NONATTACHMENT AND NONATTACHMENT TO SELF: THE ROLE OF LETTING GO IN OPTIMAL PSYCHOLOGICAL HEALTH

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Abstract

Nonattachment is a central theme in Buddhism and Hinduism and refers to the subjective quality of not being stuck or fixated on concepts or sensory objects, and an absence of attempts to control what is occurring in the field of consciousness. According to Buddhist theory, individuals who are nonattached, flexibly interact with their experience and live their lives relatively unfettered by the self-inflicted suffering associated with attempts to control experience. Nonattachment has received a growing amount of attention in recent years but remains relatively unstudied in Western psychology. Preliminary research found nonattachment is associated with greater well-being, empathy and kindness, and reduced depression, anxiety and stress. Recent research has also investigated nonattachment in relation to mindfulness, finding it to mediate the relationship of mindfulness to a range of positive psychological outcomes. The focus of the present dissertation is to provide a comprehensive investigation of nonattachment, with an aim to gain further insight into the construct, addressing areas relating to nonattachment that have not yet been studied. To address this focus, this dissertation was separated into four studies.

The aim of study 1 was to extend previous research and ascertain whether nonattachment mediates the impact of mindfulness on a range of positive and negative psychological outcomes. Specifically, nonattachment was investigated as a mechanism of mindfulness that mediates its relationship to psychological and subjective well-being, depression, anxiety and stress. Two sequential studies were conducted to test the hypotheses. Study 1 ($N = 516$) established that nonattachment mediated the impact of mindfulness on psychological and subjective well-being. Study 2 ($N = 416$) demonstrated that nonattachment also mediated the impact of mindfulness on depression, anxiety and stress.
The aim of study 2 was to investigate whether, in addition to well-being and ill-being, nonattachment was related with optimal psychological development. Study 2 investigated whether nonattachment related to three elements of optimal psychological development: wisdom, self-actualisation and self-transcendence. Furthermore, the study investigated whether the documented impact of mindfulness on these outcomes was mediated by nonattachment. Results from 348 university students supported expectations that nonattachment was positively related to wisdom, self-actualisation and self-transcendence, and further confirmed expectations that nonattachment was a mediator of the impact of mindfulness on all three aspects of optimal psychological development.

The aim of study 3 was to further elucidate the nonattachment construct by investigating the lived experience of nonattachment and attachment. Twenty-four in-depth interviews were conducted to address this aim. The interviews targeted individuals who had scored very high and very low in levels of nonattachment and focused on how nonattachment and attachment impacted individuals’ lives in general, their relationships, their views of personal development, as well as how their nonattachment/attachment had developed. The findings provided unique insights into individuals’ experiences of nonattachment and attachment and how it impacted them. Highly nonattached individuals displayed an openness and flexibility that assisted their lives to flow with minimal self-obstruction. In contrast, highly attached individuals were quite rigid in their thinking, placing often unachievable expectations on themselves and others, and tended to experience mental health issues that adversely impacted their lives. Transformative suffering played a significant role in the development of nonattachment, whereas experiences of suffering that were unresolved tended to contribute to the development of attachments.

Finally, the aim of study 4 was to investigate nonattachment as it applies to the self, seeking to define, create and validate a new measure of ‘nonattachment to self’. A new
construct of ‘nonattachment to self’ (NTS) was developed, defined as the absence of fixation on self-related concepts, thoughts and feelings, and a capacity to flexibly interact with these concepts, thoughts and feelings without trying to control them. Two studies \((N = 445, N = 388, N = 338)\) involving expert consultation and exploratory and confirmatory factor analyses, established and confirmed a single factor, internally consistent 7-item scale, with evidence supporting its test-retest reliability, criterion, and construct validity. NTS emerged as a unique way of relating to the self, distinct from general nonattachment, that aligned with higher levels of well-being and adaptive functioning.

Overall, the studies combine to provide unique insight into the constructs of nonattachment and nonattachment to self. The combined findings highlight the pervasive benefits of being nonattached for overall psychological health.
Declaration

I declare that this dissertation does not incorporate without acknowledgment any material previously submitted for a degree in any University, College of Advanced Education, or other educational institution, and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text. I further declare that the ethical principles and procedures specified in the Faculty of Health, Arts and Design Human Research Ethics Committee document have been adhered to in the preparation of this report.

Richard Whitehead

Date: 29/3/19
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List of conference presentations within candidature period


International Conference on Mindfulness – Auckland, New Zealand, February 9 – 14th 2019. Two abstracts were presented: *Stories of Suffering and Growth: An Investigation of the Lived Experience of Nonattachment* (oral presentation), and *The Relative Contributions of Nonattachment to Self and Self-compassion, to Psychological Distress and Psychological Wellbeing for Individuals with and without Depressive Symptoms* (poster presentation).
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1. Nonattachment mediates the relationship between mindfulness and psychological and subjective well-being, depression, anxiety and stress. This paper has been published (see Appendix L) in the Journal of Happiness Studies after making minor revisions (see Appendix D).

2. Growing by letting go: Nonattachment as a quality of advanced psychological development. Submitted to Journal of Adult Development May 22, 2018. This paper is now published (see Appendix L) after being sent back to the journal addressing reviewers’ concerns (see Appendix D).

3. Stories of suffering and growth: a qualitative investigation into nonattachment. Submitted to: Contemporary Buddhism and was accepted without revision (see Appendix L).

4. Letting go of self: The creation of the nonattachment to self scale. Submitted to Frontiers in Psychology, June 10, 2018. This paper has been published (see Appendix L) after addressing the reviewers comments (see Appendix D).
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CHAPTER 1: INTRODUCTION AND THESIS OVERVIEW

1.1 Chapter Guide

This chapter provides a brief outline of the thesis structure and justification for the studies that form this dissertation.

1.2 Thesis Outline

The present dissertation provides an in-depth investigation of nonattachment; a newly studied construct within Western psychology. This dissertation investigates nonattachment as a related, but distinct, construct to mindfulness that may be strongly related to well-being and advanced psychological development. Furthermore, this dissertation provides the first comprehensive investigation of the lived experience of nonattachment and provides a justification for the study of a related, but distinct construct of ‘nonattachment to self’.

This dissertation begins with a literature review and introduction to the nonattachment construct (Chapter 2), which follows the sequential structure of the four studies that form part of the dissertation (Chapters 4 – 7). The literature review defines the construct, outlining its origins in Buddhism and Hinduism, and how it has been adapted to Western psychology. The theory and research linking nonattachment to well-being and ill-being is explored, and a case is also formulated for the proposed relationship of nonattachment with measures of advanced psychological development: wisdom, self-actualisation and self-transcendence. The review then explores nonattachment in relation to mindfulness, investigating previous theory and research into the notion that nonattachment represents a mechanism of mindfulness that helps to explain its positive impact. The literature review continues with a theoretical exploration of how nonattachment may present in lived experience, as well as possible ways
in which nonattachment may be developed. Finally, the theory underpinning the existence of a separate, but related, construct to nonattachment, ‘nonattachment to self’, is explored.

Following this literature review is an overview of the methodology underlying the four studies (Chapter 3). Although the methodology is described in each of the four papers separately, given the limitations on word count when writing for publication, Chapter 4 provides supplementary material, outlining the methodology in further detail. The dissertation then includes the four papers written and submitted for publication in academic journals (Chapters 4 – 7). Although there is some unavoidable repetition within these four papers (e.g., in defining nonattachment), they each represent distinct and original research that is worthy of publication. The four papers provide a sequential investigation into the construct of nonattachment and nonattachment to self and address the research questions outlined in Chapter 3. Finally, a concluding chapter (Chapter 8) summarises the findings of the four studies and explores theoretical implications, limitations and directions for future research.

1.3 Justification for the Research

The current trend in psychology appears geared towards pathology and healthcare-friendly solution-focused treatment (Whitehead & Bates, 2016). Although there are benefits to this focus, there is potential to neglect the more positive components of human functioning. The birth of Positive Psychology addresses the strict focus on the medical model of psychology, in which the focus is on the reduction of pathology, and widens the net to improve the well-being of everyone, and not just those with pathological symptoms (Bermant, Talwar & Rozen, 2011). Research on aspects of positive human functioning goes beyond pathology and provides important insights into well-being and quality of life. One area that investigates positive human functioning that has received a great deal of attention over the past decade is Buddhist psychology. The interest in Buddhist psychology has been
furthered due to its usefulness in clinical practice and the shift towards a more positive psychology (Sahdra & Shaver, 2013).

It has been argued that Buddhist-derived practices (BDPs) are going through a transition of focus within Western psychology. Van Gordon et al. (in press) discuss that research into BDPs has involved a progression from a focus on mindfulness and awareness and attention in the 1980s, towards a focus on more ethical and empathetic awareness (e.g., compassion, loving kindness meditation). They further discuss that over the past five years there has been a greater focus on the wisdom-based BDPs such as nonattachment.

The focus of the present research adds to the growing amount of research in Buddhist psychology, in areas such as mindfulness (e.g., Beitel et al., 2014; Brown & Ryan, 2003; Desrosier et al., 2014; Hanley, Warner & Garland, 2015; Klainin-Yobas et al., 2016; Leary & Tate, 2007; Tran et al., 2014) and self-compassion (e.g., Krieger et al., 2013; Neff, 2003, 2008; Pauley & McPherson, 2010; Raes, Pommier, Neff & Van Gucht, 2010), and investigates the construct of nonattachment. Nonattachment is a central theme within Buddhism (Dalai Lama, 1999; Hanh, 2006) and other spiritual traditions (Burley, 2014). Nonattachment has received a growing amount of attention, but has not been widely studied within Western psychology (Bhambani & Cabral, 2015; Sahdra et al., 2015). Much like the more widely studied construct of mindfulness, the construct of nonattachment captures the way in which individuals interact with their experience (Hanh, 2006). Nonattachment denotes an absence of attempts to control what is occurring in the field of consciousness, as well as not being stuck or fixated on the need for experience to be one way or other (Sahdra et al., 2010). Recent research has shown nonattachment to be an extremely beneficial quality to possess, that is positively related to individuals’ well-being (Chao & Chen, 2013; Feliu-Soler et al., 2016; Sahdra et al., 2010), empathy and kindness (Sahdra et al., 2015), and
negatively related to psychological distress (Coffey & Hartman, 2008), suicide rumination (Lamis & Dvorak, 2013), depression, anxiety and stress (Sahdra et al., 2010).

The investigation of constructs and practices from the Eastern contemplative traditions (e.g., mindfulness, self-compassion, loving-kindness) has provided insight into factors underlying individuals’ well-being and suffering. Interventions based on these constructs (e.g., mindfulness-based cognitive therapy) have proven to be effective in treating a range of negative psychological symptoms (Britton, Shahar, Szepsenwol & Jacobs, 2012; Gu, Strauss, Bond & Cavanagh, 2015). The preliminary findings in relation to nonattachment suggest that it may even have a greater positive effect on mental health outcomes than mindfulness (e.g., Lamis & Dvorak, 2013), and may be a mechanism of mindfulness that helps to explain its positive impact (Tran et al., 2014).

The limited but important findings of the benefits of nonattachment for mental health provide a justification for its continued study, to build further insight into the construct from a psychological perspective. Furthermore, given the ubiquity and success of Buddhist psychology-based interventions for the treatment of psychological conditions and overall well-being (see Keng, Smoski & Robins, 2011), the possibility of developing insight into interventions developed for the sole purpose of building nonattachment, has boundless potential.
Chapter 2: INTRODUCTION TO NONATTACHMENT

2.1 Chapter Guide

This chapter presents a literature review on the nature of nonattachment, including its origins in the Eastern contemplative traditions and how it has been investigated within Western psychology. This chapter follows the sequence of the four studies presented in chapters four to seven. After providing an investigation into the origins of nonattachment in Buddhism and Hinduism, a review of the literature is conducted looking at ‘nonattachment and well-being and ill-being’, and ‘nonattachment as a quality of optimal psychological development’. This will be followed by a section on ‘mindfulness and nonattachment’ that provides literature central to the first two studies. The section, ‘the presentation of nonattachment and how it is developed’ relates to Study 3 and outlines how nonattachment may theoretically present in lived experience, and how it might develop in individuals with and without meditation experience. Finally, the section ‘nonattachment to self as a separate construct’ discusses the literature relevant to the fourth study.

2.2 The Nature of Nonattachment

“It is difficult to find a single word that will adequately describe the ideal man of the free philosophers, the mystics, the founders of religions. ‘Non-attached’ is perhaps the best. The ideal man is the non-attached man” (Huxley, 1941, p. 3).

The quality of nonattachment has been considered to represent the highest stages of spiritual and psychological growth (Huxley, 1941). Nonattachment is one of the core teachings in many spiritual traditions (Burley, 2014), and is seen as a crucial component of Buddhism (Hanh, 1998; Gammage, 2006; Thubten, 2009) and the Hindu tradition of Vedanta (Vivekananda, 1947). It is also discussed as a key component of Christianity and Christian mysticism (see Shone, 1992). More recently, nonattachment has been studied from the
perspective of Western psychology, turning it into a measurable quantity (see Sahdra et al., 2010).

The term “nonattachment” covers many topics integral to Asian religious traditions, but it is not identical to their meanings (Bermant et al., 2011). A number of terms have been discussed as equating to nonattachment. Terms such as Upeksha (also translated to equanimity) or Vairagya (translated as dispassion) have been used to describe the English term nonattachment (Princeton Dictionary of Buddhism, 2014). It has also been translated as alobha, meaning ‘non-greed’ or ‘generosity’ (Keown, 2014). As there are different interpretations and definitions of nonattachment within the various Eastern traditions, the present thesis does not seek to produce a definitive interpretation. However, to gain an understanding of the nature of the construct, the notion of attachment is explored, and then nonattachment is discussed within the general context of the Eastern contemplative traditions of Buddhism and Hinduism.”

2.3 Attachment

To understand the construct of nonattachment, it is important to define ‘attachment’. The term ‘attachment’ has different meanings in different disciplines. In Western psychology, attachment often refers to attachment style, referencing a child’s attachment to the caregiver (see Bowlby, 1969; Ainsworth, Blehar, Waters & Wall, 1978), or the quality and safety of a person’s relationships as an adult (Hazan & Shaver, 1987). In this context, being attached is a desirable quality aligned with feelings of safety and security in later life (Sahdra et al., 2010). In contrast, in the context of nonattachment, attachment refers to the “overallocation of cognitive and emotional resources toward a particular object, construct, or idea to the extent that the object is assigned an attractive quality that is unrealistic and that exceeds its intrinsic worth.” (Shonin et al., 2014, p.126). This can also be conceptualised a
method of interacting with experience that involves clinging to experiences perceived as positive and the avoidance of experiences perceived as negative (Altobello, 2009; Agarwal, 1992; Sahdra et al., 2010; Shone, 1992). Just as mindfulness indicates an open, aware and non-judgmental interaction with experience, attachment represents a way of interacting with experience that is governed by clinging and aversion. For example, an individual may demonstrate attachment in the form of aversion towards failure. In this instance, the attachment itself causes suffering through ongoing ruminative thoughts about potential failure, which are quite separate from the actual failure experienced. Similarly, a person may demonstrate attachment by clinging onto the physical attributes of their youth. In this case, when the energy of clinging is inevitably challenged through getting older and changes in the body, the individual may experience feelings of inadequacy and ruminate on, rather than flexibly interact with, their changing life circumstances.

It is also important to distinguish nonattachment from ‘detachment’. Detachment can signify a lack of caring (Stambaugh, 1999), or a complete aversion or avoidance of experience (Altobello, 2009; Gammage, 2006). In contrast, nonattachment does not dictate a removal, aversion, or lack of caring, but instead indicates a total acceptance of experience without the need to avoid or cling to it (Sahdra et al., 2015). The nonattached person “genuinely cares about, is engaged in, and responsive to the present situation without falling into self-aggrandizement or self-degradation” (Sahdra et al., 2010, p. 118). In contrast to a person who is highly attached to the outcome of a situation, the nonattached person can be totally present and respond without attaching or fixating on the outcome. Nonattachment requires a wilful acceptance, appreciation and a letting go in relation to what is occurring (Culliford, 1996), resulting in an emanation of strength and stability (Stambaugh, 1999). Far from being an apathetic state, Huxley (1941) noted that “non-attachment imposes upon those who would practise it, the adoption of an intensely positive attitude towards the world” (p. 4).
2.4 Nonattachment in Buddhism

Nonattachment is a core theme in many of the Buddhist teachings (Gammage, 2006; Hanh, 1998; Thubten, 2009). At the core of the Buddhist teachings are the Four Noble Truths, the second of which maintains that the cause of ubiquitous suffering is individuals’ attachment to pleasure and craving, and their avoidance of pain (Dalai Lama, 1997; Sumedho 2012). Within the Buddhist context, attachments are seen as the root cause of suffering and, as such, it is freedom from these attachments, or ‘nonattachment’, that can reduce and eradicate suffering. Importantly, however, nonattachment can both transcend the suffering on a relative level (e.g., rumination, anxiety), and be a crucial component of self-realisation, in which a person can awaken to their true nature, where there is no attachment to a separate, independent self (Agarwal, 1982; Thubten, 2009).

When discussing the Four Noble Truths, the Dalai Lama stated that afflictions such as attachments are the root cause of unhappiness and suffering (2001). He also proposes that it is through freedom from attachments, both attachments to desires and sensations, and to forms of bliss, that one can enter the desired state of equanimity (1997). The Dalai Lama (2001) explained that grasping at life we perceive as static and permanent is “the root cause of all our misery (and) it lies at the core of all of our afflictive emotions” (p.66). The suffering occurs, not from life itself or the five senses, but from the ignorance of the fact that everything is impermanent, including the self. It is this mistaken belief that gives rise to attachment (Hanh, 2006). It is nonattachment and a sense of ‘letting go’ of this craving and avoidance that lies at the core of the Buddhist path (Gammage, 2006; Hanh, 1998; Thubten, 2009), and represents a transcendence of suffering.

Within the Buddhist literature, nonattachment can be understood in two forms: First, there is nonattachment to objects, whether they are mental formations, or objects of the
senses (Hanh, 2006). Second, there is nonattachment to views, the central of which is the view that there is an independent, unchanging self that lies at the centre of experience. It is the latter that is a focus of the central Buddhist text, the Diamond Sutra (Soeng, 2010; Hanh, 1992, 2012). In a commentary on the Diamond Sutra, the practice of nonattachment is seen as the process that will lead to the illumination of ‘wrong views’ (Hanh, 1992, 2012). Hanh (1986) argues that it is our attachment to wrong views that causes us to be narrow minded and stops an individual from being open to the insights and experiences of others. Hahn (1986) states that “the way of nonattachment from views is the basic teaching of Buddhism concerning understanding” (p. 92).

Within the Buddhist texts, freedom from attachment is not only discussed as important for the cessation of suffering on a relative level but also seen as a necessary component of awakening, or enlightenment. One of the most central Buddhist Canons, the Abhidhamma, states:

“The wise, disciplining themselves long, understand the impermanence (of life), realize the deathless state, and completely cutting off the fetters of attachment, attain peace.” (verse 42, Bodhi, 1993).

Similarly, in another central scripture, The Dhammapada, Gautama Buddha states:

“Those whose minds are thoroughly practiced in the factors of enlightenment, who find delight in freedom from attachment in the renunciation of clinging, free from the inflow of thoughts, they are like shining lights, having reached the final liberation in the world.” (verse 89, translation J. Richards, 1993).
2.5 Nonattachment in Hinduism and Vedanta

Another important source of the nonattachment construct is its role in Indian philosophy and spirituality. Although Buddhist psychology and Buddhist notions of the self receive attention within psychological literature, psychological constructs within Hinduism remain relatively unstudied within the body of modern Western studies (Ram-Prasad, 2012). However, it is very important to outline nonattachment in relation to its origins in Hinduism, specifically the Vedic teachings, dating back more than 3500 years. A key theme present throughout Indian philosophy is that liberation from suffering comes from removing attachment to desires and the sensations brought about by the five senses (Pande & Naidu, 1992). In addition to being viewed as an ideal quality to possess (Banth & Talwar, 2012; Upadhyay & Vashishtha, 2014; Naidu & Pande, 1999), it is also greatly associated with self-realization through a nonattachment to self (Agarwal, 1982). Within Hinduism, nonattachment is considered a necessary component of self-realization and the ultimate freedom that exists from this (Agarwal, 1982). Nonattachment is also one of the key themes in the Central Hindu text, the Bhagavad Gita (Vivekananda, 1947). The Bhagavad Gita makes many references to nonattachment being one of the highest qualities attainable:

“Do what is to be done well without attachment and you will attain the highest good”

(3:19)

Similar to the Buddhist texts, nonattachment is also discussed in the Bhagavad Gita in relation to self-realisation:

“The one whose mind is free from attachment and longing and who has sublimated the impulses of the mind into the quest for self-realization gains the most exalted end... freedom from action” (18:49).
Nonattachment is considered as crucially important in the journey of self-realisation and as an endpoint in which the realized self is naturally in a state of nonattachment (Naidu & Pande, 1999; Pande & Naidu, 1992). This point is also highlighted in the earliest central Indian philosophical/spiritual texts, the Upanishads, which date back more than 3500 years:

“On account of attachment to unreal objects the mind pursues such objects. But it comes back to its pure state when it attains non-attachment, realizing their unreality”

(The Upanishads, Verse 79, Mandukya Upanishad).

It is important to identify the origins of the nonattachment and understand that it has played a crucial role in two of the biggest religions/philosophies in the world. Given the previous success of integrating themes from the Eastern contemplative traditions in psychology (e.g., mindfulness, meditation), nonattachment represents an ideal construct to study due to its theorized relationship with reduced suffering and increased psychological growth.

2.6 Nonattachment in Western Psychology

Nonattachment has received minimal, albeit growing, attention within Western Psychology (Bhambhani & Cabral, 2015). Before creation of the nonattachment scale (NAS; Sahdra et al., 2010), only a few studies had empirically investigated the benefits of nonattachment (e.g., Coffey & Hartman, 2008; Pande & Naidu, 1992). Early studies utilised the linking inventory (McIntosh & Martin, 1992) as a measure of nonattachment. The linking inventory measured nonattachment as the extent to which an individual’s happiness was contingent on external experience. In theory, this captured individuals’ ability to gain satisfaction internally, and thus limited the need to try to control experience through clinging and avoidance. Early research utilising the linking inventory found that it was related to
reduced psychological distress (Coffey & Hartman, 2008), rumination and anxiety (Coffey, Hartman & Fredrickson, 2010).

At a similar time to the creation of the linking inventory, Pande (1990) created a measure of nonattachment based on the translation of ‘anasakti’ and the writings in the Bhagavad Gita. Pande described Anasakti as nonattachment, equipoise, and effort without attachment to the outcome (Banth & Talwar, 2012; Kool, 2008; Pande & Naidu, 1992). It is identified as the opposite of attachment (asakti) in which there is a great focus on outcomes and the external, material world. Anasakti was detailed as being crucially important in the journey of self-realization, and is an endpoint in which the realized self is naturally in a state of anasakti (Naidu & Pande, 1999; Pande & Naidu, 1992). Research utilizing the measure of anasakti demonstrated that people who were high on levels of anasakti had less stress and strain in their lives than people with lower levels (Pande & Naidu, 1992). Anasakti was also shown to be related to increased life satisfaction and positive affect, and reduced negative affect (Banth & Talwar, 2010).

Although measures of linking and anasakti were used in some studies, nonattachment remained relatively unstudied in Western psychology until Sahdra et al. (2010) created the nonattachment scale (NAS). The NAS was created through a comprehensive process involving consultation with primary and secondary Buddhist texts, as well as a lengthy consultation with Buddhist scholars from a range of disciplines within Buddhism. The psychometric properties of the NAS were originally tested with five samples in the United States; these showed the scale to be a valid and reliable measure of nonattachment. Furthermore, the scale has been replicated cross-culturally (Ju & Lee, 2015, Feliu-Soler et al., 2016), with reliable and well-validated Spanish (Feliu-Soler et al., 2016) and Chinese (Chao & Chen, 2013) versions of the scale.
The development of a well-researched and psychometrically sound measure of nonattachment has allowed for the study of nonattachment, both as a stand-alone trait, and as a possible mechanism of the more widely studied construct of mindfulness (e.g., Sahdra et al., 2016; Tran et al., 2014). Although there are fewer than 100 articles published studying nonattachment, these have steadily increased over the past five years. So far, nonattachment has been investigated in relation to constructs such as mindfulness (Sahdra et al., 2016), avoidant and anxious attachment styles (Sahdra et al., 2010; Sahdra & Shaver, 2013), psychological distress (Bhambhani & Cabral, 2015), empathy (Sahdra et al., 2015), and well-being (Chao & Chen, 2015; Feliu-Soler et al., 2016; Sahdra et al., 2010). In all studies to date, nonattachment has been shown to relate to positive outcomes and to be a beneficial quality to possess. A number of the key findings are discussed in the following section with an aim to provide support for the studies presented in this thesis.

2.7 Nonattachment, Well-being and Ill-being (Article 1)

Perhaps the findings that best support the ongoing study of nonattachment, are those showing its beneficial impact on well-being and ill-being. The current empirical evidence supports the theory that attachments underlie individuals’ levels of suffering (Dalai Lama, 1997, 2001; Hanh, 2006), and that it is through letting go of these attachments that an individual can experience freedom (Sumedho, 2012), and reduce suffering in life (Hanh, 2006). Sahdra et al.’s (2010) first study using the NAS, found that it was related to a range of well-being measures, including both short-term well-being (aligned with feeling good), and more comprehensive, pervasive, psychological well-being (encompassing a range of areas in life such as quality of relationships and a sense of personal growth). The few studies that have followed also show nonattachment to be related to positive and negative affect (Wang, Wong & Yeh, 2016), psychological well-being (Ju & Lee, 2015), life satisfaction, life
effectiveness (Sahdra et al., 2016) as well as other measures of individuals’ quality of life such as relationship harmony (Wang et al., 2016) and pro-sociality (Sahdra et al., 2015).

Nonattachment also relates to ill-being. Utilising the NAS, research shows nonattachment is related to reduced psychological distress (Bhambani & Cabral, 2016; Chao & Chen, 2013), suicide rumination (Lamis & Dvorak, 2013), and depression, anxiety and stress (Sahdra et al., 2010; Feliu-Soler et al., 2016). Empirical research on the impact of nonattachment on measures of psychological suffering supports the Buddhist theory that the way individuals interact with experiences can impact their suffering independently from the experiences themselves (Hanh, 2006; Dalai Lama, 2001). The conclusion drawn from these studies is that nonattachment can assist in minimizing the negative impact of attachments that can cause greater self-inflicted suffering, through behaviours such as rumination, worry and anxiety.

The growing amount of research on benefits of nonattachment for well-being and ill-being provides the basis for the first study in this thesis: the investigation of nonattachment in relation to a range of well-being and ill-being measures, when measured alongside the more well-established construct of mindfulness.

2.8 Nonattachment and Optimal Psychological Development (Article 2)

While there have been positive findings into the relationship of nonattachment to measures of well-being, no previous research has investigated nonattachment in relation to psychological development. As the Buddhist and Hindu theories align nonattachment with spiritual growth and development, the decision was made to test whether this theoretical link may also be true for Western notions of growth and development. Specifically, research was conducted to investigate whether nonattachment is a quality that develops over time, and is
aligned with measures of optimal psychological development: wisdom, self-actualisation and self-transcendence.

In theories outlined within the Eastern contemplative traditions, nonattachment appears to be a highly valued quality that grows over time with effort (Bodhi, 1993), and is aligned with optimal growth and development (Donner, 2010). This suggests nonattachment is something that is aspired to, with it appearing to relate to the later stages, if not an end-point, of psychological growth. Theoretically, nonattachment aligns with a sense of personal freedom (Sumedho, 2012), with the highest levels of nonattachment appearing to be something akin to self-realisation. However, whether nonattachment represents a quality aligned with optimal stages of growth from a Western psychological perspective, had not been investigated prior to this thesis.

The theory behind nonattachment was compared to a range of other theoretical texts relating to optimal psychological development, such as Loevinger’s theory on ego development (1976), Levenson’s liberative model of adult development (2001), and Maslow’s theories of self-actualisation and self-transcendence (1971). From that comparison, it appeared that nonattachment would indeed be a quality aligned with optimal growth and development. Theories associated with wisdom (e.g., Ardelt, 2003, 2008), self-actualisation (Beitel et al., 2014; Maslow, 1968) and self-transcendence (Cook-Greuter, 2000; Levenson et al., 2005) all highlight similar qualities, involving a movement away from fixation on self-biased points of view and an ability to engage with experience in a more flexible, self-reflective and unbiased manner. These underlying themes present in wise, self-actualised and self-transcendent individuals indicated that nonattachment is a potentially important quality in the development of optimal psychological growth.
Study 2 was conducted to investigate a likely relationship between optimal psychological development and nonattachment. Due to the benefits for emotional, psychological and spiritual growth outlined in the Eastern contemplative traditions, it was considered important to investigate nonattachment as a quality that can be aspired to from a Western psychological standpoint, and as a possible quality that can assist individuals to reach stages of optimal psychological growth and development.

2.9 Mindfulness and Nonattachment (Nonattachment as a Mechanism of Mindfulness)

A focus of the present thesis, which applied to the first two studies, was the investigation of nonattachment alongside the more widely studied construct of mindfulness. Mindfulness was studied alongside nonattachment in studies 1 and 2 to determine if; (a) nonattachment may be a more beneficial trait than mindfulness in relation to well-being and optimal psychological development, and (b) whether nonattachment represents an important mechanism that explains the positive impact of mindfulness. The following section looks at the topic of mindfulness in relation to nonattachment. Further, this section proposes that nonattachment is important to study, both as a potential mechanism of mindfulness and as a more easily definable and measurable construct that is equally, if not more important, for positive psychological outcomes.

Mindfulness has become a widely studied construct in recent times, both as a beneficial trait and in the context of mindfulness-based interventions. Mindfulness has its roots in the Eastern Buddhist tradition and is discussed as being at the core of Buddhism (Hanh, 1998). The ubiquity of mindfulness research in recent times has produced many positive results. Increased levels of mindfulness have been related to a range of beneficial outcomes, such as increased emotional regulation (Teper, Segal & Inzlicht, 2013), self-compassion (Neff, 2003), well-being (Brown & Ryan, 2003; Hanley, et al., 2015; Hollis-
Walker & Colosimo, 2010; Howell, Dopko, Passmore & Buro, 2010; Klainin-Yobas et al., 2016), and reduced cognitive rigidity (Greenberg, Reiner & Meiran, 2010), depression (e.g., Coffey & Hartman, 2008; Feliu-Soler et al., 2016; Gecht et al., 2014; Kohls, Sauer & Walach, 2009) anxiety (e.g., Coffey & Hartman, 2008; Feliu-Soler et al., 2016; Kohls et al., 2009) and stress (e.g., Feliu-Soler et al., 2016; Zimmaro et al., 2016). Mindfulness has become a popular area of research for a number of reasons. These include the development of mindfulness-based interventions such as mindfulness-based stress reduction (MBSR; Kabat-Zinn, 1990), and mindfulness based cognitive therapy (MBCT; Segal, Williams, Teasdale, 2002), both of which can be applied within an easily measurable time period, and have shown to reduce negative symptoms in the short-term (Keng et al., 2011). However, recently, the vast amount of mindfulness research has come under criticism for its lack of uniformity (Desbordes et al., 2014; Grossman, 2015; Grossman & Van Dam, 2011) and the apparent watering down of the original Buddhist conceptualisations (Monteiro, Muston & Compson, 2015).

A major pitfall of the mindfulness literature is the lack of any agreed upon definition of the construct (Chiesa, 2012; Coffey et al., 2010; Desbordes et al., 2014; Grossman & Van Dam, 2011; Grossman, 2015; Monteiro et al., 2015). The popularity of mindfulness in Western psychology in recent years has produced a multitude of definitions, operationalisations and self-report measures that, although very different, attempt to measure the trait of mindful awareness (Chiesa, 2012; Grossman & Van Dam, 2011). For example, Langer’s (1989) mindfulness/mindlessness scale measures 4 key areas of; novelty seeking, engagement, novelty producing, and flexibility. In contrast, the Freiburg Mindfulness Inventory (FMI; Buchheld, Grossman & Walach, 2001) captures a measure of mindfulness aligned with the outcomes of Vispassana meditation. Within the traditional Buddhist community, there has been some unease about the proliferation of mindfulness and how it is
defined and taught (Monteiro et al., 2015; Dreyfus, 2014). Although there may not be any agreed upon definition of mindfulness within Western psychology, it appears to be part of a set of steps in a transitional path towards changing one’s functioning to reduce suffering and improve well-being (Grossman & Van Dam, 2011).

To gain a further understanding into mindfulness, it is important to understand some of the outcomes of mindfulness practice (Chiesa, 2012), and the underlying mechanisms that help to explain its positive impact. Grossman (2015) outlined the need for mindfulness research to include the underlying Buddhist ethics of compassion, equanimity and loving kindness. He argued that without a focus on these ethics there is the potential to lose the most important aspect of mindfulness. Similarly, Desbordes et al. (2014) discussed that due to the lack of consensus on what constitutes mindfulness, the Buddhist concept of ‘equanimity’ may better represent a quality that is a sought-after result of Buddhist mindfulness practice. Understanding nonattachment in relation to mindfulness was a focus of the first two studies of the present thesis. Nonattachment was explored as a quality that may have a stronger relationship to well-being and optimal psychological development than mindfulness. In addition to comparing the impact of mindfulness and nonattachment on positive psychological outcomes, the main focus of studies 1 and 2 was an investigation of nonattachment as a potential mechanism of mindfulness.

Nonattachment is a related, but distinct construct to mindfulness (Sahdra et al., 2010, 2016). Whereas mindfulness is primarily concerned with the observation of what is happening in the field of consciousness (Kabat-Zinn, 2003), nonattachment denotes a letting go of attempts to control what is occurring in the field of consciousness. The relationship of mindfulness to nonattachment has recently been documented, with greater mindfulness consistently predicting higher levels of nonattachment (e.g., Feliu-Soler, et al., 2016; Lamis & Dvorak, 2013; Sahdra et al., 2010, 2016; Tran et al., 2014). Nonattachment has also been
theorized to be part of a series of processes that help to explain the relationship between mindfulness and a range of positive psychological outcomes (Bhambani & Cabral, 2015; Brown, Ryan & Creswell, 2007; Hayes & Plumb, 2007; Tran et al., 2014).

Nonattachment has been found to mediate the relationship between mindfulness and life satisfaction (Sahdra et al., 2016), depression (Tran et al., 2014) and psychological well-being (Ju & Lee, 2015). Similarly, nonattachment has also been found to mediate the positive impact of Vipassana meditation on the reduction of negative affect and increased self-directedness (Montero-Marín et al., 2016). This is an especially interesting area of study as it helps to elucidate the specific pathways that explain how mindfulness can have a positive impact on individuals. Understanding the specific mechanisms of mindfulness will assist in the development of mindfulness-based interventions, and when evaluating the effectiveness of mindfulness practices.

2.10 The Presentation and Development of Nonattachment (Study 3)

Despite growing investigation into nonattachment, exactly how it is developed and how it presents in individuals remains unclear. To date, there has been no qualitative investigation on nonattachment to gain an understanding of how nonattachment (or attachment) presents, or is developed, in the general population. Theoretically, displaying nonattachment should result in a greater sense of freedom and a lack of tension with experience (Adyashanti, 2011). Empirical evidence also indicates that nonattachment relates to positive social relationships (Sahdra et al., 2015; Wang et al., 2016), increased well-being (Ju & Lee, 2015) and reduced stress and anxiety (Sahdra et al., 2010). However, exactly how individuals’ experience nonattachment and its impact, requires further investigation. In contrast to nonattachment, theory suggests that attachments represent unhealthy psychological strategies (Lamis & Dvorak, 2013) which can underlie an individuals’ sense of
suffering (Dalai Lama, 2001) but further insight into exactly how attachments affect individuals is needed. There is also limited empirical evidence relating to how nonattachment develops, beyond the knowledge that it is associated with greater mindfulness, engaging in meditative practice, and increased age (Sahdra et al., 2010). Although general theoretical statements suggest nonattachment can be developed through experiences involving self-reflection (Sahdra et al., 2010), precisely what these are is unclear.

The third study in this dissertation sought to address these issues through a qualitative investigation of people identified as having very high and very low levels of nonattachment. To gain an in-depth understanding of nonattachment and attachment as lived experience, the areas of focus in this study were: the presentation of nonattachment in everyday life, the impact of nonattachment on relationships, the development of nonattachment, and the role of nonattachment on personal development.

2.11 The Development of Nonattachment

So far, the only documented pathway towards developing nonattachment is engaging in contemplative practice and displaying general mindfulness (e.g., Sahdra et al., 2010; Feliu-Soler et al., 2016; Van Gordon et al., 2018). A major question of Study 3 was how individuals develop nonattachment when they are not involved in any traditional practice, or do not follow any specific spiritual tradition. This was an important area of study given the many benefits of nonattachment for individuals’ quality of life. Understanding how nonattachment develops provides insight into how it may be facilitated in the future. Although attempts were made to remove the influence of expectations before beginning the third study, some theories of how nonattachment may develop were explored.
2.11.1 Nonattachment and contemplative practice

One way of building nonattachment that has theoretical and empirical support is engaging in a meditative practice. Theoretically, through gentle interest in the phenomena of awareness, practitioners of meditation can be presently aware of what occurs within their field of consciousness, without trying to grasp onto it or push it away (Sahdra et al., 2010). This relationship between meditation and nonattachment has also been shown empirically. Sahdra et al. (2010) found nonattachment was higher in those who meditated for more than three hours per week, compared to those that did not meditate or meditated at lower levels. Similarly, Feliu-Soler et al. (2016) found those who engaged in meditation had higher levels of nonattachment than those who did not, and that hours spent in meditation per week, and years spent engaging in the practice, were also related to higher levels of nonattachment. Montero-Marín et al., (2016) also found that individuals that engaged in a one-month Vipassana retreat had higher levels of nonattachment after completing the retreat than at pre-retreat levels. More recently, Van Gordon et al., (2018) found that nonattachment increased after experienced practitioners engaged in emptiness meditation, while Van Gordon, Shonin and Griffiths (2016) found that engaging in mindfulness attention training also resulted in higher levels of nonattachment. Although this path towards nonattachment has theoretical and empirical support, levels of nonattachment vary in the population, inclusive of people who do not engage in meditative practices. This indicates that factors other than meditation influence an individual’s levels of nonattachment.

2.11.2 Nonattachment and life experience

One consistent finding is that nonattachment is related to age (Sahdra et al., 2010, 2016; Feliu-Soler et al., 2016). As people get older, they tend to become more nonattached. This indicates that experiences over the life-span can potentially build nonattachment. The
way individuals process their life experiences may assist in building insight into the ever-changing nature of experience, and the futility of attachments. There is also evidence to suggest that the way individuals process their life experiences is associated with factors related to nonattachment, such as wisdom (Weststrate & Gluck, 2017) and ego-resilience (Pals, 2006b). Research on the processing of life experiences suggests major life experiences have the greatest potential to impact later life.

Weststrate and Gluck (2017) investigated the relationships between the narrative processing of life experiences and wisdom. They found that individuals who could reflect on their personal experiences, to build meaning and personal growth, tended to be wiser. Similarly, Pals (2006a) showed that taking an open exploratory approach to the processing of difficult life experiences and displaying a coherent resolution of the experiences, was related to greater ego-maturity and psychological and physical health. This indicates that the way individuals process their challenging life experiences may be related to their levels of nonattachment. As self-reflection is believed to foster nonattachment (Sahdra et al., 2010), individuals who are able to process their challenging life experience with an openness and self-reflexivity may be able to build greater nonattachment.

Another factor that may play a role in developing nonattachment is how people process their very highest, peak experiences. Peak experiences provide moments of intense clarity and feelings of interconnectedness and wholeness (McAdams, 1985). Levin and Steele (2005) found that peak experiences involving a more enduring feeling of peace, can result in feelings of equanimity and a shift in consciousness. Theoretically, transcendent peak experiences may provide a glimpse into ultimate reality described as one of the two truths in Buddhism (Hanh, 1998), in which there is no separateness. Experiences of interconnectedness or wholeness can provide perspective for individuals that may limit their fixation on trying to be in control of experience and thus build greater nonattachment.
2.11.3 Nonattachment and psychotherapy

Given that self-reflection is believed to be a key factor in building nonattachment (Sahdra et al., 2010; Thubten, 2009), any activities that foster self-reflection may contribute to nonattachment. Engaging in psychotherapy or counselling, or even personal development may potentially assist in building nonattachment. Both psychotherapy and Buddhist practice aim at encouraging the exploration of the depths of the psyche, even when this reveals uncomfortable and frightening experiences, in order to understand and cease suffering (Miller, 2009).

One aspect that highlights the development of nonattachment in psychotherapy is working with defence mechanisms. Defence mechanisms are responses to a perceived threat (e.g., receiving criticism at work) aimed at avoiding the negative feelings associated with the perceived threat (Clark, 1991). Defence mechanisms are a prime example of how attachment manifests. Psychotherapy can assist in breaking down defence mechanisms aimed at keeping away the bad, or trying to hold on to what is safe and comfortable, even when this is of detriment to the person (Clark, 1998). Through building an awareness of our fears and defences, it is possible for an individual to let down their guard and be more open to the present experience, whatever that may be. Similarly, a client’s willingness to be vulnerable in therapy may also be connected to nonattachment. Moving towards vulnerability for the ultimate benefit of one’s well-being challenges the individual’s attachments, or avoidance of the bad/painful and a need to cling on to the good/safe. It is through a conscious challenging of our attachments that one can practice nonattachment (Thubten, 2009). Theoretically, when people can challenge their fear and move beyond invulnerability, they can be part of something larger and transcend their attachments (Jordan, 2008).
2.12 Nonattachment to Self as a Separate Construct

“The very essence of all spiritual teaching is about dissolving attachment to the self”
(Thubten, 2009, p. 39).

The final study of the present dissertation was based on theory present within the Eastern contemplative traditions and the findings of the previous three studies. Removing a fixation on the self and developing understanding of the transient nature of the self is a core theme in Buddhism and Hinduism (Harris, 2014). The existing nonattachment scale (NAS; Sahdra et al, 2010) refers to a letting go of clinging or avoidance to external stimuli. However, prior to the current research, no measure of nonattachment had been developed that specifically addresses the self.

2.12.1 Theory underlying ‘nonattachment to self’

Within the Buddhist and Hindu literature, a central theme is the notion of the illusory nature of the self, and the path towards experientially realising this, or self-realisation (Ando, 2009; Chan, 2008; Davis, 2010; Harris, 2012; Huxley, 1947). The theory behind nonattachment indicates that everything is impermanent, and this notion extends to the idea of the separate self (Hanh, 1998). Buddhists see the self as a totally dynamic process that is not static and view the common belief in a separate self as nothing more than a delusion, and that constantly trying to protect the self-delusion is the cause of anxiety and suffering (Chang et al., 2014). The Dalai Lama (1997) discussed that knowledge of ultimate existence, in which there is no independent self, leads to the cessation of the attachments of grasping and aversion, as there is no separate thing left to be attached.

In Western psychology, there is often a focus on building up a sense of self, with a focus on the development of a healthy self-concept that is well-adjusted (e.g., good self-
esteem, has their needs met, has healthy relationships). The Eastern view of the self is similar, however, in the Eastern view, the development of the self does not stop at needs fulfillment and includes a transcendence of the individual, or dualistic self, to a place of no-self (Immergut & Kaufman, 2014; Shiah, 2016). A number of key terms within the Eastern contemplative traditions are used to convey experience beyond the self-other distinction: the notion of the ‘no-self’ (anatman, anatta in Pali), non-dual awareness, or the Buddhist notion of emptiness. Each of these concepts, which share a significant amount of overlap, provide a theory that posits the non-existence of a separate static self. Instead, these concepts point to the possibility of realising the true nature of the self, a self that is non-dual and that is empty of inherent existence. Realisation of this non-dual self is considered synonymous with true liberation, or self-realisation.

In Buddhism, the theory surrounding ‘no-self’ is based on the notion that everything in experience is empty of inherent existence and that all experience is transient, including the experience of a separate self. In Buddhism, the perceived self is discussed as no more than a representation of the five aggregates: form, feeling, perception or conception, volition, and consciousness (Hanh, 1998). However, there is no separate static self of which to speak of, just a collection of these five transient workings that are perceived to be a separate, enduring self (Hanh, 1998; Ando, 2009). There has also been some empirical investigation into notions of Buddhist ‘emptiness’. Van Gordon et al. (in press) conducted an in-depth study into the impact of emptiness meditation (e.g., meditation on the notion of emptiness) on experienced meditation practitioners. They found that meditators that engaged in emptiness meditation increased their levels of nonattachment to the self to a greater extent than a control group engaging in general mindfulness meditation.

In addition to the theory relating to no-self is the theory from the Vedic texts relating to nonduality (advaita). The core theme of nonduality is that reality has no separation and
that any perceived separation is a creation of the mind, which can only understand experience in relation to other experience (e.g., understanding light as a concept in relation to the concept of dark). Realization of the nondual reality and nondual awareness is identified as the ultimate goal of all meditation practices and is posited as one of the core components by which meditation produces positive psychological outcomes (Berman & Stevens, 2015). Costeines (2009) conducted a qualitative investigation of people who had achieved a sense of non-dual awareness. They found a unifying characteristic in almost all of the individuals studied was a sense of nonattachment to things as well as nonattachment to the notion of a separate self. Nondual awareness has also been researched as an underlying mechanism of meditation that unifies the heterogeneous meditation styles. In Buddhism, the Mahamudra proposes that nondual mindfulness is a way to remove the self/other distinction (Dunne, 2011).

There is also some evidence in neuroscience for a nonattachment to self. From a neurological perspective, there is no such a thing as a single pointed self that can be found in the brain (Metzinger, 2003). However, there are elements of the brain associated with self-reference. Research has located areas of the brain that support self-referential processing which are impacted by mindfulness training (Holzel et al., 2011). Holzel et al. (2011) posits that one of the mechanisms underlying the benefits of mindfulness, is cessation of identification with a static self and seeing the self as something transient along with other stimuli. They argue that through the practice of mindfulness meditation, one displays meta-awareness which enables them to disengage from the self-referential narrative present in daily life.

The theory outlining the transient nature (and nonexistence) of the separate static self provided an initial point for the current investigation. Further investigation focused on trying to measure these concepts in a valid and reliable way. After exploring numerous avenues, the
focus of study 4 was the development and initial validation of a new ‘nonattachment to self’
scale, capturing the extent to which individuals could let go of a rigid identification with the
self. In light of research on the general nonattachment construct, displaying a nonattachment
to self appeared to be something that could be applicable to the general population. Also, as
an over self-focus is related to increased negative psychological symptoms (Kyrios et al.,
2016; Mor & Winquist, 2002), the focus of the research shifted towards a theoretical letting
go of fixated self-focus, which could address the role of self-focus in well-being and
suffering.

Chapter 3: Methods and Overview

3.1 Chapter Overview

This chapter provides an outline of the methodology used in the present four studies.
Given the limited word count when writing for publication, some elements of the
methodology that were not contained in the papers, are discussed.

3.2 Paper 1 (Chapter 5)

Paper 1 investigated whether nonattachment mediated the relationship of mindfulness
to psychological and subjective well-being depression, anxiety and stress.

3.2.1 Hypotheses and research questions

Two hypotheses were proposed in this study. First, it was hypothesised that
nonattachment and mindfulness would be related to increased psychological and subjective
well-being and reduced depression, anxiety and stress. It was further hypothesised that the
relationship between mindfulness and psychological well-being, positive and negative affect,
life satisfaction, depression, anxiety and stress would be mediated by nonattachment. This
was the first paper to systematically investigate nonattachment as a mediator of mindfulness
for a range of positive and negative well-being variables and, specifically, was the first to investigate the mediating role of nonattachment on mindfulness and positive and negative affect, stress, anxiety.

3.2.2 Methodology
The methodology used in study 1 involved the use of online questionnaires (see Appendices G & H) to collect data. The data from two samples \((n = 516, n = 416)\) was then analysed for correlational relationships, and to test whether nonattachment mediated the relationship of mindfulness to a range of positive and negative well-being variables. The correlational analyses were tested with Pearson’s product moments correlations, however, due to the non-normal distribution of some variables, Spearman’s rho was also used in the analysis. To test the mediation, a non-parametric bootstrapping method with 5000 samples (Preacher & Hayes, 2004) was conducted using the ‘PROCESS’ macro (Hayes, 2013) in SPSS.

The sampling for this study utilised two separate samples that were split into two sequential studies. In study 2, a new measure of mindfulness, the Five Factor Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer & Toney, 2006), was included to provide greater external validity and generalise the findings to multiple conceptualisations of mindfulness.

3.3 Paper 2 (Chapter 6)

Study 2 investigated the relationship of nonattachment to measures of optimal psychological development: wisdom, self-actualisation and self-transcendence. Further, this study investigated whether nonattachment mediated the relationship between mindfulness and each of these three measures.
3.3.1 Hypotheses and research questions

Two hypotheses were proposed in this study. First, it was hypothesised that nonattachment and mindfulness would be positively correlated with each measure of optimal psychological development: wisdom, self-actualisation and self-transcendence. It was further hypothesised that nonattachment would mediate the relationship of mindfulness to wisdom, self-actualisation and self-transcendence

3.3.2 Methodology

The methodology used in study 1 involved the use of online questionnaires (see Appendix K) to collect data. Data was collected from 388 participants and Pearson’s product moments correlations were used to test the correlational analysis in Study 2. To test the mediation for each of the dependent variables, nonparametric bootstrapping method analyses were conducted for each of the dependent variables. This methodology was conducted based on the methodology used in study 1 and other recently published mediation analyses.

3.4 Qualitative Study into Nonattachment (Chapter 6)

Study 3 involved a qualitative investigation of the presentation of nonattachment for individuals identifying as having very high or very low levels of nonattachment.

3.4.1 Hypotheses and research questions

A number of research questions governed the enquiry for study 3. Given the large amount of data (110,000 words) provided by participants, and the limited word count when writing for publication, the article could not include all the questions given to participants. The research questions that governed the enquiry were: (a) how does nonattachment and attachment present in individuals’ lives in general, (b) how does nonattachment and attachment play out in individuals’ relationships, (c) how does nonattachment and attachment
develop in individuals’ lives, (d) do levels of nonattachment and attachment impact individuals’ views on personal development and their personal development goals, (e) how do peak and nadir experiences relate to levels of nonattachment and attachment and (f) how do attachment and nonattachment specifically relate notions of self?

3.4.2 Methodology

The methodology used for the present study was a thematic analysis (using steps set out by Braun & Clark, 2006) of the transcripts of 24 in-depth interviews with individuals identified as scoring the very highest or the very lowest in levels of nonattachment, based on the scores of 1191 participants who had completed the 7-item nonattachment scale (NAS-7; Elphinstone, Sahdra & Ciarrochi, 2015).

3.4.2.1 Participants

Individuals for the qualitative interviews were sought from three samples used in three studies that had included the 7-item nonattachment scale (NAS-7; Elphinstone et al., 2015). These studies had also given participants the opportunity to provide their contact details and consent for a follow-up interview (see Appendix F for consent forms).

Sample 1 (N = 445) comprised 124 men and 321 women aged from 18 to 77 years (M = 35.77, SD = 11.84). Most respondents did not report any religious or spiritual affiliation (51.2%), others identified as Christian (22.2%); 10.8% identified with a general, nonreligious spirituality, 8.3% identified with a contemplative tradition (i.e., Buddhism, Vedanta), 2.7% identified as Muslim, 1% identified as Hindu and 3.8% other. The majority of participants (51.7%) engaged with a contemplative practice (e.g., meditation, mindfulness) for an average of 3.4 hours per week.
Sample 2 comprised 388 participants (71 men & 317 women) aged from 18 to 77 ($M = 35.33,$ $SD = 10.80$). Eighty percent of participants were born in Australia or New Zealand, 4.4% in the UK, 1.3% from India, 1.3% South Africa 1% from Iran, 1% from Malaysia and 11% other. Most respondents did not state any religious or spiritual affiliation (64.2%) or identified as Christian (21.9%); 5.4% identified with a general, nonreligious spirituality, while 2.6% identified with a contemplative tradition (i.e., Buddhism, Vedanta), 2.3% identified as Muslim, 1% identified as Hindu and 2.8% other.

Sample 3 comprised 338 respondents (262 women & 76 men) ranging from 18 to 75 years ($M = 34.43,$ $SD = 11.60$). The respondents predominantly identified as Anglo-European (82.6%), followed by Asian (7%), Indian and sub-continent (2.6%), Middle Eastern (2%), African (1.7%), New Zealander or Pacific Islander (1.7%) or other (2.2%). Most respondents did not state any religious or spiritual affiliation (51.2%) or identified as Christian (24.4%); 13.1% identified with a general, nonreligious spirituality, while 5.2% identified with a contemplative tradition (i.e., Buddhism, Vedanta), 1.7% identified as Muslim, 1.2% identified as Hindu and 3.1% other.

Participants from sample 1 were recruited in two ways. First, psychology students from a mid-sized university in Melbourne, Australia were given course credit for completing the questionnaire ($n = 363$). Second, participants were sourced by a snowball method, via a social media website (See Appendix J), where a brief description of the study was posted with a link to the online questionnaire ($n = 82$). Participants from samples 2 and 3 were all undergraduate psychology students from a mid-sized Melbourne university that gained course credit for completing the questionnaire.

It was decided that 12 interviews would be conducted for each of the high and low nonattachment groups based on the recommendations set out by Guest, Bunce, and Johnson.
(2006), for qualitative interviews to reach data saturation. To identify the 24 participants for the interviews, all data was sorted according to their scores of the NAS-7. All participants that had provided their contact details (either email or phone number), that had the highest and lowest scores in nonattachment, were contacted to confirm if they agreed to participate in a follow-up interview. Participants from the high nonattachment group had scores ranging from 39 to 42 (\(M = 41.42, \ SD = 1.00\)), with 75% having the highest score possible. There was significantly more variability in the low nonattachment group, with nobody having the lowest score possible, with scores ranging from 10 to 25 (\(M = 19.33, \ SD = 4.30\)). Once contacted, approximately 50% of participants responded favourably and agreed to be interviewed, either via the video messaging service Skype, or in person. The remaining 50% did not respond to the researcher’s emails or declined to participate in the interviews when spoken to.

3.4.2.2 Interviews

The questions developed for the interview were based on the theoretical and empirical literature into nonattachment and were created in consultation with the research team. The interviews were semi-structured, with questions being open-ended to allow interviewees to take the interviews in the direction they wanted. Further, an initial trial interview was conducted where feedback was requested from the interviewee. Based on the structure of the initial interview, no major changes were made, and the decision was made to continue with the following 24 interviews.

3.4.2.3 Data analysis

The data were analysed according to the steps for the thematic analysis set out in Braun and Clark (2006; see Table 2 in Chapter 6). The initial stage of the analysis involved the transcription of the interviews by the primary researcher, with ideas and initial themes being noted along the way. The transcriptions and subsequent analysis of the 24 interviews
consisted of more than 110,000 words and was a very in-depth and lengthy process. During this process, the decision was made to focus on a number of the key areas of the interviews; (a) nonattachment in general life, (b) nonattachment and relationships, (c) the development of nonattachment, and (d) nonattachment/attachment and personal development. A number of quotes capturing themes presented in the article, that were not able to be included in the article due to word limits, have been included in Appendix B.

It was decided that the other areas of the interview, involving peak and nadir experiences, and nonattachment to self-related thoughts and feelings, would not be a focus of the paper due the word limits and limited scope involved in writing for publication. However, these topics provided cogent themes in support of the main themes explored in the paper, and yielded further evidence that the processing of major life experiences could be important in building nonattachment. Furthermore, the themes explored, relating to individuals’ thoughts and feelings about themselves, provided interesting findings suggesting that attachment to self-related stimuli had a strong negative impact on an individuals’ quality of life. Interviewees who were low on nonattachment were very strongly affected by their self-focused thoughts and feelings and described that these thoughts and feelings could trigger a strong negative affective response that they found difficult to ignore. This finding provided support for the fourth study investigating the benefits of being nonattached to the self.

3.5 Development of the Nonattachment to Self Scale (Chapter 7)

Following on from the data gathered about nonattachment to self-related stimuli in study 3, study 4 focused on the development and validation of a new measure, the nonattachment to self (NTS) scale. Developing the NTS scale attempted to empirically measure one of the underlying theories in the Eastern contemplative traditions, that focuses
on the importance of letting go of attachment to a separate static self (Harris, 2014). The scale creation and validation process sought to develop a measure of NTS that was empirically distinct to general nonattachment and self-compassion. A further aim of the study was to ensure the new measure of NTS was a psychometrically valid construct that displayed positive correlations with theoretically aligned constructs and measures of well-being and adaptive functioning. For example, NTS was expected to be positively correlated with well-being and adaptive psychological functioning, as well as negatively correlated with measures of ill-being and maladaptive psychological functioning. NTS was also tested for discriminant validity to ensure that it was not capturing a dissociation from the self or lack of self-awareness.

3.5.1 Methodology

Much of the methodology for study 4 is outlined in the research paper, however, some additional information regarding this study is outlined in this section, as it was unable to be included in the paper due to length requirements. Data was collected for study 4 from each of the three samples outlined in study 1 and 2 \((n = 516, n = 416, n = 388)\).

3.5.1.1 Item creation

Initially, the idea for the NTS scale was to create a measure akin to Buddhist notions of no-self and emptiness. The idea was to capture the extent to which individuals had realised the illusory nature of the self and had experienced moments of oneness or nondual awareness. This initial process included a consultation with experts in the field. The first consultation involved an expert in philosophy who specialised in the Buddhist construct of no-self. This initial consultation provided more questions than answers and highlighted the potential difficulties in measuring aspects of experience that are transcendent (e.g., an experience of no-self did not appear to be quantitatively measurable). Future consultation
with the research team and other experts in the field led to a shift from the earlier focus, to a measure capturing the extent to which people can let go of a rigid fixation on the self, or a ‘nonattachment to self’. NTS was defined as the absence of fixation on self-related concepts, thoughts and feelings, and a capacity to flexibly interact with these concepts, thoughts and feelings without trying to control them. Based on this initial consultation process and resulting definition of the proposed construct, an initial item pool of 116 items was created.

A second stage of consultation with experts in the field involved discussion of the appropriateness of items and any concerns regarding the measurement of the construct. A conscious decision was made by the researcher not to focus strictly on Buddhism, as nonattachment to self is a core component of many spiritual traditions (Thubten, 2009). This consultation process involved speaking with seven experts. These included experts aligned with Mahayana and Theravadin Buddhism (3), psychologists aligned with Buddhist psychotherapy (1), theological psychologists (1), and philosophers and practitioners with expertise in theories aligned with no-self (2). The writer also consulted numerous primary texts (e.g., Abhidhamma, 3rd century BCE; Upanishads, 8th-5th BCE.) and contemporary texts from Eastern contemplative traditions that address notions of no-self and nonattachment to self (e.g., Adyashanti, 2012; Hanh, 1998, 2006; Thubten, 2009). A key focus during this process was to create items that would be appropriate for non-meditators and individuals with no knowledge of the Eastern contemplative traditions.

3.5.1.2 Data analysis

The consultation period produced an item pool of 64 items that were included in the initial exploratory factor analysis (EFA; see Appendix A). These items explored notions of fixating and clinging on to positive thoughts and views of self, as well as fixating on or rejecting negative thoughts and feelings about the self. The initial items also attempted to
capture outcomes associated with taking a nonattached stance towards the self. A number of stages of item reduction outlined in the fourth paper highlighted similar themes. Items that focused excessively on either positive or negative self-related thoughts, feelings or concepts tended to cross-load on multiple factors. This appeared to be due to items such as ‘I am very critical of myself’ possibly capturing constructs such as depression or self-compassion, in addition to attachment/nonattachment to the self. Similarly, items that involved possible outcomes of being nonattached to the self, such as “I rarely feel the need to defend my views’, also tended to load on multiple factors. This indicates they did not solely result from a being nonattached to the self, and may have been capturing more general nonattachment, or holding rigid points of view. Towards the end of the item reduction process, it became clear that items that were less emotionally valanced, and which addressed all self-related thoughts, feelings and concepts, tended to best capture the NTS construct. The final seven items (see Appendix A) captured a nonattachment to self-related thoughts, feelings and definitions.

3.5.1.3 Confirmatory factor analyses and validation

Following the EFA, two confirmatory factor analyses (CFAs) were conducted on two further samples (see chapter 7 for a comprehensive review). The analyses provided evidence for a single factor, 7-item measure of NTS. Convergent and discriminant validity, comparing the new NTS scale with other measures, utilised Pearson’s product moment correlations. Two further CFAs, using nested models (Bagozzi, Yi & Phillips, 1991), were used to test the distinctiveness of the NTS scale from similar constructs of nonattachment and self-compassion.

3.6 Ethics Clearances and Authorship

The Swinburne University Human Research Ethics Committee (SUHREC) issued clearances for the research reported in this dissertation. Copies of each clearance, including
modifications are included in Appendix C. Details of the extent of the contributions made by each author of each paper are set out in Appendix D.
Chapter 4: Article 1 - Nonattachment and psychological and subjective well-being, depression, anxiety and stress.

4.1 Brief Introduction

The first study in this thesis was undertaken to further clarify the relationship between nonattachment and multiple measures of well-being and ill-being. Utilising multiple measures of well-being and ill-being was important for this study as these measures combined to capture a comprehensive well-being that was pervasive in quality of life. That nonattachment was found to be associated with multiple aspects of well-being and ill-being was an especially important finding from the first study, as it was the first step on which to develop further studies. During the early research phase of the study it became clear that the greatest opportunity to provide novel research in this area was to investigate both mindfulness and nonattachment in relation to a range of well-being and ill-being measures. Specifically, to investigate whether nonattachment was a mechanism of mindfulness that mediated its relationship to these measures. Although there had been some preliminary work in this area, no comprehensive investigation had been conducted on the mediating role of nonattachment on the relationship of mindfulness and a range of well-being variables.
4.2 Article 1: Nonattachment mediates the relationship between mindfulness and psychological and subjective well-being, depression, anxiety and stress.
Nonattachment mediates the relationship of mindfulness to subjective and psychological well-being, depression and stress

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Abstract

The Buddhist construct of nonattachment is a related, yet distinct construct to mindfulness. Whereas mindfulness refers to an individual's open, present-centred awareness of what is happening in their field of consciousness, nonattachment denotes an absence of attempts to control what is happening in their field of consciousness. The aim of the present research was to determine whether nonattachment is a mechanism of mindfulness that mediates its relationship to psychological and subjective well-being, depression, anxiety and stress. Two sequential studies were conducted. Study 1 (N = 516) established that nonattachment mediated the relationship of mindfulness to psychological and subjective well-being. Study 2 (N = 416) demonstrated that nonattachment also mediated the relationship of mindfulness to depression, anxiety and stress. In combination, these studies are the first to demonstrate that the relationship of mindfulness to a broad range of psychological outcomes is at least partially determined by nonattachment. These findings provide insight into how mindfulness impacts mental health and have implications for the development and assessment of mindfulness-based interventions.
Introduction

The Buddhist construct of nonattachment refers to the “subjective quality of not being stuck or fixated on ideas, images, or sensory objects and not feeling an internal pressure to acquire, hold, avoid, or change.” (Desbordes et al., 2015 p. 25). A nonattached person is free from mental fixations (Sahdra, Shaver & Brown, 2010; Sahdra & Shaver, 2013) and interacts with their experience without trying to cling on to desirable experiences or avoid unpleasant experiences (Sahdra, Ciarrochi, Parker, Marshall & Heaven, 2015; Sahdra, Ciarrochi & Parker, 2016). The overarching aim of the present study was to examine the role of nonattachment as a mechanism of mindfulness in relation to a range of well-being variables not previously investigated. Nonattachment is related but distinct from mindfulness (Feliu-Soler, 2016; Sahdra et al., 2016). Nonattachment has been shown to have a stronger impact on mental health when measured alongside mindfulness (Lamis & Dvorak, 2013) and preliminary research suggests nonattachment may be a mechanism that helps to explain the positive impact of mindfulness on well-being (Sahdra et al., 2016). However, no comprehensive investigation into the mediating role of nonattachment has been conducted. A key contribution of the present research is to extend previous analyses by examining whether nonattachment mediates the relationship of mindfulness to psychological well-being (PWB), positive affect (PA), negative affect (NA), anxiety and stress among Australian adults. This introduction outlines the nature of nonattachment and its relationship to mindfulness and discusses previous work on mindfulness and nonattachment in relation to well-being, depression, anxiety and stress.

The Nature of Nonattachment

In the Buddhist context, attachment refers to the energy involved in clinging to experiences perceived as positive and the avoidance of experiences perceived as negative (Agarwal, 1992; Altobello, 2009; Sahdra et al., 2010; Shone, 1992). For example, attachment
can manifest an aversion to embarrassment. Here, the attachment itself causes anticipatory worry, rumination and suffering, quite separate from any embarrassment suffered. Similarly, attachment may be evident when a person attempts to cling to the identity of their youth. In this case, when that identity is inevitably challenged through aging and progression of life circumstances, the individual may experience pining, worry, or feelings of inadequacy. Theoretically, the more an individual engages with attachments, the more their well-being can be impacted by processes associated with attempts to control experience. These include fear, anxiety, worry or rumination. Further, the certain failure of efforts to control experiences diminishes the ability to interact with the experience in an open and flexible way. Achieving nonattachment, therefore, should afford an individual a greater sense of mastery over their environment and an ability to engage more adaptably with experience.

**Nonattachment and Mindfulness**

A quality that is closely related, but distinct from nonattachment, is mindfulness. Mindfulness is at the core of Buddhist teachings (Hanh, 1999) and has been investigated both as a trait and in the context of mindfulness-based interventions. Although mindfulness is conceptualised in a number of different ways, two consistently identified aspects of mindfulness are; an open awareness and observing of experience, and a mindful ‘acceptance’ of experience (Bishop et al., 2004; Coffey, Hartman & Fredrickson, 2010; Lindsay & Creswell, 2015, 2017). Being more mindful is associated with better mental health in a range of areas such as psychological well-being (e.g., Brown & Ryan, 2003), depression and anxiety (e.g., Desrosier et al., 2014; Tran et al., 2014), cognitive rigidity (Greenberg, Reiner & Meiran, 2010) and emotional regulation (Teper, Segal & Inzlicht, 2013).

Research shows mindfulness to be consistently related to nonattachment (Feliu-soler et al., 2016; Ju & Lee, 2015; Lamis & Dvorak, 2013; Sahdra et al., 2010, 2016). However, it
is also empirically distinct from each of its components (Sahdra et al., 2016). This distinction is important as nonattachment shares similarities to the mindfulness component of ‘acceptance’. The ‘acceptance’ component of mindfulness involves a non-reactive and non-judging interaction with experience, and is theorized to explain the positive effect of mindfulness training on reducing negative affective experiences (Lindsay & Creswell, 2017). Measures of acceptance, such as nonjudgment and non-reactivity (from the five factor mindfulness questionnaire; FFMQ; Baer et al., 2006), capture a non-judgment of self-related stimuli (e.g., “I criticize myself for having irrational or inappropriate emotions” - reversed) and an absence of automatic reactions to challenging situations (e.g., “in difficult situations, I can pause without immediately reacting”). In contrast, nonattachment captures a broader quality associated with the process of letting go of unhelpful thoughts and feelings, as well as a general attitude of non-clinging/non-aversion towards experience (e.g., “I can enjoy my family and friends without feeling I need to hang on to them.”). Theoretically, an individual’s mindful, nonreactive, present-centred awareness of what is happening in their field of consciousness (Desbordes et al., 2014), can facilitate a letting go of control and a general nonattached attitude towards experience, without the need for specified outcomes.

Nonattachment, Mindfulness and Well-being.

Although research on the effects of nonattachment on well-being is limited, the relationship between mindfulness and positive and negative well-being outcomes is well documented. Mindfulness has been linked with two prominent models of well-being: subjective well-being (SWB) and psychological well-being (PWB; Ryff, 1989; Ryff & Keyes, 1995). SWB is aligned with hedonia and relates to feeling good about one’s life and more short-term, pleasure-based happiness (Bauer, McAdams, & Pals, 2006). PWB is a more pervasive measure of well-being aligned with eudaimonia (Ryan & Deci, 2001; Ryff, 1989). PWB involves a range of areas of a person’s life such as the quality of their relationships and
their sense of meaning and purpose in life (Ryff, 1989; Ryff & Keyes, 1995). Mindfulness is associated with increased PWB (e.g., Brown & Ryan, 2003; Hanley, Warner & Garland, 2015; Hollis-Walker & Colosimo, 2010; Howell, Dopko, Passmore & Buro, 2010; Klainin-Yobas et al., 2016) and increased SWB (e.g., Hanley et al., 2015; Wenzel, von Versen, Hirschmuller & Kubiak, 2015). Being more mindfully present and being wilfully open and nonjudging towards what arises in the field of consciousness appears to be associated with better well-being and quality of life, although the precise mechanisms of this relationship need further elucidation.

Unlike mindfulness, there is little research on the association of nonattachment with well-being, although the existing evidence suggests a relationship exists. When developing the nonattachment scale (NAS), Sahdra et al. (2010) found nonattachment was related to three measures of SWB; life satisfaction, positive affect (PA) and negative affect (NA), as well as four dimensions of Ryff’s (1989) PWB scale; personal growth, self-acceptance, positive relationships with others and purpose in life. Wang et al. (2016) also found nonattachment to be related to life-satisfaction, PA and NA. In theory, letting go of the need for experience to be one way or other means that well-being can be experienced independently of external circumstances (Sahdra et al., 2010). This would limit the negative impact of mental fixation involved in trying to control experience and assist in maintaining a more stable sense of well-being, and a generally more positive attitude towards the world (Huxley, 1937).

Nonattachment, Mindfulness and Depression, Anxiety and Stress

As well as increased well-being, mindfulness is also related to lower levels of negative psychological symptoms. Being more mindfully aware of experience without judgment can assist in limiting the effects of negative psychological symptoms. Higher
levels of mindfulness are related to reduced depression (e.g., Coffey & Hartman, 2008; Feliu-Soler et al., 2016; Gecht et al., 2014; Kohls, Sauer & Walach, 2009) anxiety (e.g., Coffey & Hartman, 2008; Feliu-Soler et al., 2016; Kohls et al., 2009) and stress (e.g., Feliu-Soler et al., 2016; Zimmaro et al., 2016). Moreover, mindfulness-based interventions have a beneficial impact on the treatment of many negative psychological symptoms (Keng, Smoski & Robins, 2011). Developing greater mindfulness can assist in dealing with negative psychological symptoms, however, the precise mechanisms through which this occurs are unclear.

Recent research suggests nonattachment may be an important factor in the reduction of negative psychological symptoms. Wang et al. (2016) identified a relationship between nonattachment and reduced psychological distress, and Sahdra et al. (2010) and Chao and Chen (2013) showed individuals higher on nonattachment had lower levels of depression and anxiety. The findings correspond with the Buddhist view that letting go of attachments is an important factor in the reduction of suffering (The Dalai Lama, 1997, 2001; Sahdra et al., 2010; Sumedho 1989). By letting go of the need to control experience, individuals may be able to reduce the negative psychological symptoms associated with trying to be in control (e.g., anxiety, worry, rumination). This may also limit the distress produced when such attempts to control experience are inevitably disrupted (e.g., fear, anxiety, and depression).

The beneficial impact of nonattachment on negative psychological symptoms is also evident when measured alongside mindfulness. Lamis and Dvorak (2013) found that in comparison to mindfulness, nonattachment was a significantly stronger predictor of reduced depressive symptoms and suicidal rumination than mindfulness. Thus, when an individual is experiencing depressive symptoms, including self-focused ruminative thinking, being engaged with an open, present-centred awareness can be helpful. However, reducing fixation on experience, and letting go of attempts to control it, may have a stronger impact on reducing these negative psychological symptoms.
Nonattachment as a Mediator of the Relationship of Mindfulness to Positive and Negative Well-being Outcomes

Prior to this study there has been no comprehensive investigation on the mechanistic relationship of nonattachment to the effect of mindfulness on well-being. However, some preliminary evidence supports nonattachment as a mechanism that explains the impact of mindfulness on well-being. Sahdra et al. (2016) found nonattachment significantly mediated the relationship of three facets of the Five Factor Mindfulness Questionnaire (FFMQ; Baer et al., 2006); describing, nonjudgment, and non-reactivity with life satisfaction and life effectiveness. Coffey, Hartman and Fredrickson (2010) also found that nonattachment mediated the relationship between the mindfulness component of ‘acceptance’ and the well-being factor of ‘flourishing’. These preliminary findings suggest the influence of mindfulness on certain aspects of well-being may be at least partially explained by nonattachment. However, it is uncertain whether this mediating role of nonattachment extends to other measures of well-being.

Although mindfulness has shown to be related to increased positive affect and decreased negative affect (e.g., Brown & Ryan, 2003), the mediating influence of nonattachment has not been explored. Theoretically, being mindful of the flow of experiences assists in developing nonattachment towards affective experiences. Being more nonattached towards experience could limit the impact of negative affect (e.g., distress, nervousness, irritability) when attempts to control experiences fail. The same may be true for positive affect, although the process is less straightforward. While nonattachment may allow for a greater flow of positive affective experiences, rather than impeding the flow of positive affective experiences by clinging to them, whether this mediates the impact of mindfulness on positive affect is unclear.
The mediating role of nonattachment has not been studied in relation to mindfulness and PWB among Australian adults. So far, only one study has investigated this relationship. Ju and Lee (2015) used translated Korean versions of the mindful attention and awareness scale (MAAS; Brown & Ryan, 2003), NAS, and PWB scales to investigate whether nonattachment mediated the relationship between mindfulness and PWB among Korean adults. Using the Baron and Kenny (1986) method for mediation they found the impact of mindfulness on PWB was partially explained by the relationship of nonattachment to PWB. However, this study was on a Korean sample using variations of the MAAS, NAS and PWB measures, and used a method of mediation considered to be outdated (Hayes, 2009). The present study sought to investigate whether these findings are applicable to Australian adults when using the more robust bootstrapping approach to mediation and a measure of mindfulness more closely aligned with its Buddhist origins.

The present study also investigated nonattachment as a mediator of mindfulness in relation to depression, anxiety and stress. There is some previous evidence to suggest that the extent to which individuals engage in attachments can mediate the impact of mindfulness-based interventions (MBIs). When conducting a meta-analysis on the mechanisms of MBIs, Gu et al. (2015) found evidence that worry and rumination significantly mediated the effect MBIs on reducing negative mental symptoms. As worry and rumination both represent attachments and an inability to let go of fixation on experience, the findings indicate that the impact of mindfulness practice on mental health can be mediated by reducing levels of attachment.

Similarly, using the FFMQ to measure mindfulness, Tran et al. (2014) showed the influence of mindfulness on depression was mediated by nonattachment. Nonattachment predicted lower levels of depression, even when the general effects of mindfulness were taken into account. Tran et al. (2014) noted the potential for nonattachment to be an
important mechanism in the treatment of depression and in reducing depressive symptoms. Tran et al.’s findings provide some initial insights into the possible mechanisms through which mindfulness impacts depressive symptoms. However, whether this relationship extends to other negative psychological symptoms (e.g., anxiety, stress) needs further investigation.

**The Present Project**

The aim of the present study was to investigate the relationship of mindfulness and nonattachment to positive and negative psychological outcomes in two sequential studies. Study 1 investigated the relationship of mindfulness and nonattachment to psychological and subjective well-being. Study 2 was then developed to test whether the relationship of mindfulness and nonattachment extended to high prevalence clinical symptoms of depression, anxiety and stress. Specifically, the first study sought to replicate and extend previous research and ascertain whether nonattachment represents a mechanism through which mindfulness positively impacts PWB and SWB. It was hypothesised that (1) nonattachment and mindfulness would be positively related to higher PWB, life satisfaction and PA, and negatively related to NA, and that (2) nonattachment would mediate the relationship of mindfulness to PWB, life satisfaction, PA and NA. The focus of Study 2 was to replicate and extend previous research to determine whether nonattachment represents a mechanism which mediates the (ameliorating) effect of mindfulness on depression, anxiety and stress. It was hypothesised that (1) higher levels of nonattachment and mindfulness would be related to decreased depression, anxiety and stress and that (2) nonattachment would mediate the relationship of mindfulness on depression, anxiety and stress.
Study 1: The relationship of mindfulness and nonattachment to psychological and subjective well-being

Method

Participants and procedure

Participants were students from a mid-sized Australian university who participated in a university-wide project on student well-being. Students received an email inviting them to complete an online survey which provided the opportunity to receive personalised feedback relating to a number of psychological constructs (e.g., nonattachment, academic motivation, adaptability). The sample comprised 516 students (190 men & 326 women) ranging from 17 – 69 years of age ($M = 28.58, SD = 10.30$). Students varied in years of completed study ranging from ‘6 months or less’ – ‘more than 5 years’ ($median = 1$ year). Students also varied in socioeconomic status, with household income (in $AUD) ranging from “$0 - $25,000” to “$200,000+” ($median = “$50,001 - $75,000”).

Measures

Nonattachment – Nonattachment was assessed using a 7-item version of the nonattachment scale (NAS-7; Elphinstone, Sahdra, & Ciarrochi, 2015; Sahdra et al., 2016) taken from the larger 30-item nonattachment scale (NAS; Sahdra et al., 2010). The NAS-7 was used as it has shown good reliability and validity when compared with the original 30-item scale (Feliu-Soler et al., 2016; Sahdra, et al., 2016). Participants rated their agreement with 7 items (e.g., “I can let go of regrets and feelings of dissatisfaction about the past”) using a Likert scale from 1 (Strongly Disagree) to 6 (Strongly Agree). Previous studies using the NAS-7 have shown it to be a valid and reliable measure (e.g., Feliu-Soler et al., 2016; Sahdra et al., 2016).

Mindfulness – The Freiburg Mindfulness Inventory (FMI; Walach et al., 2006) was specifically chosen as it is a single factor measure deeply rooted in the Buddhist origins of the
mindfulness construct (Bergomi et al., 2013; Buchheld, Grossman & Walach, 2001; Walach et al., 2006). The scale consists of 14 items (e.g., “When I notice an absence of mind, I gently return to the experience of the here and now”) rated on a 4-point Likert scale from 1 (Rarely) to 4 (Almost Always). Previous research has shown the FMI measures to be a valid and reliable, single factor measure of mindfulness (e.g., Kohls et al., 2009; Walach et al., 2006).

**Life Satisfaction** – Life satisfaction was measured with the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larson & Griffen, 1985). The SWLS consists of five items (e.g., “In most ways my life is close to ideal”) rated on a 7-point scale from 1 (Strongly Disagree) to 7 (Strongly Agree) for scale totals ranging from 5 to 35. The SWLS is a widely used and well-validated measure of life satisfaction (e.g., Bauer, McAdams & Sakaeda, 2005; McMahan & Estes, 2010; Sahdra et al., 2010).

**Positive and Negative Affect** - The Positive and Negative Affect Schedule (PANAS; Watson, Clark & Tellegen, 1988) consists of 10 items measuring positive affect (PA; e.g., ‘Strong’, ‘Interested’) and 10 assessing negative affect (NA; e.g., ‘Nervous’, ‘Ashamed’). Items are rated on a 5-point Likert scale ranging from 1 (Very Slightly or Not at All) to 5 (Extremely) evaluating the extent to which the item has been experienced over the past three months. Total scores range from 10 to 50 on each subscale of positive and negative affect. Factor analysis has consistently confirmed the two-factor structure of the PANAS (e.g., Merz & Roesch, 2011; Tuccitto, Giacobbi Jr. & Leite, 2010) and research has found positive and negative affect to be two distinct constructs (Busseri, Sadava & Decourville, 2007; Huelsman, Nemanick & Munz, 1998). Therefore, the individual components of positive and negative affect were measured separately. The PANAS has been shown to be a valid and reliable measure (Wang et al., 2015; Watson et al., 1988; Whitehead & Bates, 2016).
**Psychological well-being** - Psychological well-being was measured by a 30-item version of the Psychological Well-being (PWB) Scale (Ryff, 1989; Ryff & Keyes, 1995). The PWB scale yields a total score by summing the 30 items as well as individual scores for the six dimensions of *Autonomy, Purpose in Life, Environmental Mastery, Positive Relationships with Others, Personal Growth,* and *Self-Acceptance,* consisting of 5 items each. All items (e.g., “I like most aspects of my personality”) are rated on a 6-point scale from 1 (Strongly Disagree) to 6 (Strongly Agree). Fifteen negatively worded items are reverse scored to provide a total PWB score from 30 to 180, and a score from 5 to 30 for the individual dimensions. The PWB scale has demonstrated good validity and reliability (e.g., Bauer et al., 2005; Grossbaum & Bates, 2002; Whitehead & Bates, 2016).

**Results**

**Nonattachment, Mindfulness and Well-being**

The means, standard deviations, and internal consistency reliabilities for all measures are presented in Table 1. Macdonald’s Omega was used as a test of internal reliability due to Cronbach’s alpha being sensitive to bias in self-report data (Tiziano-Hermosilla & Alvarado, 2016). Most internal consistency reliabilities were acceptable, however, the internal reliability was lower than acceptable for the measure *autonomy.* As an overall measure of PWB was used in the analysis, and item analysis revealed the scale would not have greater internal consistency if any of its items was deleted, the decision was made to proceed with the analysis.
Table 1

*Means, Standard Deviations and Internal Reliabilities for all Measures in Study 1*

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<tbody>
<tr>
<td>Nonattachment</td>
<td>34.64</td>
<td>7.64</td>
<td>.84</td>
</tr>
<tr>
<td>FMI</td>
<td>38.01</td>
<td>6.73</td>
<td>.84</td>
</tr>
<tr>
<td><strong>SWB</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Affect</td>
<td>35.74</td>
<td>7.44</td>
<td>.90</td>
</tr>
<tr>
<td>Negative Affect</td>
<td>24.67</td>
<td>8.52</td>
<td>.89</td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td>22.06</td>
<td>7.12</td>
<td>.89</td>
</tr>
<tr>
<td><strong>PWB</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purpose in Life</td>
<td>19.42</td>
<td>3.53</td>
<td>.75</td>
</tr>
<tr>
<td>Environmental Mastery</td>
<td>19.25</td>
<td>3.28</td>
<td>.82</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>24.98</td>
<td>3.71</td>
<td>.74</td>
</tr>
<tr>
<td>Self-Acceptance</td>
<td>21.42</td>
<td>5.16</td>
<td>.85</td>
</tr>
<tr>
<td>Autonomy</td>
<td>22.00</td>
<td>4.14</td>
<td>.68</td>
</tr>
<tr>
<td>Positive Relationships</td>
<td>19.42</td>
<td>4.04</td>
<td>.83</td>
</tr>
</tbody>
</table>

*N = 516, SWB = Subjective Well-being, PWB = Psychological Well-being, FMI = Freiburg Mindfulness Inventory.*

The relationships among the variables were examined with Pearson’s correlation coefficients and are presented in Table 2. All correlations were in line with expectations. As hypothesised, higher scores on mindfulness and nonattachment were associated with greater life satisfaction and PA and less NA. They were also associated with higher levels PWB and the individual facets of purpose in life, environmental mastery, personal growth, self-acceptance, autonomy and positive relationships with others.
Table 2

*Intercorrelations Among Nonattachment, Mindfulness and Subjective Wellbeing, Psychological Wellbeing and Depression, Anxiety and Stress.*

<table>
<thead>
<tr>
<th></th>
<th>Nonattachment</th>
<th>Mindfulness</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SWB</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Affect</td>
<td>.44**</td>
<td>.45**</td>
</tr>
<tr>
<td>Negative Affect</td>
<td>-.44**</td>
<td>-.39**</td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td>.47**</td>
<td>.40**</td>
</tr>
<tr>
<td><strong>PWB</strong></td>
<td>.62**</td>
<td>.54**</td>
</tr>
<tr>
<td>Purpose in Life</td>
<td>.27**</td>
<td>.24**</td>
</tr>
<tr>
<td>Environmental Mastery</td>
<td>.50**</td>
<td>.46**</td>
</tr>
<tr>
<td><strong>Mastery</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Growth</td>
<td>.37**</td>
<td>.29**</td>
</tr>
<tr>
<td>Self-Acceptance</td>
<td>.58**</td>
<td>.54**</td>
</tr>
<tr>
<td>Autonomy</td>
<td>.38**</td>
<td>.30**</td>
</tr>
<tr>
<td>Positive Relationships</td>
<td>.33**</td>
<td>.32**</td>
</tr>
</tbody>
</table>

*Note: N = 516, SWB = Subjective Well-being, PWB = Psychological Well-being, ** = p < .001*

Mediation analyses was conducted for each dependent wellbeing variable using a nonparametric bootstrapping method (see Preacher & Hayes, 2004) with 5,000 samples (Shrout & Bolger, 2002) to derive a 95% confidence interval (p < .05) for the mediating effect of nonattachment. All variables in the analyses were converted to z values to obtain standardised effect sizes in which relative contributions can be compared. In accordance with the procedure of Sahdra et al. (2016), age was entered as a covariate. This method employed the PROCESS Macro provided by Hayes (2013).

In each mediation analysis greater mindfulness, as assessed by the FMI, was associated with increased nonattachment (a path). The results for the direct relationships
between nonattachment and each wellbeing variable (i.e., $b$ path), the initial relationship between mindfulness and each wellbeing variable (i.e., $c$ path), and after the inclusion of nonattachment ($c'$ path) are shown in Figure 1. Bootstrapping revealed that the confidence intervals for the indirect effect of nonattachment on each of PWB, PA, NA and life satisfaction (see Table 3) did not contain zero, thus the results indicate that nonattachment significantly mediated the relationship between mindfulness and higher levels of PWB, PA, and life satisfaction, and lower levels of NA.

**Figure 1.** Path model for mediation with nonattachment entered as the mediator of the relationship of mindfulness to psychological well-being, life satisfaction, positive affect and negative affect. Coefficients in parenthesis are direct relationship without the inclusion of the mediator. Note: ** $p < .001$, * $p < .05$
Table 3.

*Indirect Effects of Nonattachment on the Relationship of Mindfulness to Psychological Well-being, Positive Affect, Negative Affect, and Life Satisfaction.*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Indirect Effect</th>
<th>SE</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWB</td>
<td>.29</td>
<td>.35</td>
<td>.23</td>
<td>.37</td>
</tr>
<tr>
<td>Positive Affect</td>
<td>.15</td>
<td>.04</td>
<td>.08</td>
<td>.23</td>
</tr>
<tr>
<td>Negative Affect</td>
<td>-.21</td>
<td>-.04</td>
<td>-.30</td>
<td>-.14</td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td>.25</td>
<td>.04</td>
<td>.17</td>
<td>.34</td>
</tr>
</tbody>
</table>

\(N = 516\), SE = Standard error, LLCI = Lower level confidence interval, ULCI = Upper level confidence interval

**Study 1 Discussion**

Study 1 investigated the extent to which nonattachment mediates the relationship between mindfulness and overall well-being. The key findings of Study 1 were that, as hypothesised, individuals higher on nonattachment and mindfulness had higher levels of PWB, PA and life satisfaction, and lower levels of NA. Also as hypothesised, nonattachment mediated the relationship of mindfulness to PWB, PA, NA and life satisfaction.

The findings align with previous research showing nonattachment mediates the relationship between mindfulness and life satisfaction (Sahdra et al., 2016) and PWB (Ju & Lee, 2015). As an extension of those findings, the mediating role of nonattachment was shown to be evident for a single factor measure of mindfulness, aligned with its Buddhist origins, that has not previously been examined. A unique finding was the mediating effect of nonattachment on the relationship of mindfulness to levels of PA and NA. The relationship of mindfulness to an individual’s positive and negative feelings is partially explained by their
levels of nonattachment. Being mindful of one’s experiences may indeed be associated with increased positive and decreased negative affective experiences (e.g., Brown & Ryan, 2003) but the ability to do so without suppressing or clinging to experiences may be of greatest benefit.

Interestingly, the results suggest that when individuals mindfully let go of trying to control positive and negative affective experiences, it relates to increased positive and decreased negative affective experiences. It may be that negative affective experiences, such as being ‘distressed’ or ‘scared’, are compounded when attempts are made to avoid them (Hayes et al., 1996). Similarly, trying to hold on to and control positive experiences does not seem to create more positive experiences. Rather, it may be that the more an individual can let go of attempts to control or hold on to positive experiences, the more they can experience freedom (Sumedho, 1989) and greater frequency of positive affective states. Being aware of these attachments through mindfulness permits a certain distance from the experience that can enable nonattachment, thus limiting the impact of negative thought patterns on affective states.

Another important finding in Study 1 was the identification of the mediating role of nonattachment in relation to PWB among Australian adults. The results extend the findings of Ju and Lee (2015) in relation to Korean adults and provide evidence for the mediating role of nonattachment on PWB using the original versions of the NAS and PWB scales and a more robust mediation analysis. PWB is often a long-term goal of meditation and mindfulness practices and is aligned with self-realisation (Waterman, 2007; Whitehead & Bates, 2016) and what people equate as representing the true ideal of happiness in life (McMahan & Estes, 2010). A person’s ability to let go of the need to hold on to or avoid any particular experience is important for an open, mindful awareness of experience to lead to the promotion of longer-term, multi-faceted pervasive well-being.
Study 2: The relationship of mindfulness and nonattachment to depression, anxiety and stress.

Method

Participants and Procedure

Participants for study 2 were first-year psychology students from a mid-sized Australian university that received course credit for participation. Participants completed an online survey and responses were collected over a six-month period. Additional demographic data not available in Study 1 was collected in Study 2. The sample comprised 416 participants consisting of (79 men & 337 women) aged from 18 to 77 (M = 35.38, SD = 10.70). Eighty-one percent of participants were born in Australia or New Zealand, 5% in the UK, 2% from India and the subcontinent, 1% from South Africa, 1% from Iran, 1% from Malaysia, 1% from China and 8% Other. Most participants were employed (full-time = 41%; part-time = 16%; casual = 8%), with 21% identifying as full-time students. The majority of participants obtained an educational degree equivalent or higher than diploma (38% diploma, 15% bachelor’s degree, 5% postgraduate diploma, 4% master’s degree, 8% other).

Materials

Nonattachment. The NAS-7 (Elphinstone et al., 2015; Sahdra et al., 2016) was again used to assess nonattachment, in addition to measures of mindfulness, depression, stress, and anxiety.

Mindfulness. The Five Factor Mindfulness Questionnaire (FFMQ; Baer et al., 2006) was chosen as a measure of mindfulness as using multiple measures across studies can increase the external validity of the findings (Norris, Lambert, Dewall & Fincham, 2012). Using the FFMQ in the second study also sought to replicate Sahdra et al.’s, (2016) successful model using the FFMQ in a mediation model with nonattachment. The FFMQ was developed from items present in other mindfulness scales and consists of 39 items (e.g.,
“When I do things, my mind wanders off and I'm easily distracted”) capturing the five factors of Observe, Awareness, Describe, Nonreactivity, and Nonjudgment. Each factor has eight items except for Nonreactivity which has seven items. All items were rated on a Likert scale from 1 (Never or Very Rarely True) to 5 (Very Often or Always True). The FFMQ is a widely used measure of mindfulness that has shown consistent validity and reliability (Baer et al., 2006; Sahdra et al., 2016).

**Depression, Anxiety and Stress** – The 21-item Depression, Anxiety, and Stress Scale (DASS-21; Lovibond & Lovibond, 1995) was used to measure depression, anxiety and stress. The DASS–21 comprises three subscales of 7 items each capturing symptoms of depression (e.g., “I felt that life was meaningless”), anxiety (e.g., “I felt scared without any good reason”) and stress (e.g., “I felt I found it difficult to relax”). Respondents rate the extent to which they have experienced symptoms over the previous week on a scale ranging from 0 (“Did not apply to me at all”) to 3 (“Applied to me very much, or most of the time”). The DASS-21 is a widely-used measure with good validity and reliability (e.g., Feliu-Soler et al., 2016; Sahdra et al., 2010).

**Results**

The means, standard deviations, and internal consistencies for all measures are presented in Table 4. All measures had good internal consistency and all means fell within expected parameters. All correlations (see Table 5) were in line with expectations; higher levels of mindfulness and nonattachment were significantly related to lower levels of depression, anxiety and stress. Additionally, due the non-normal distribution of depression, anxiety and stress in the sample, Spearman’s rho was also used to test the correlations (Bishara & Hittner, 2012).
Table 4.

Means, Standard Deviations and Internal Reliabilities for Study 2

<table>
<thead>
<tr>
<th>Measures</th>
<th>Mean</th>
<th>SD</th>
<th>ω</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonattachment</td>
<td>30.78</td>
<td>6.39</td>
<td>.88</td>
</tr>
<tr>
<td>FFMQ</td>
<td>68.08</td>
<td>9.83</td>
<td>.90</td>
</tr>
<tr>
<td>Depression</td>
<td>3.41</td>
<td>4.31</td>
<td>.92</td>
</tr>
<tr>
<td>Anxiety</td>
<td>3.42</td>
<td>4.42</td>
<td>.95</td>
</tr>
<tr>
<td>Stress</td>
<td>5.27</td>
<td>4.58</td>
<td>.94</td>
</tr>
</tbody>
</table>

N = 416, FFMQ = Five Factor Mindfulness Questionnaire

Table 5

Correlations Among Nonattachment and Mindfulness, and Depression, Anxiety and Stress using Spearman’s Rho.

<table>
<thead>
<tr>
<th>Measures</th>
<th>Nonattachment</th>
<th>Mindfulness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>-.46**</td>
<td>-.48**</td>
</tr>
<tr>
<td>Anxiety</td>
<td>-.48**</td>
<td>-.42**</td>
</tr>
<tr>
<td>Stress</td>
<td>-.50**</td>
<td>-.42**</td>
</tr>
</tbody>
</table>

Note: N = 416, ** p < .001

Mediation analyses were conducted in accordance with the approach used in Study 1. To obtain standardised Beta coefficients all variables were converted to Z-values, and age was entered as a covariate. Higher levels of mindfulness as assessed by the FFMQ were associated with greater nonattachment and all direct and indirect pathways were significant (See Figure 2). Bootstrapping revealed the confidence intervals for the indirect effect of nonattachment on each of depression, anxiety and stress (see Table 6) did not contain zero.
Thus, the results indicate that nonattachment significantly mediated the relationship between mindfulness and lower levels of depression, anxiety, and stress.

Figure 2. Path model for mediation with nonattachment entered as the mediator of the relationship of mindfulness to depression, anxiety and stress. Coefficients in parenthesis are direct relationship without the inclusion of the mediator. Note: ** p < .001

Table 6

<table>
<thead>
<tr>
<th>Measure</th>
<th>Indirect Effect</th>
<th>SE</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>-.14</td>
<td>-.03</td>
<td>-.21</td>
<td>-.07</td>
</tr>
<tr>
<td>Anxiety</td>
<td>-.14</td>
<td>-.04</td>
<td>-.22</td>
<td>-.07</td>
</tr>
<tr>
<td>Stress</td>
<td>-.16</td>
<td>-.03</td>
<td>-.23</td>
<td>-.10</td>
</tr>
</tbody>
</table>

\(N = 416\), SE = Standard error, LLCI = Lower level confidence interval, ULCI = Upper level confidence interval
**Study 2 Discussion**

As expected, greater mindfulness and nonattachment were related to reduced depression, anxiety and stress. Furthermore, the relationship of mindfulness to depression, anxiety and stress was mediated by nonattachment. Being more mindful appears, therefore, to relate to higher levels of nonattachment which contributes to reduced symptoms of depression, anxiety and stress.

The findings build on earlier research showing nonattachment mediates the relationship of mindfulness to depression (Tran et al., 2014). A novel finding is that the mediating role of nonattachment extends beyond depression to the relationship of mindfulness to stress and anxiety. Higher levels of mindfulness can promote greater nonattachment which can then assist in ‘letting go’ of unhelpful psychological strategies (Lamis & Dvorak, 2013) that contribute to a range of negative psychological symptoms (Tran et al., 2014) that includes depression, anxiety and stress.

The positive relationship of mindfulness to reduced stress was partially determined by the ability to let go of the need to control experience through clinging or avoidance. This finding is especially important as mindfulness-based interventions often aim to alter individuals’ responses to stress (Cicchetti, 2016). The present data provide insight into the mechanisms of this process. Attachments indicate a tension or conflict with what is occurring. Being mindfully aware of this tension with experience, and the need for it to be different, creates an opportunity to consciously let go of the tension, resulting in an acceptance of experience, greater presence and lower levels of stress.

That the mediating role of nonattachment also extends to the relationship of mindfulness to anxiety suggests being mindfully aware of one’s experience assists the reduction of anxiety but that mindfully removing attachment towards experience may be most beneficial. This supports previous work indicating that certain aspects of mindfulness, such
as mindful observing, may not be helpful in reducing anxiety (Baer et al., 2006; Coffey et al., 2010; Desrosier et al., 2014; Lindsay & Creswell, 2017) unless it is done without reactivity (Desrosier et al., 2014). Being more mindful provides the conditions for nonattachment which can assist the individual in reducing unhelpful psychological strategies, such as rumination and worry that increase anxiety (Desrosier et al., 2014; Gu et al., 2015; Lamis & Dvorak, 2013).

These combined results support the contention of Lindsay and Creswell (2017) that to reduce negative affective responses, the most important aspect of mindfulness and mindfulness practice is a non-reactive, nonjudgmental acceptance of experience. However, as the FFMQ contains factors measuring nonreactivity and nonjudgment, the present findings indicate that nonattachment also mediates the role of non-reactive acceptance on negative psychological symptoms. Theoretically, the results indicate that the most efficacious pathway to reducing negative psychological symptoms is to mindfully engage with experience without attempts to try and control it.

**General Discussion**

Overall, the findings from the two studies highlight that nonattachment represents a quality that is influential in relation to PWB, SWB and depression, anxiety and stress. Results suggest that the more an individual can let go of fixating on their experience, the better their quality of life in general. The results extend previous studies and provide more comprehensive evidence that nonattachment represents a mechanism that helps to explain the positive relationship of mindfulness on a range of positive and negative psychological outcomes. Mindfulness appears to be a pathway to building greater nonattachment which can limit the negative impact of attachments involved in trying to control experience. The findings provide novel evidence that letting go of attempts to control experience, through
mindfulness, appears to be important in the promotion of greater psychological well-being and positive affect, and the reduction of negative affect, stress and anxiety.

These findings have implications for the development and evaluation of the efficacy of mindfulness interventions. The findings support growing evidence for the benefits of mindfulness-based interventions for psychological health (Keng et al., 2011), and provide insight into the mechanisms underlying these benefits. Because nonattachment acts as a mediator of mindfulness, whether an intervention promotes nonattachment may be an important factor in the formulation and projected outcomes of mindfulness-based interventions. The findings also highlight a distinction between mindfulness practices directed at trying to feel good or ‘at peace’, and those whose goal is to be nonattached to experience. The results indicate that mindfulness practices which facilitate a letting go of the need for experience to be any particular way (even if that way is calm, happy or peaceful) may be most beneficial for overall psychological health. Furthermore, the present findings highlight the potential for interventions designed for the specific purpose of building nonattachment, whether this is via mindfulness or another method. Finding an effective method to assist individuals to let go of attempts to fixate on controlling their experience is an important area for future study (Sahdra et al., 2016), and has implications for improving individuals’ overall well-being and mental health in general.

A limitation of the present research was that both samples were drawn from a university student population and there were significantly more women than men. Although Sahdra et al. (2010) found no gender difference in levels of nonattachment, research is needed to confirm the findings in more diverse and representative samples. Another important consideration is that the study design was cross-sectional and the findings are correlational and cannot determine causality. Although, theoretically, developing greater nonattachment would seem to result in developing greater well-being (Dhiravamsa, 1975; Sahdra et al.,
2016), it is also possible that greater well-being may assist a person to develop greater nonattachment. A longitudinal study on the effects of interventions designed to promote nonattachment on mental health would provide insight into the causal relationship if one exists. It is also important to acknowledge that different measures of mindfulness were used in study 1 and 2. Although having multiple measures of the construct can increase the external validity of the findings (Norris et al., 2012), it can also be seen as a limitation as the studies are not directly replicating other. It may be that using the FMI in Study 2 may not have yielded significant findings or vice versa, however, the FMI and the FFMQ have shown to be highly correlated (r = .70; Siegling & Petrides, 2014) and both discuss measuring mindfulness that includes elements of acceptance and awareness (Kohls et al., 2009; Tran et al., 2013). Thus, utilising two different measures of mindfulness that are strongly related was not seen a major conceptual issue in this study.

Another consideration is the absence of measures of social desirability. Although social desirability is an important factor to acknowledge for self-report measures, research shows that social desirability may only have a limited impact in relation to well-being (Kozma & Stones, 1987; Mancini & McKeel, 1986; McCrae, 1986), mindfulness (Brown & Ryan, 2003) and nonattachment (Sahdra et al., 2010). However, as social desirability was not tested specifically in this study, its effects cannot be known.

In conclusion, the present findings support and extend previous research that has established nonattachment as an important factor in relation to greater PWB, SWB and reduced depression, anxiety and stress. The present research highlights that nonattachment is an important mechanism that partially explains the relationship of mindfulness to positive mental health outcomes. The findings provide insight into how mindfulness relates to a range of positive and negative psychological outcomes and has implications for how mindfulness interventions may be developed or evaluated. Furthermore, the results indicate the need for
further research on nonattachment in relation to well-being and mental health and highlight the potential benefit of interventions designed specifically for the promotion of nonattachment.

References


data: Comparison of Pearson, Spearman, transformation, and resampling approaches.  

*Psychological Methods, 17*(3), 399-417. doi:10.1037/a0028087


Klainin-Yobas, P., Ramirez, D., Zenaida, F., Sarmiento, J., Thanoi, W., Ignacio, J., & Lau, Y.


reliability in realistic conditions: congeneric and asymmetrical measurements.


Chapter 5: Nonattachment and Advanced Psychological Development

5.1 Brief Introduction

The second study was undertaken for two reasons. First, the idea for this article came from the theory outlining the importance given to nonattachment as an optimal sign of development in the Eastern contemplative traditions. In Buddhism, nonattachment is considered as a quality aligned with spiritual development and wisdom into the transient nature of experience. It is also discussed in relation to self-realisation and enlightenment. The decision was made to investigate whether this theoretical relationship to optimal psychological and spiritual growth in the contemplative traditions, was also evident with measures of optimal psychological growth in Western psychology.

The second reason for conducting study 2 was to replicate and extend the results of the first study, that found nonattachment to be a mechanism of mindfulness that mediates its impact. Study 2 investigated whether this mechanistic relationship extended to measures of psychological development. As mindfulness practice is associated with building insight and personal growth, the second study sought to investigate whether the benefits of mindfulness in this area could be partially explained by nonattachment.
5.2 Article 2 – Growing by letting go: Nonattachment and mindfulness as qualities of optimal psychological development.
Growing by letting go: Nonattachment and mindfulness as qualities of advanced psychological development.

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Conflict of interest: The authors declare they have no conflict.
Abstract

Psychological development continues throughout adulthood, with some individuals reaching advanced levels of adult psychological development. A focus of the present study was to investigate the Buddhist construct of nonattachment in relation to three elements of advanced psychological development: wisdom, self-actualisation and self-transcendence. The possibility that nonattachment mediates the relationship of mindfulness to these aspects of optimal psychological development was also investigated. Results from 348 university students supported expectations that nonattachment was positively related to wisdom, self-actualisation and self-transcendence and confirmed similar positive relationships for mindfulness. In addition, nonattachment was found to act as a partial mediator of mindfulness for all three aspects of advanced adult psychological development. Interestingly, an alternate mediational pathway was discovered as mindfulness was shown to mediate the relationship of nonattachment to measures of advanced psychological development. The results have implications for understanding the different pathways towards developing wisdom, self-actualisation and self-transcendence and provide insight into the possible mechanisms of mindfulness and nonattachment that help to explain their positive impact.
Introduction

A number of theories of adult development propose that people can continue growing and developing across a range of areas of psychological functioning well into adult life (Cook-Greuter, 2000; Levenson, Aldwin & Cupertino, 2001; Loevinger, 1976). The higher stages of adult psychological development are believed to involve, “increasing flexibility, conceptual complexity, and tolerance for ambiguity; recognition and acceptance of internal contradictions; a broader and more complex understanding of the self, others, and the self in relation to others” (Hartman & Zimberoff, 2008 p.3). These qualities accord with three well-studied components of advanced psychological development; wisdom (Ardelt, 2008; Gluck, Bluck, Baron & McAdams, 2005; Thomas, Bangen, Ardelt, Jeste, 2017), self-actualisation (Maslow, 1962; Rogers, 1961) and self-transcendence (Levenson et al. 2001; Levenson, Jennings, Aldwin & Shiraishi, 2005; Loevinger, 1976). Recent research suggests certain practices aligned with Buddhist psychology may assist people in reaching such advanced stages of growth and development (Hartman & Zimberoff, 2008). The present study investigated two constructs within Buddhist psychology, nonattachment and mindfulness, in terms of their alignment with the higher stages of psychological development. The present study is the first to investigate whether nonattachment relates to wisdom, self-actualisation, and self-transcendence. Further, as recent research suggests nonattachment may be a mechanism of mindfulness (Sahdra, Ciarrochi & Parker, 2016), the present study also investigated whether nonattachment mediates the impact of mindfulness on these indicators of advanced psychological development.

Nonattachment, mindfulness and advanced psychological development

To understand the construct of nonattachment, it is important to define ‘attachment’, as the term has different meanings in different disciplines. In psychology, attachment often refers to attachment style, referencing a child’s attachment to the caregiver (see Bowlby,
1969; Ainsworth, Blehar, Waters & Wall, 1978) or the quality and safety of a person’s relationships as an adult (Hazan & Shaver, 1987). However, in the context of nonattachment, attachment refers to the energy involved in clinging to experiences perceived as positive and the avoidance of experiences perceived as negative (Altobello, 2009; Agarwal, 1992; Sahdra et al., 2010). Nonattachment, therefore, involves an interaction with experience without fixation, or needing to control it though clinging or avoidance (Sahdra et al., 2010). The quality of nonattachment is at the core of the Buddhist teachings (Gammage, 2006; Hanh, 1999; Thubten, 2009), is identified as an ideal quality to possess (Banth & Talwar, 2012; Upadhyay & Vashishtha, 2014) and is associated with greater presence and maturity (Sahdra et al., 2010).

In contrast, mindfulness results from an open, nonjudging awareness towards what is unfolding in the field of consciousness as it occurs moment to moment (Kabat-Zinn, 2003) and represents one of the stages on the noble eight-fold path that is central to Buddhist teachings (Dalai Lama, 1997). Some preliminary evidence suggests mindfulness is positively associated with the optimal qualities of self-actualization (Beitel et al., 2014), wisdom (Beaumont, 2011) and self-transcendence (Vago & Silbersweig, 2012), however, the precise mechanisms of this relationship are unclear. Buddhist theory suggests that greater mindfulness can allow an individual to develop greater insight into the transient nature of reality and the futility of trying to control the ever-changing flow of experience, which in turn builds nonattachment and reduces the negative impact that attachments have on an individual’s quality of life (Dalai Lama, 1997, 2001). Accordingly, nonattachment has been shown to mediate the positive impact of mindfulness in relation to life satisfaction, life effectiveness (Sahdra et al., 2016) and ‘flourishing’ (Coffey, Fredrickson & Hartman, 2010).

Nonattachment and mindfulness are qualities developed over time that are both likely to create the conditions that foster advanced psychological development. Although empirical
evidence exists for mindfulness in relation to advanced psychological development, no such empirical evidence exists for nonattachment. Potentially, the more an individual learns, grows and develops throughout their adult life and encounters major life experiences (e.g., losing a job, the break-up of a relationship), the more they learn the futility of attachments aimed at trying to control experience (Sahdra et al., 2010). Letting go of impeding attachments may facilitate a freedom and thriving in life, allowing individuals develop at advanced levels. This is likely to include the development of wisdom, self-actualisation, and self-transcendence.

**Wisdom**

Wisdom is a multifaceted construct (Ardelt, 2003; Clayton & Birren, 1980; Le, 2008) seen as a sign of optimal development across all cultures and religions, despite its various definitions and conceptualisations (Le, 2008, 2011). Within Buddhism, wisdom involves understanding the interdependent nature of reality, the transience of all experience, and understanding there is no way to truly hold on to any fixed experience (Dalai Lama, 2001; Hanh, 1999, 2006). Within Western psychology, Ardelt (2003) conceptualised wisdom as a developmental quality encapsulating three dimensions of: affective, cognitive and reflective wisdom. These dimensions capture a selflessness and compassion for others (Ardelt, 2008); a comprehension of life with deep meaning and significance, especially intra and interpersonal matters (Ardelt, 2003; Thomas et al., 2017); and an unbiased, decentered view of reality which acknowledges the existence of multiple perspectives (Thomas et al., 2017).

Wisdom develops across the lifespan (Ardelt, 2003; 2007; Bluck & Gluck, 2005; Staudinger, 1999) by growing from life experiences (Bluck & Gluck, 2005; Mansfield, McLean, & Lilgendahl, 2010). Learning from experience through careful reflexivity and an ability to challenge one’s subjectivity and take on multiple perspectives, is believed to
produce wisdom and a greater understanding of the ambiguity and paradoxes in life (Ardelt, 2011). Wisdom is associated with greater emotional complexity, less emotional reactivity and a greater propensity to see things from the bigger picture (Grossman, Gerlach, & Denissen, 2016).

Within Buddhist literature, mindfulness is important in the development of wisdom (Anālayo, 2010; Buchheld, 2001; Purser & Milillo, 2014). Mindfulness assists an individual to witness experience without attaching to the apparent independent nature of existence and develop wisdom into the ever-changing nature of things (Hanh, 1999). Accordingly, Beaumont (2011) found that people with higher levels of mindfulness also had higher levels of wisdom. Mindfulness was also positively associated with all three dimensions of Ardelt’s (2003) three-dimensional wisdom scale (3D-WS); cognitive, affective and reflective wisdom. Individuals with an open, present-centred awareness tended to understand the complexities and ambiguities of experience (reflective wisdom), understand experience on a deeper level (cognitive wisdom), and were less self-focused and more compassionate towards others (affective wisdom).

Nonattachment may also be strongly related to wisdom and may represent a mechanism through which mindfulness impacts the development of wisdom. Nonattachment involves an engagement with experience without fixation on specific beliefs and opinions that may limit knowledge and understanding of the complexities and ambiguities in life. This is highlighted in a speech by the Dalai Lama (2011):

“I am a Buddhist but I should not develop attachment to Buddhism, because once you develop attachment to your faith, then your mind will become biased; then you can’t see the value of other traditions.”
Letting go of attachment to certain views allows an individual to be open to other perspectives and thus promotes greater understanding and wisdom.

The cognitive and reflective factors of wisdom highlight an individual's ability to engage with multiple perspectives and to understand life more deeply by building greater self-awareness and self-insight (Ardelt, 2003, 2008). In contrast, being attached to experience involves narrow fixation on experience being a specific way, and thus limits awareness or insight beyond that which is fixated on. Wisdom arises when an individual can be mindfully aware of the flow of experience without attachment (Hartman & Zimberoff, 2009). Nonattachment also appears to be related to the affective aspect of interpersonal wisdom. Being more nonattached is associated with being more present in life and less impacted by the fixation on self-related thoughts and feelings (Sahdra et al., 2010) which may theoretically create a greater space for understanding and empathising with others (Sahdra et al., 2015). Accordingly, nonattachment has been associated with greater empathy, peer-rated kindness, and helpfulness (Sahdra et al., 2015), and greater relational harmony cultivated through compassion (Wang et al., 2015). Theoretically, living without attachment allows a flow of experience in which individuals can develop insight into the ambiguous and complex nature of experience, contributing to a deeper understanding of life and greater understanding and compassion towards others.

**Self-actualisation**

Self-actualisation is perhaps one of the most prominent theories of optimal adult development (Bauer, Shwab & McAdams, 2011). Following the achievement of basic needs, self-actualisation is defined as achievement of a person’s highest potential (Beaumont, 2009; Jones & Crandall, 1986) and a movement from self-fixation towards selflessness and altruism (D’Souza & Gurin, 2016). Maslow (1968) described self-actualizing individuals as having a
strong propensity to deeply understand and experience the self and others as existing interdependently. Self-actualisers also display resistance to enculturation and engage with ethical issues from multiple perspectives (Bauer et al., 2011; Maslow, 1970).

Some evidence suggests being more mindful is associated with greater self-actualisation. Brown and Ryan (2003) found higher levels of mindfulness captured by an open, present centred awareness, related to higher levels of self actualisation, measured by the Measure of Actualization of Potential (MAP; Lefrancois, Leclerc, Dube, Hebert & Gaulin, 1997). In a more comprehensive investigation, Beitel et al. (2014) reported that higher mindfulness was associated with greater self-actualisation measured by the Short Index of Self-Actualization (SISA; Jones & Crandall, 1986). They also found self-actualisation to be related to three facets of mindfulness; acting with awareness, acting without judgement, and describing, but not observing. These findings highlight that mindfully attending to experience with concentration and acceptance are qualities aligned with self-actualisation (Maslow, 1971). The specific mechanisms through which mindfulness impacts self-actualisation may also be explained by the facilitation of nonattachment.

Nonattachment appears conceptually aligned with self-actualisation. Maslow (1954) proposed that self-actualised people are autonomous, have a deep acceptance of reality and are motivated by personal growth. They also demonstrate a potential to live in the moment and to gain their sense of satisfaction from their own self, without being impacted by unnecessary mental patterns such as guilt, shame and regret (see also Beitel et al., 2014). Similarly, being highly nonattached can be characterised as ‘radical acceptance’, with guilt, shame, and regrets being clear examples of attachments characterised by wanting experience to be other than it is (Whitehead, Bates, Elphinstone, Yang & Murray, 2018). Both self-actualised and nonattached individuals also display an ability to gain satisfaction internally, rather than relying on outside circumstances. The well-being of nonattached individuals is
not contingent on the nature of their experiences or how they interact with their environment (Coffey et al., 2010; Sahdra et al., 2010). It is therefore likely that individuals who have attained higher levels of self-actualisation will also be more nonattached.

**Self-transcendence**

Self-transcendence is a core component in theories of advanced psychological development (Ardelt, 2008; Bauer & Wayment, 2008; Cook-Greuter, 2000; Frankl, 1966; Hartmann & Zimberoff, 2008; Manners & Durkin, 2000) and refers to moving beyond the concerns of the individual self. People high in self-transcendence are less focused on self-interest, have a more flexible self-construct, are less fixed on their own perspectives, and have greater concern for others and life in general (Cook-Greuter, 2000; Levenson et al., 2005). Similar to wisdom and self-actualisation, self-transcendence involves a greater understanding of one’s own, and others’ implicit biases and the ability to act without the influence of conditioned and unconscious tendencies (Le, 2011). Although originally measured as a trait, Maslow (1971) saw self-transcendence as the highest stage of development. To Maslow, it represented a quality that separated self-actualisers who focused on fulfilling their own potential, from those who moved beyond the fulfillment of their own self-focused needs and potentials (Koltko-Rivera, 2006). Frankl (1966) also argued that, in addition to self-actualizing and fulfilling one’s sense of meaning, people also have the potential to transcend the concerns of an individual self.

Mindfulness and meditation have been identified as important factors in the pathway towards self-transcendence (Cook-Greuter, 2000). Theoretically, being mindful of the flow of experience assists the witnessing of the self from an objective space, allowing for insight into the biases and egoic nature of the self, which can be a transcendent process (Epstein, 1988; Hartman & Zimberoff, 2008). In developing the Adult Self-Transcendence Inventory,
Levenson et al. (2005) found adult self-transcendence to be positively associated with meditation experience. Individuals who meditated displayed higher levels of self-transcendence than non-meditators.

There is also neuroscientific evidence that mindfulness and mindfulness meditation can affect levels of self-transcendence. Farb et al. (2007) found mindfulness-based interventions could significantly reduce activity in areas of the brain associated with self-reference. They discovered that those who had undergone training in mindfulness-based stress reduction (MBSR) showed reduced activity in the brain during a self-referencing exercise relative to those who had not undergone the course. Thus, exhibiting mindfulness towards experience may indeed assist in uncovering the self-biases in unconscious thoughts and actions (Anālayo, 2010; Vago & Silbersweig, 2014). The practice of mindfulness appears to reduce self-focus and promote meta-awareness which in turn enables disengagement from the self-referential narrative present in daily life (Holzel et al., 2014; Vago & Silbersweig, 2014). Through the reduction of self-referential processing and a more objective view of the self (Holzel et al., 2011), increased mindfulness may facilitate a movement away from self-focus and towards self-transcendence. It is also important to investigate the mechanisms of this relationship and potentially, whether nonattachment is a mechanism through which mindfulness allows an individual to move away from self-focus.

Although the relationship between nonattachment and self-transcendence has not been investigated, the two show conceptual overlap. In Levenson et al.’s (2001) model of adult development, the self is discussed as existing relative to attachments that can be transcended through nonattachment and a greater understanding of the self (Ardelt, 2008; Levenson et al., 2001). For self-transcenders, there is a movement away from a self-focus towards an other- or universal-focus (Cook-Greuter, 2000; Hartman & Zimberoff, 2008; Vago & Silbersweig, 2012). The transcendence of self-focus through understanding the self and the unconscious
biases that impact experience (Le, 2011), allude to the importance of nonattachment in this process of becoming aware of one’s own states and the workings of the ego. As the self is at the centre of attachments (Chan, 2008; Levenson et al., 2001), letting go of attachments to one’s self-serving biases allows transcendence by engendering a life not governed by self-interest or self-focus. Nonattachment, therefore represents a process of letting go of attachment to the separate static self (Hanh, 2006). Reducing the need for experience to be one way or other also lessens the need to fixate on the self as being of utmost importance, or being any way in particular. Without the self-fixation associated with attachment, an individual can be more present and other-focused (Sahdra et al., 2015).

The present study

The present study investigated the relationships among mindfulness, nonattachment, and the constructs of wisdom, self-actualisation and self-transcendence. As nonattachment has been shown to mediate the positive impact of mindfulness on a range of variables (e.g., Sahdra et al., 2016; Whitehead et al., 2018), mediational analyses were also conducted. It was hypothesised that nonattachment and mindfulness would be positively correlated to wisdom, self-actualisation and self-transcendence (Hypothesis 1) and that nonattachment would at least partially mediate the relationships of mindfulness with each of wisdom, self-actualization, and self-transcendence (Hypothesis 2).

Method

Participants and procedure

The sample comprised 348 respondents (270 women & 78 men) ranging from 18 to 64 years ($M = 34.29 \ SD = 11.33$). The respondents predominantly identified as Anglo-European (83.1%), followed by Asian (6.8%), Indian and sub-continent (2.5%), Middle Eastern (2%), African (1.7%), New Zealander or Pacific Islander (1.7%) or other (2.2%).
Most respondents did not state any religious or spiritual affiliation (50.8%) or identified as Christian (24.6%); 13.3% identified with a general, nonreligious spirituality, while 5.1% identified with a contemplative tradition (i.e., Buddhism, Vedanta), 1.7% identified as Muslim, 1% identified as Hindu and 3.1% other.

Participants were undergraduate psychology students at a mid-sized metropolitan university in Australia who completed the study in exchange for course credit. It is also important to note that the majority of participants were mature age, studying psychology online, which increased the mean age in the sample. Students accessed an online questionnaire and could complete the questionnaire in their own time. Data was collected over a six-month period. All research conducted adhered to ethical guidelines and received ethics clearance through the appropriate ethics committee.

**Measures**

**Nonattachment.** The 7-item Nonattachment Scale (NAS-7; Elphinstone, Sahdra, & Ciarrochi, 2015; Sahdra et al., 2016) was taken from the larger 30-item nonattachment scale (NAS; Sahdra et al., 2010). The seven items (e.g., “I can let go of regrets and feelings of dissatisfaction about the past”) are rated on a 7-point Likert scale from 1 (Strongly Disagree) to 7 (Strongly Agree). The NAS-7 shows good reliability and validity when compared with the original 30-item scale (Sahdra et al., 2016).

**Mindfulness.** The 20-item Five Factor Mindfulness Questionnaire (FFMQ; Baer et al., 2006; Tran, Gluck & Nader, 2013) was used as it is considered to be the most comprehensive measure of mindfulness (Sahdra et al., 2016). The five factors present in the FFMQ are Observe, Awareness, Describe, Nonreactivity, and Nonjudgment. Items (e.g., “When I do things, my mind wanders off and I'm easily distracted”) are rated on a Likert scale from 1 (Never or Very Rarely True) to 5 (Very Often or Always True).
**Self-actualisation.** The Short Index of Self-actualization (SISA; Jones & Crandall, 1986) is a 15-item widely used self-report measure derived from Shostrom’s (1964) Personal Orientation Inventory. Items (e.g., “I believe that people are essentially good and can be trusted”) are rated on a 4-point Likert Scale from 1(Agree) to 4 (Disagree).

**Wisdom.** The 12-Item Three-Dimensional Wisdom Scale (3D-WS-12; Thomas et al., 2017) is a recently developed abbreviated version of the larger three-dimensional wisdom scale (3D-WS; Ardelt, 2003). The 3D-WS-12 has 12 items (e.g., “I can be comfortable with all kinds of people”) rated on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree). The 3D-WS-12 and has shown good reliability and validity when measuring a higher order single factor of wisdom (Thomas et al., 2017).

**Self-transcendence.** The self-transcendence subscale from the Adult Self-Transcendence Inventory (ASTI; Levenson et al., 2005) is a 9-item measure of self-transcendence. Items (e.g., “I do not become angry as easily”) are rated on a Likert scale from 1 (Disagree Strongly) to 4 (Agree Strongly). The ATSI is a well-established reliable and valid measure of self-transcendence when assessing the construct as a process of adult development (Le, 2011; Levenson et al., 2005).

**Results**

The means, standard deviations, and internal consistency coefficients for all measures are presented in Table 1. All means were within expected parameters and were normally distributed. Although Cronbach’s Alpha was lower than ideal (< .80) for some measures, Alphas were all .70 or above and determined to be good given the short length of the scales.
Table 1.


<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Alpha</th>
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</thead>
<tbody>
<tr>
<td>Nonattachment</td>
<td>32.30</td>
<td>6.27</td>
<td>.87</td>
</tr>
<tr>
<td>FFMQ</td>
<td>62.02</td>
<td>10.82</td>
<td>.83</td>
</tr>
<tr>
<td>Observe</td>
<td>14.38</td>
<td>3.24</td>
<td>.77</td>
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<tr>
<td>Aware</td>
<td>10.60</td>
<td>3.00</td>
<td>.70</td>
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<tr>
<td>Describe</td>
<td>12.14</td>
<td>3.36</td>
<td>.72</td>
</tr>
<tr>
<td>NonReact</td>
<td>12.73</td>
<td>2.98</td>
<td>.73</td>
</tr>
<tr>
<td>NonJudge</td>
<td>12.17</td>
<td>4.17</td>
<td>.80</td>
</tr>
<tr>
<td>Wisdom</td>
<td>42.48</td>
<td>7.31</td>
<td>.76</td>
</tr>
<tr>
<td>Self-Actualisation</td>
<td>43.90</td>
<td>6.00</td>
<td>.71</td>
</tr>
<tr>
<td>Self-Transcendence</td>
<td>37.32</td>
<td>6.47</td>
<td>.87</td>
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*N = 348, FFMQ = Five Factor Mindfulness Questionnaire*

Relationships among the variables are shown in Table 2. As hypothesised (Hypothesis 1), nonattachment and mindfulness were positively correlated with all measures of optimal psychological development; wisdom, self-actualisation and self-transcendence. These correlations were all moderate-to-strong, with nonattachment and mindfulness also showing a moderate positive correlation.
Table 2.

*Intercorrelation among Nonattachment, Mindfulness, Wisdom, Self-actualisation and Self-transcendence and Age.*

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
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<th>10</th>
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<tbody>
<tr>
<td>1. Nonattachment</td>
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<td>2. FFMQ</td>
<td>.58</td>
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<td>3. Observe</td>
<td>.28</td>
<td>.56</td>
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<td>4. Aware</td>
<td>.33</td>
<td>.63</td>
<td>.07</td>
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<td></td>
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<tr>
<td>5. Describe</td>
<td>.28</td>
<td>.67</td>
<td>.29</td>
<td>.35</td>
<td></td>
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<tr>
<td>6. NonReact</td>
<td>.61</td>
<td>.67</td>
<td>.41</td>
<td>.20</td>
<td>.26</td>
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<td>7. NonJudge</td>
<td>.41</td>
<td>.72</td>
<td>.12</td>
<td>.45</td>
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<td>8. Wisdom</td>
<td>.56</td>
<td>.63</td>
<td>.31</td>
<td>.39</td>
<td>.41</td>
<td>.47</td>
<td>.48</td>
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<td>9. Self-Actual</td>
<td>.64</td>
<td>.65</td>
<td>.30</td>
<td>.40</td>
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<td>.54</td>
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<td>10. Self-Transcend</td>
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<td>.46</td>
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<tr>
<td>11. Age</td>
<td>.23</td>
<td>.33</td>
<td>.16</td>
<td>.24</td>
<td>.23</td>
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<td>.25</td>
<td>.30</td>
<td>.30</td>
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</table>

*N = 348, All relationships are significant at the *p* < .001 except 1 = significant at *p* < .05 and 2 = nonsignificant.

Mediation analyses were conducted using the ‘Process’ SPSS macro developed by Preacher and Hayes (2013). All variables in the analyses were converted to z values to obtain standardised effect sizes in which relative contributions can be compared. In each mediation analysis greater mindfulness was associated with increased nonattachment (*a* path). The results for the direct relationships between nonattachment and each advanced psychological development variable (i.e., *b* path), the initial relationship between mindfulness and each advanced psychological development (i.e., *c* path), and after the inclusion of nonattachment (*c’* path) are shown in Figure 1. To test the significance of the mediation, a nonparametric bootstrapping method (see Preacher & Hayes, 2004) with 5000 resamples (Shrout & Bolger, 2002) was used to derive a 95% confidence interval for the impact of nonattachment. The indirect effect is significant (*p* < .05) if the upper and lower bounds of the 95% Confidence Interval (CI) do not include zero. Three separate analyses were conducted, with wisdom, self-
actualization, and self-transcendence entered in each separate analysis as the dependent variable. Mindfulness was entered as the independent variable and nonattachment as the mediator in each analysis. As age is known to play a role in the development of nonattachment (Sahdra et al., 2010), age was entered as a covariate to limit the effect of age on the dependent variables (see Sahdra et al., 2016). When entered as a covariate, in each mediation analyses, age ceased to be a significant predictor.

Figure 1. Path diagram depicting nonattachment as the mediator of mindfulness on the outcome variables of wisdom, self-actualisation and self-transcendence. Note. The coefficients in parenthesis represent the $c'$ path where the mediator was excluded from the analysis. **$p < .001$

Bootstrapping estimated the indirect effect of nonattachment on wisdom was estimated to lie between .10 and .24. The indirect effect of nonattachment on self-actualisation was estimated to lie between .16 and .30, while the indirect effect of nonattachment on self-transcendence was estimated to lie between .18 and .33, indicating that the mediating effect of nonattachment in each analysis was significant. Therefore, as the $c'$
paths were also significant in each case, greater nonattachment was found to partially mediate
the relationships between increased mindfulness and higher levels of wisdom, self-
actualisation, and self-transcendence.

**Alternate mediational model**

Although the results for mediation support the hypotheses, when testing for
mediation, in addition to having a strong theoretical basis, it is also important that
nonequivalent mediation models are not found to be statistically equivalent (Little, Card,
Bovaird, Preacher & Crandall, 2007). There is a strong theoretical and empirical basis for
nonattachment as a proposed mediator of mindfulness (Dhiravamsa, 1975; Montero-Marin et
al., 2016; Sahdra et al., 2016 Shapiro, Carlson, Astin, & Freedman, 2006). However, it has
previously been discussed that nonattachment is not only cultivated through mindfulness, and
other experiences that foster self-reflection may also facilitate the development of
nonattachment (Sahdra et al., 2010). Therefore, it is possible that building greater
nonattachment, through self-reflection, may foster greater mindfulness, and thus, greater
wisdom, self-actualisation and self-transcendence.

To test this, and rule out alternative mediation models, further bootstrapping analyses
were conducted to test whether mindfulness mediates the relationship of nonattachment to
wisdom, self-actualisation and self-transcendence. All variables were converted to z values
and age was entered as a covariate. Results showed the 95% confidence interval for the
indirect effect of mindfulness on wisdom was estimated to lie between .18 and .32, between
.16 and .29 for self-actualisation, and between .10 and .23 for self-transcendence. As none of
the estimations contained zero, the mediating effect of nonattachment in each analysis was
significant. The results indicate that even though Hypothesis 2 was supported, multiple
pathways may exist to building nonattachment and mindfulness which can in turn lead to
greater wisdom, self-actualisation and self-transcendence.
Discussion

The current study examined mindfulness and nonattachment in relation to three measures indicative of advanced psychological development. Findings were as hypothesised, with greater levels of nonattachment and mindfulness being positively correlated with higher levels of wisdom, self-actualisation and self-transcendence. This establishes the proposed positive relationship of nonattachment to advanced psychological development and replicates previous findings for the relationship of mindfulness and wisdom (Beaumont, 2011), self-actualisation (Beitel et al., 2014), and self-transcendence (e.g., Farb et al., 2007; Vago & Sibersweig, 2014). Also as hypothesised, nonattachment partially mediated the relationship of mindfulness with each of wisdom, self-actualization, and self-transcendence. This extends previous research on well-being and ill-being and demonstrates that the role of nonattachment as a mediator of mindfulness extends to the three indicators of advanced psychological development. However, further analyses revealed an alternate mediation pathway indicating mindfulness mediates the relationship of nonattachment to advanced psychological development. This suggests that nonattachment and mindfulness can both facilitate each other, and that there may be multiple pathways to building nonattachment.

The findings for nonattachment emphasize the importance of letting go of control of experience in creating the conditions for advanced psychological development. Consistent with theoretical propositions, this indicates that as individuals develop greater wisdom and grow towards actualisation of the self, they lessen attempts to control experience and become less fixated on it unfolding any particular way. The data also support the contention that some of the most highly developed people in society display nonattachment (Huxley, 1947) and an equanimous engagement with experience (Astin & Keen, 2006). Being nonattached reduces the impact of implicit self-serving biases through building insight into them, rather than engaging in them. This promotes reflexivity and greater understanding of the self, and
creates a flexibility and openness to life without expectation that allows an individual to freely take opportunities as they arise, propelling them towards achieving their potential.

In addition to wisdom and self-actualisation, the more an individual can let go of the need to control their experience, the more likely they are to transcend their own self-focus. Being nonattached provides a space for individuals to witness the egoic nature of the self (Epstein, 1988; Hartman & Zimberoff, 2008). Letting go of attachment appears to be a letting go of the fixation on self (Sahdra et al., 2015). Living a life in which attachments are prominent would appear to limit development beyond a self-focus. Letting go of attachment may provide the optimal conditions for a developmental growth process from self-focus to a more selfless, and self-transcendent focus.

Another unique finding of the present study was the identification of nonattachment as a partial mediator of the relationship of mindfulness with the measures of advanced psychological development. This provides further support for the theory that nonattachment is an important mechanism of mindfulness and helps to explain the positive impact mindfulness can have. While taking a mindful stance towards experience can assist in developing wisdom (Ardelt, 2003; Bluck & Gluck, 2004), the optimal conditions for the development of wisdom and a deeper understanding of life appears also to involve a letting go of attachment to what is occurring in one’s field of consciousness. Similarly, while self-actualization is related to open, mindful engagement in ideas and other people (Maslow, 1968), the present findings highlight that freedom from attachment to these ideas and thoughts helps to explain this relationship.

Interestingly, the mediating role of nonattachment was strongest for mindfulness and self-transcendence. Theoretically, this can be attributed to the egoic self being intertwined with attachments (Chan, 2008) and the intrinsic self-transcendent nature of nonattachment.
(Epstein, 1988). The results indicate that when mindfully engaging with experience as it occurs moment to moment (Kabat-Zinn, 2003), it is the individual’s ability to let go of controlling that experience that has the greatest impact on transcending self-focus and self-fixation. This suggests that it is through the engagement of mindfulness that one can let go of the heavy attachment to self which partly contributes to a more inclusive engagement with experience that stretches beyond the individual self-focus.

The present findings have a number of implications for future research. In addition to being an important factor for increased well-being (Sahdra et al., 2010), nonattachment represents an important quality aligned with the later stages of the psychological developmental process. Through increased self-awareness and insight into experience (Sahdra et al., 2015), nonattachment appears to provide the ideal conditions for advanced psychological development, and the presence (or not) of nonattachment may help explain why some individuals reach these developmental levels and others do not. This indicates the importance of studying nonattachment, both as a stand-alone quality and as a mechanism that helps to explain the positive impact of mindfulness.

It is also noteworthy that nonattachment is not solely cultivated through mindfulness and meditation (Sahdra et al., 2010). In addition to being mindful, nonattachment may be developed through self-reflection and developing understanding into the subjective nature of experience and that all experience is transient (Hanh, 1999; Sahdra et al., 2010). This is highlighted by the findings suggesting mindfulness also mediates the relationship of nonattachment to each of wisdom, self-actualisation, and self-transcendence. This result indicates the multiple pathways to building nonattachment. Perhaps, nonattachment that is cultivated through pathways other than mindfulness (e.g., psychotherapy, post-traumatic growth), may also promote mindfulness which can assist in the psychological development process. This has implications for the development and delivery of psychological
interventions. Although mindfulness and nonattachment are similarly beneficial (Sahdra et al., 2016) there has been a major focus on interventions designed to promote mindfulness rather than interventions designed to promote nonattachment. For individuals who may not find the experiential nature of mindfulness-based practices beneficial (e.g., Chambers et al., 2016), interventions designed to build insight into the subjective and transient nature of experience and thus, greater nonattachment, may be of great benefit. For individuals wishing to facilitate their own, or others’ psychological development process, understanding the specific pathways to nonattachment may provide insight into the development of greater wisdom, self-actualisation, and transcendence of self-focus.

There are a number of methodological considerations in the present study. One limitation was that the participants were all university students and may not have captured a sample representative of the general population. Also, there were more women than men in the sample which raises the possibility of gender bias; however, Sahdra et al. (2010) observed no significant gender difference in scores on nonattachment. Additionally, all respondents were residing in Australia which further limits the generalisability of the findings. Future studies are needed with a more diverse and representative sample to determine the generalisability of the findings. Further, the results are cross-sectional and causality cannot be determined. Although, the results support previous theory that nonattachment is believed to emanate from mindfulness (Sahdra et al., 2016), the results of the current cross-sectional study suggest that the causal pathways may be more complex. It is likely that nonattachment may assists individuals to be more mindful, and that qualities such as wisdom and self-transcendence could also facilitate greater instances of mindfulness and nonattachment. Future longitudinal research comparing the mechanisms and outcomes of mindfulness and nonattachment-based interventions may help elucidate the specific causal pathways to
wisdom, self-actualisation and self-transcendence. A longitudinal study would also be valuable to investigate changes in optimal psychological development over time.

In conclusion, the present findings are the first to show nonattachment is related to advanced psychological development and is a significant partial mediator of the relationship between mindfulness and wisdom, self-actualisation, and self-transcendence. However, the results also indicate there may be multiple pathways to building nonattachment and mindfulness that may be beneficial for psychological development. These findings support the need for further research on nonattachment, support the benefits of mindfulness, and have implications for interventions designed specifically to promote nonattachment.

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Chapter 6: A Qualitative Investigation of Nonattachment

6.1 Brief Introduction

When people discuss the notion of nonattachment, it is usually as a theory, based on the philosophy of the Eastern contemplative traditions. The teachings state the importance of letting go of control, and outline the transient, interdependent nature of experience. From this theory it is possible to understand how letting go of control may be associated with a greater sense of freedom and well-being (Sumedho, 2012). Recent empirical research (e.g., Sahdra et al., 2015, 2016) also indicates how nonattachment may be beneficial for factors such as interpersonal relationships (Sahdra et al., 2015) and well-being (Feliu-Soler et al., 2016; Sahdra et al., 2016). However, despite the theory and empirical research, the lived experience of nonattachment is not clear. What does it look like to see someone who is highly nonattached operate in their environment? How do people feel that they have reached a place where they can/cannot let go of control in their life? These were important questions that followed from the first two studies.

These questions culminated in a qualitative investigation on nonattachment for people scoring high or low on levels of nonattachment. This study produced rich data based on in-depth reflections by individuals about important experiences, covering areas such as their deepest traumas, their most triumphant moments or the combination of both. The interviews conducted for this study were personally enriching for the author. The 110,000-word transcription and analysis further enabled the author to engage with the qualitative data from a more in-depth perspective. The author connected with the individuals on an intimate level and felt privileged to be allowed into the lives of participants. Furthermore, the writer’s experience of clarifying personal views and expectations added to the exploratory research experience. Being open and flexible to the information provided allowed data to be gathered
that helped to build a more complete picture of nonattachment as it presents in a Western population.
6.2 Article 3 – Stories of suffering and growth: A qualitative investigation into nonattachment.
Abstract

**Objective:** The Buddhist concept of nonattachment refers to a flexible engagement with experience without fixation on achieving specified outcomes. The primary focus of this study was to qualitatively examine how nonattachment and attachment develop, and how they affect individuals’ lives, relationships, and personal development.

**Method:** Twenty-four in-depth interviews were conducted with participants (18 women, 6 men) aged 19 to 61 ($M = 36.20, SD = 11.00$), drawn from a larger sample of 1191, who scored very high or very low on nonattachment. Transcripts of the interviews were thematically analysed and themes were contrasted between the nonattachment and attachment groups.

**Results:** Thematic analysis revealed highly nonattached individuals were psychologically mature, and flexibly engaged with their experiences, allowing their life to flow with minimal self-obstruction. In contrast, highly attached individuals were fixed in their thinking and often placed unachievable expectations on themselves and others, which adversely affected their mental health. Interestingly, transformative suffering was crucial in the development of nonattachment, whereas unresolved experiences of suffering contributed to the development of attachment.

**Conclusions:** These findings provide the first qualitative data on the experience of nonattachment, and highlight its pervasive impact on quality of life and psychological growth.

**Keywords:** Nonattachment; attachment; psychological growth; thematic analysis; Buddhist psychology
Introduction

Nonattachment is a core construct in Buddhism and many other spiritual traditions (Burley, 2014). It refers to “the subjective quality of not being stuck or fixated on ideas, images, or sensory objects and not feeling an internal pressure to acquire, hold, avoid, or change.” (Sahdra, Shaver & Brown, 2010, p. 118). Theoretically, a nonattached individual can flexibly interact with experience without the need to control it through attempts to cling to desirable experiences or to avoid unpleasant experiences (Sahdra, Ciarrochi & Parker, 2016; Sahdra, Ciarrochi, Parker, Marshall & Heaven, 2015). Recent research shows nonattachment to be related to a range of positive psychological outcomes (e.g., Ju & Lee, 2015; Sahdra et al., 2010; Whitehead, Bates, Elphinstone, Yang & Murray, 2018). However, it remains unclear exactly how nonattachment is experienced and how it develops. The aim of the present study was to gain insight into the lived experience of individuals who identify as highly nonattached or highly attached. Interviews were conducted to explore how nonattachment and attachment affect a person’s life; their relationships, how they felt nonattachment and attachment had developed, and how nonattachment and attachment influence their notions of personal development. Each of these areas were chosen on the basis of existing theory and current findings in the growing body of research on nonattachment.

The Nonattachment Construct

Nonattachment has its origins in the Eastern contemplative traditions dating back more than 2,500 years in Buddhism and 3,500 years in Hinduism. In Buddhism, nonattachment is associated with inner freedom (Sumedho, 1998) and indicates a letting go of attempts to control experience and a willingness to engage with experience regardless of content. It does not indicate a detachment from experience (Sahdra et al., 2010, 2015, 2016) but reflects a deep presence and engagement with experience without the need for it to unfold in any specific way. Within the contemplative traditions, nonattachment is a sought-after quality (Banth & Talwar, 2014) and is indicative of growth and development (Donner, 2010).
In contrast, attachments indicate a way of interacting with experience in which an individual fixates on their experiences, attempting to control what is occurring by holding on to experiences perceived as desirable and aversion towards experiences perceived undesirable (Altobello, 2009; Dalai Lama, 2001). For example, attachments may manifest as an aversion toward uncomfortable feelings. In this situation, such feelings are suppressed, but the suppression itself takes energy and causes suffering in the forms of anxiety or stress. When the feelings can no longer be suppressed there can also be experiences of dread, panic or being overwhelmed. In Buddhism, attachments are seen as the underlying cause of suffering and it is how an individual relates to their experience, rather than experience itself, that causes suffering (Dalai Lama, 1997, 2001; Hanh, 2006).

Buddhist psychological constructs, such as nonattachment are receiving growing attention in Western psychology, with constructs such as self-compassion and mindfulness being widely studied. More recently, the construct of nonattachment has been investigated. Initial findings on nonattachment support the Buddhist theory that attachments relate to individual suffering. Correlational research shows that nonattachment negatively relates to suicide rumination (Tran et al., 2014), psychological distress (Coffey et al., 2010; Wang et al., 2016) and symptoms of depression, anxiety and stress (Sahdra et al., 2010). Fixating on attempts to control experience appears to be an unhelpful psychological strategy (Lamis & Dvorak, 2013) that negatively impacts mental health. Due to the ever-changing nature of experience (Hanh, 1998), attempts to control it are often futile and result in feelings such as disappointment, resentment, depression or other negative affective responses.

Correlational research also shows nonattachment to relate positively to well-being (Chao & Chen, 2013; Feliu-Soler et al., 2016; Sahdra et al., 2010; Whitehead et al., 2018a). Nonattachment is positively related to short-term, subjective well-being as well as more pervasive, psychological well-being (Ju & Lee, 2015; Sahdra et al., 2010), identified as
representing true happiness in life (McMahan & Estes, 2010). Theoretically, removing the fixation on needing experience to be one way or other, limits the self-inflicted rumination and worry associated with constant attempts to control the flow of experience (Whitehead et al., 2018a). This then allows an individual to experience well-being independently of external circumstances (Sahdra et al., 2010).

**Interpersonal relationships**

Some preliminary empirical evidence suggests being more nonattached can improve the quality of relationships. Nonattachment has been shown to correlate with positive interpersonal relationships (Sahdra et al., 2010) as well as greater relationship harmony (Wang, Wong & Yeh, 2016). Further, Sahdra et al. (2015) found that, in addition to being related to students’ self-reported levels of empathy, nonattachment was positively related to how kind and helpful their peers perceived them to be. The findings indicate that nonattachment can play an important role in healthy relationships.

The benefits of nonattachment for interpersonal relationships may be due to a greater flexibility, and an absence of fixed beliefs that may adversely impact relationships (Whitehead, Bates & Elphinstone, 2018). Being more nonattached and less fixated on personal beliefs or expectations assists individuals in seeing situations from others’ perspectives (Adyashanti, 2017; Hanh, 1998). This can help the development and maintenance of relationships, as they do not have to fit in with pre-conceived notions of what a relationship is, and can be more flexible and open to growth and change. For example, trying to cling to the euphoric and elevated feelings associated with a new romantic relationship (Tennov, 1979) can produce anxiety, stress and disappointment when the relationship experience inevitably shifts over time. In this case, the transition towards more stable feelings in the relationship may not be smooth, with expectations and pining for the
way it was limiting the opportunities for the relationship to flexibly grow and change over time.

The development of nonattachment

A focus of this study is to gain further understanding of how nonattachment is developed. Theoretically, experiences that promote self-reflection assist in developing nonattachment (Sahdra et al., 2010; Thubten, 2009). However, exactly what these methods are remains unclear, especially in relation to individuals with no meditative practice or affiliation with the contemplative traditions. Within Buddhism, nonattachment is believed to develop through meditation and engagement with the Buddhist path towards self-realization (Hanh, 2006). This is captured in a quote from the Abidhamma, a central Buddhist Canon:

“The wise, disciplining themselves long, understand the impermanence (of life), realize the deathless state, and completely cutting off the fetters of attachment, attain peace.” (verse 42, Bodhi, 1993, pp. 229).

Thus, it is via the Buddhist path towards understanding impermanence, that one may develop nonattachment (Dalai Lama, 2001; Hanh, 1998).

The Buddhist pathway to nonattachment is supported by empirical evidence that nonattachment is cultivated through meditation. Sahdra et al. (2010) found nonattachment to be higher in those who meditated for more than 3 hours per week, compared to those who did not meditate or meditated at lower levels. Feliu-Soler et al. (2016) also found nonattachment was higher in meditators than non-meditators; the silence and stillness developed in meditation is believed to foster greater objectivity and nonattachment (Adyashanti, 2012). Nonattachment has also been linked with being mindful (Sahdra et al., 2016; Tran et al., 2014; Whitehead et al., 2018b). Adopting a mindful present awareness towards what occurs within the field of consciousness, whether perceived as positive or negative, can facilitate a
letting go of grasping onto, or pushing away, experience (Sahdra et al., 2010). Recent research also suggests nonattachment may at least partially mediate the relationship between mindfulness and a range of positive psychological outcomes (Coffey, Hartman & Fredrickson, 2010; Lamis & Dvorak, 2013; Sahdra et al., 2016).

Meditation and the practice of mindfulness are documented methods for building nonattachment, however, there are varying levels of nonattachment within the population, independent of meditation experience, and the relationship between meditation practice hours and nonattachment is weak (e.g., Sahdra et al., 2010). This indicates nonattachment may be developed in other ways. Interestingly, nonattachment is consistently positively related to age (Sahdra et al., 2010, 2016). This suggests that nonattachment develops over the lifespan. In theory, the many ups and downs in life, provide opportunities to be self-reflective and to develop insight into the ever-changing nature of experience and the futility of trying to control it (Sahdra et al., 2016).

**Personal Development**

A final area in need of exploration is the role nonattachment plays in individuals’ notions of personal development and their personal development goals. Recent research shows nonattached people score higher on longer-term, optimal psychological developmental outcomes of wisdom, self-actualisation and self-transcendence (Whitehead et al., 2018b). This indicates nonattachment is associated with the higher stages of psychological development (Cook-Greuter, 2000; Levenson et al., 2005) and may be associated with the psychological growth process.

**The present study**

The present study explored how nonattachment presents and how it develops across the lifespan. Although correlational research suggests associations between nonattachment
and positive psychological outcomes, it is unclear how nonattachment and attachment are experienced in people’s lives, and how nonattachment and attachment develop over time. To address these questions, a qualitative investigation was conducted targeting the lived experience of individuals identified as either highly nonattached or highly attached. Theory, and the limited empirical work, provided the basis for four research questions: (a) how does nonattachment/attachment impact general life, (b) how does nonattachment/attachment impact individuals’ relationships, (c) how do individuals feel nonattachment/attachment has developed in their life and what has led them to interact with experience is this way, and (d) what role do nonattachment/attachment play in individuals’ notions of personal development and their personal developmental goals.

Method

Participants

There were 24 participants (6 men & 18 women) aged from 19 to 61 (M = 36.20, SD = 11.00). The participants had a range of spiritual/religious affiliations and a range of levels of contemplative practice. Seventeen participants did not identify with a spiritual or religious tradition, two identified as Christian, two identified with a contemplative tradition, two with a general, nonreligious spirituality, and one identified as Muslim. Nine participants engaged with a contemplative practice, while fifteen did not.

Measures

Nonattachment. The 7-item nonattachment scale (NAS-7; Elphinstone, Sahdra, & Ciarrochi, 2015; Sahdra et al., 2016) was used as a measure of nonattachment that determined which participants were contacted for the highly nonattached/highly attached groups. The NAS-7 was taken from the larger 30-item nonattachment scale (NAS; Sahdra et al., 2010). The NAS-7 was chosen because it has shown good reliability and validity when compared
with the original 30-item scale (Feliu-Soler et al., 2016; Sahdra, et al., 2016). Participants rated their agreement with 7 items (e.g., “I can let go of regrets and feelings of dissatisfaction about the past”) using a 6-point Likert scale from 1 (Strongly Disagree) to 6 (Strongly Agree). Previous studies using the NAS-7 have shown it to be a valid and internally reliable measure (e.g., $\alpha = .85$, Feliu-Soler et al., 2016; $\alpha = .82$, Sahdra et al., 2015; $\alpha = .85$, Whitehead et al., 2018a).

**Semi-structured interview.** A number of interview questions were created for the study (See Table 1). Those questions were composed based on previous theory and research into nonattachment, and then confirmed after a pilot interview. A pilot interview was conducted on an individual scoring very high on nonattachment and lasted for 65 minutes. This pilot was used to trial the questions and gain any feedback from the interviewee. No major changes in question wording or sequence resulted from the original interview questions.

**Procedure**

Interviewees were drawn from participants in three studies ($N = 1,191$), each of which included the NAS-7. Participants in the three studies were sourced in two ways. Participants comprised undergraduate psychology students from a mid-sized metropolitan university in Melbourne, Australia that received course credit for completing the survey ($n = 1,109$). A second group of participants responded to a page on a social media website detailing the study and linking to the questionnaire ($n = 82$). Participants from the three studies were given the opportunity to provide their contact details for a follow-up interview. Of those who provided their contact details, based on their scores on the NAS-7, a list was formulated based on the extent to which their scores represented the very highest levels and very lowest levels of nonattachment. Scores on the NAS-7 of the total sample ranged from 10 to 42 ($M =$


Participants from the high nonattachment group had scores ranging from 39 to 42 ($M = 41.42, SD = 1.00$), while participants from the low nonattachment group had scores ranging from 10 to 25 ($M = 19.33, SD = 4.30$). For the high nonattachment group, the range of scores represented the top $87^{th}$ percentile with the mean score being the top $96^{th}$ percentile. For the low nonattachment group, the scores ranges fell below the $15^{th}$ percentile with the mean score falling in the $3^{rd}$ percentile. A total of 12 interviews were conducted for each of the high and low nonattachment groups. This was based on the recommendations set out by Guest, Bunce, and Johnson (2006), that data saturation occurs within the first 12 in-depth interviews.

Participants were contacted by phone or email to request an interview. Approximately 50% of those contacted for interviews did not respond to the request or stated they did not wish to participate. The interviews were conducted in person or via video chat (i.e., Skype) and took between 52 minutes and 90 minutes to complete. All interviews were recorded on a digital voice recorder. Interviewees were given a $30$ voucher for their participation in the interviews.

At the beginning of each of the 24 interviews, participants were given a basic description of nonattachment and attachment, describing the ways in which people can interact with their experience, either through trying to control what is occurring through clinging onto the positive or avoiding the negative (attachment), or through letting go of control and being open to experience as it changes (nonattachment). Participants were then asked if they identified with either of the descriptions. Twenty-one of the 24 participants clearly identified their pre-assigned high or low nonattachment group. Three participants from the low nonattachment group were less clear about their level of attachment and were asked to complete the NAS-7 again to assist them in identifying their level of attachment or nonattachment.
Table 1.

*Interview Questions for High and Low Nonattachment Groups*

<table>
<thead>
<tr>
<th>Interview Questions</th>
</tr>
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<tbody>
<tr>
<td>Q.1 What role does your attachment/nonattachment play in your life in general?</td>
</tr>
<tr>
<td>Q.2 How does your way of interacting with experience play out in your</td>
</tr>
<tr>
<td>relationships? (e.g., friendships, familial relationships, romantic relationships)</td>
</tr>
<tr>
<td>Q.3 How do you feel this way of interacting with experience has developed in your</td>
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<tr>
<td>life? Do you feel it was a progression, or were there any major life events that</td>
</tr>
<tr>
<td>contributed?</td>
</tr>
<tr>
<td>Q.4 How do you understand the notion of personal development, and what are your</td>
</tr>
<tr>
<td>own personal developmental goals?</td>
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<tr>
<td>Q.5 Participants were given three hypothetical scenarios:</td>
</tr>
<tr>
<td>- A conflict at work that was not able to be solved that day</td>
</tr>
<tr>
<td>- An experience of having a booked vacation cancelled at the last minute</td>
</tr>
<tr>
<td>by the travel agent</td>
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<tr>
<td>- An experience of losing a job they had recently been told in the</td>
</tr>
<tr>
<td>interview that they were been successful in getting.</td>
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<tr>
<td>Participants were then asked: How would you feel in this situation? How would you</td>
</tr>
<tr>
<td>deal with the situation?</td>
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</table>

After each of the 24 interviews were completed, the principle researcher recorded his own reflection about the person interviewed. Once all the interviews and reflections had been recorded, they were transcribed by the principle researcher as this is an effective way for the researcher to become familiar with the data for thematic analysis (Riessman, 1993).
Thematic Analysis

After transcriptions, the text from the transcripts was divided according to the first four interview questions. The four content areas thematically analysed were: (a) how nonattachment/attachment plays out in their life in general, (b) the role nonattachment or attachment played in interpersonal relationships, (c) how individuals felt their attachments or nonattachment had developed, and (d) Individuals’ notions of personal development and how they viewed their personal developmental goals. Responses to the fifth question, relating to hypothetical scenarios, were analysed separately and relevant themes were integrated into one of the first four categories. Thematic analysis was conducted according to the stages set out by Braun and Clark (2006; see Table 2). In the present study, a theme was defined as something deemed to be important to the data in relation to the research questions, and that represented a recurring, patterned response or meaning within the transcripts (Braun & Clark, 2006).
Table 2.

*Six Phases of Thematic Analysis based on Braun and Clark (2006).*

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description of the process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Becoming familiarised with the data</td>
<td>This phase involved conducting the interviews, reflecting upon them and noting any points of interest. This further involved transcription of the 24 interviews and more than 110,000 words. During the transcription process, further ideas were noted down.</td>
</tr>
<tr>
<td>2. Generating preliminary codes</td>
<td>Transcripts was re-read multiple times and data identified as relevant to the research questions was colour-coded and converted to a thematic table.</td>
</tr>
<tr>
<td>3. Searching for themes</td>
<td>The thematic table was analysed according to themes present within the specific questions given to participants. However, if certain themes arose in answers to other questions that were determined to fit more appropriately with another research question, they were included under that area (e.g., an answer from the question on ‘personal development’ may have contained a theme more relevant to the ‘development of nonattachment’ section).</td>
</tr>
<tr>
<td>4. Reviewing themes</td>
<td>Themes identified in phase three were checked against the data in the thematic table, and then again with original data.</td>
</tr>
<tr>
<td>5. Defining and naming themes</td>
<td>This phase involved further refining the themes, defining the meaning of each theme, and developing succinct names for each theme.</td>
</tr>
<tr>
<td>6. Producing thematic report</td>
<td>Involved selecting the extracts that best captured the themes present. Conducted final examination of themes and extracts.</td>
</tr>
</tbody>
</table>

**Results and Discussion**

Results of the thematic analysis are presented in four areas of focus. The first two areas focused on nonattachment and attachment in general life and interpersonal relationships. The third and fourth areas focused on the development of nonattachment and
attachment, and how nonattachment and attachment affected people’s views of personal
development. The themes present in the interviewees’ accounts are outlined for the high and
low groups separately, and a combined summary and discussion of the themes are presented
at the end of each section. Interviewees names have been changed to preserve anonymity.

Nonattachment and Attachment in General Life

High nonattachment group

Individuals from the high nonattachment group were explicit and insightful about the
way in which nonattachment presented in their lives. Three key themes arose; (a) a mindful
engagement with experience, (b) an acceptance of experience and (c) a sense of ease and flow
in life.

Mindful engagement with experience

Individuals reported that one of the first stages of their process of nonattachment was
a mindful engagement with experience. This mindful engagement reflected a capacity to
observe thoughts and feelings associated with an experience with meta-awareness, and a
distancing from the experience so that it can be objectively evaluated. During this process,
individuals assessed their experience and associated feelings as helpful or not, or controllable
or not. The length of time required for this process differed depending on the intensity of the
experience, occurring almost instantly for some experiences, or taking up to a few days if the
emotional reaction was very strong.

The interviewees reported that the process assisted them to move on from difficult
situations. For example, Jane (34) explained how she deals with difficult issues:

*Obviously, some things frustrate me... I might feel certain feelings and then observe
them and question ‘what do I choose to do with this? Do I need to action something to
make this go away? ’ Or, if something happens and I think, ‘well that’s just how I’m feeling at the moment’… it’s like a process I have to do, to be aware of what is real and what I can control and what I can’t.

This mindful, objective engagement with experience emerged as the first step in a process whereby individuals engaged with an acceptance of experience and a letting go of unhelpful thoughts and feelings.

**Acceptance of experience**

The interviewees demonstrated a capacity to deeply accept experience. This theme of acceptance involved acknowledgement of the inevitability of experience and a letting go of control. This theme emerged in descriptions of specific experiences but was also evident as a general attitude towards all experience. The acceptance is captured in comments such as “whatever happens, happens”, or a “trust in the universe”, or that experience unfolds in a way that is “meant to be”. For example, Gale (31) explained:

*I have learned not to hold onto the situation and the story but instead trusting that if it’s happened, it’s happened, and I needed to go through that situation.*

This quote highlights an acceptance of experience as part of life and a trust that it has occurred this way for a reason. This was a common theme and, although individuals conceptualised this trust or acceptance differently (e.g., trust in God, or accepting the interdependence of experience), the general theme of a deep acceptance was prominent.

As part of their acceptance of experience, interviewees also saw challenging experiences as opportunities for learning and growth. Once individuals had accepted the inevitability of the experience, they discussed the potential to learn from the experience or to see it as an opportunity for growth. In response to challenging situations, the interviewees outlined a process whereby they questioned why the experience arose in the first place, how
their perspective may be biased, and how they might best manage the situation in the future. For example:

*I try to not get too hung up on things going a certain way, and that regardless of what’s happening in the situation, it’s still something to learn from or go through; it’s an experience* (Serena, 34)

**Ease and flow**

The ease and flow theme captured an ability to navigate life without getting unduly stuck or fixated on experiences, thoughts and feelings. Whereas in the past they may have worried or ruminated a lot, interviewees explained that they could now let go of a lot of these behaviours and experience a sense of ease in situations that allowed them to flow. This is highlighted in a quote by Paul (61):

*It makes life easy, it makes it flow... you can live in the moment without worry or without those ego patterns from the past coming to affect the way you do things or the way you are in the world.*

Paul’s quote highlights the positive impact he feels being nonattached has on his life. This sentiment was common for most of this group and, despite challenges, there was an overall ease and balance that they brought to their experience.

**Low nonattachment group**

People from the low nonattachment group came from varying backgrounds, ages, vocations, and life experiences. However, the interviews yielded key themes related to the impact of attachment in their lives. These themes were: (a) a sense of suffering, (b) control, and (c) concealment.
Suffering

Suffering was the most prominent theme and referred to the regular occurrences of negative thoughts and feelings. The negative thoughts and feelings were directly connected to how the individuals related to their experience, rather than the experience itself. Examples included negative self-evaluations and experiences of rumination, anxiety and worry. Jeff (48) highlights a common pattern of thoughts and feelings:

*I doubt myself a lot, and I come to quite a low and think of myself as a bit of an imposter that is going to be found out... I’m affected really strongly by those thoughts whether they are positive which can get me really up, or negative, which can get me really down.*

The suffering experienced by individuals in the low nonattachment group was impacted by an inability to accept themselves or challenging situations. They often experienced immediate negative responses when situations did not go well. However, as many reported mental health diagnoses (e.g., depression and anxiety), these mental health conditions may have contributed to their negative affective responses and inability to let things go.

Control

The need for control refers to attempts to control experience and to avoid situations triggering feelings of discomfort or dis-ease. This is captured in a quote from Bella (26):

*I do try and avoid situations that I am unable to control. If I know that I’m not able to control that situation, I will almost always not do it*

Other controlling behaviours included creating structured plans for social interactions or an unwillingness to leave the home environment unnecessarily, due to feeling that fewer things could go wrong at home.
A need for control was also evident in perfectionism and extremely high personal standards. Interviewees described themselves as perfectionists or as having personal standards higher than they would ever place on anyone else. These standards were often beyond reach. For example, Bianca (38) stated:

*I’m a perfectionist so I tend to do things to death and I never know when to stop. I’m my own worst critic and I am really horrible to myself. It is very exhausting... my expectations are so unrealistic that I almost always end up in a position where I feel really, really down on myself*

This quote highlights individuals’ attempts to control their environment, with constant attempts to do better or be better. However, frequently, expectations and high standards were never met due to constantly shifting goal posts, or experiences being outside the person’s control, which resulted in feelings of disappointment or failure.

Interestingly, some individuals from the low nonattachment group described that striving to attain such high standards had assisted them in their success at work, and to reach high levels of academic achievement. Interviewees spoke of never being happy with what they had achieved and were always left wanting the next thing. These individuals explained that this had propelled them in their career, or had made them more successful in their life, but also acknowledged the related feeling of inner discontent.

**Concealment of attachments**

Initially, in some interviews, attachments were not discussed openly or were only lightly touched on. However, as the interviews continued, interviewees became more forthcoming and open in relation to their behaviours. When questioned about this, two individuals described keeping their controlling behaviours hidden:
I feel, as a front, I can remain unbelievably relaxed now. I guess it’s a little bit like a duck when people talk about a duck on the water, I’ll be working vigorously in my mind to keep that front and I need to make sure things are planned (Ben, 44)

Similarly:

I always had a reputation of being extremely spontaneous but that was more of a front, where it was a controlled spontaneity (James, 48)

These examples highlight the reluctance of some of the highly attached interviewees to express behaviours that may be perceived as negative and indicates attachments may be less observable in some people.

**Summary and Discussion**

The thematic analysis provides insight into the pervasive impact of nonattachment and attachment in people’s lives. Consistent with theory, nonattachment emerged as a conscious process aligned with greater presence (Sahdra et al., 2010, 2016). Interviewees described a process of nonattachment whereby they mindfully engaged with their reactions to experiences, were able to accept the inevitability of the experience and let go of any fixation on unhelpful thoughts and feelings. This permitted people to be more present and allowed experiences to flow with minimal obstruction, even if the experiences were initially challenging or emotionally provoking. In contrast, attachments restricted individuals’ ability to flexibility engage with experiences, exacerbating rumination, worry, and self-judgment that negatively impacted their mental health. This highlights the negative impact of attachment on rumination (Lamis & Dvorak, 2013) and negative psychological symptoms (Bhambani & Cabral, 2016; Chao & Chen, 2013; Sahdra et al., 2010; Tran et al., 2014). Whereas, attachments produce maladaptive psychological strategies (Lamis & Dvorak, 2013) aimed at being in control, nonattachment assists people to be more objective and less
controlling toward experience, permitting them to learn and grow from difficult life experiences, rather than engaging in self-inflicted worry and rumination involved with attachments (Whitehead et al., 2018a).

**Interpersonal Relationships**

**High nonattachment group**

The main interpersonal themes evident within the high nonattachment group’s approach to relationships were: (a) perspective taking, (b) empathy and compassion, and (c) removal of expectations on others.

**Perspective taking**

The perspective taking theme captured references to a person’s ability to move beyond their own perspective and to actively try and see things from others’ perspectives. Perspective taking was most apparent in descriptions of challenging situations but was also evident in everyday interpersonal relationships. All those in the high nonattached group indicated that when dealing with interpersonal conflict situations, they would investigate their own emotional responses but also consider the situation from others’ perspectives. Serena (34) described her response to a hypothetical situation in which she had been insulted by someone at work:

*I’d be feeling quite annoyed and frustrated but I would be consciously trying to think, what’s going on for them that’s making them feel like that.*

**Removing expectations**

Removing expectations involved a process of letting go of expectations of others to fit with preconceived notions of what was right. Interviewees reported their relationships benefitted from removing expectations, whereas having expectations could lead to feelings of
being let down or could inhibit authentic communication. Serena (34) reflected on letting go of an expectation her relationships needed to make her feel good:

*I'm not relying on somebody else’s mood to make me feel good and if somebody doesn’t want to be in a good mood then that’s fine, they can be how they want to be and they’re not necessarily impacting me and I’m not looking to change that.*

Anna (30) also noted:

*In regard to relationships, there is a letting go of expectations. For me, it’s been really positive to understand that everybody’s on their own path.*

**Empathy and compassion**

The theme of empathy and compassion for others manifested as an ability to be understanding and accepting of people, regardless of circumstance. The interviewees acknowledged and empathised with the difficulties and challenges that others could have, even when presented as challenges to their relationships. For example, Grace (31) described:

*I’ve developed a bigger level of compassion towards other people and accept that they are human, and they are going to make mistakes, so it kind of took the pressure off always expecting people to be a certain way, or expecting situations to be a certain way.*

The theme of compassion arose often in descriptions of people’s reactions in a conflict situation. Paul (61) explained how he would react, given time to reflect, to an individual verbally insulting him at work:

*Firstly, I would have compassion for them because I would realise that it is coming from their egoic places. I might have a look at whether there was something that I did… that they have a reaction to, then I would have compassion for them.*
Low nonattachment group

People from the low nonattachment group described positive and negative interpersonal relationships but focused most on difficulties in their relationships. The key themes that emerged were; (a) expectations on others and (b) fear of losing/disrupting the relationship.

Expectation on others

Unlike the high nonattachment group, people in the low nonattachment group often had inflexible expectations of the people around them. In relationships, this involved a set of standards they felt people should meet, including courtesy, loyalty, or a general ‘right’ way of being. Participants reported that they had standards for their friendships and that once someone broke their trust, they could end the relationship as they found it difficult to let go of past actions. This is highlighted by Sophie (27) in specifying her moral standards for people in her life:

*I believe that you make a choice and you have agency in your life, and you can either follow morals or you can knowingly be amoral or immoral. So, I don’t particularly have time for people that I find are amoral or immoral if they do things that hurt others... It’s very black and white to me, either you are kind across-the-board or you aren’t.*

Here, Sophie describes an inflexible set of black and white moral standards that are expected of anyone with whom she would want to have a positive relationship.

When others contravened the standards and expectations of the interviewees, this could trigger an emotional reaction and feelings of distrust or being unsafe:
If I can’t connect with them on a level that I’m comfortable with, then it’s pretty much done. I can’t trust them, I don’t want to talk to them. I feel very nervous if I have to work with them (Bianca, 38).

When individuals’ expectations were not met, they displayed a capacity to end relationships or judge them as unworthy. However, they also displayed a fear of losing positive relationships.

**Fear of losing or disrupting the relationship**

This theme was encapsulated by fears of confrontation or of doing something that may jeopardise relationships. The fear involved a sense of clinging to the relationship and engaging in actions to ensure the relationship was not disrupted. Attempts to maintain a stable relationship manifested as behaviours that often were personally detrimental, such as avoiding confrontation:

> I’m quite clingy and I don’t like confrontations. I like to be, even if I haven’t done anything wrong, I’d be the one to say sorry because I just like to avoid any sort of issues with people. It might negatively impact myself but not the relationship (Emma, 22).

**Summary and discussion**

The present data align with the emphasis in Buddhism that compassionate relationships involves freedom from rigid views about others (Sahdra & Shaver, 2013). The results also support previous quantitative findings, that nonattachment is associated with greater harmony in relationships (Wang et al., 2014), empathy and kindness (Sahdra et al., 2015). Nonattachment appears to be an important factor in mature healthy relationships that allows greater interpersonal flexibility and understanding, and assists individuals to be present for others rather than being fixated on the self-perspective (Sahdra et al., 2015).
contrast, attachments hinder healthy relationships through attempts to control them with rigid expectations and aversion to challenging, but potentially beneficial, interpersonal interactions. Furthermore, whereas nonattachment assisted individuals in dealing with conflict situations, attachments limited people’s capacity to deal with conflict, as they tended to be more reactive and could become stuck in the emotion associated with the experience, finding it difficult to accept and move on.

The Development of Nonattachment

High nonattachment group

Two themes emerged in this group’s accounts of developing nonattachment; (a) suffering (as a catalyst for growth), and (b) active engagement with self-reflection/contemplation. In almost all cases, it was combination of suffering and self-reflection or contemplation that assisted in the development of nonattachment.

Suffering (as a catalyst for growth)

All but one of those in the high nonattachment group described a very low moment, or moments in their lives where they experienced a great deal of psychological pain. The pain and turmoil associated with the experience acted as a catalyst for change in their lives and propelled them toward interacting with their experience in a different, more nonattached, and psychologically healthy way. These moments were not necessarily epiphanies. In most cases, they were described as beginning a trajectory from attachment to nonattachment. This is captured by Jane (34) describing the lowest point in her life, when she had been very ill for about a year and was needing a serious operation:

“He (the doctor) said if you don’t have this operation, you will die. And, I think that was the moment where I thought, I actually have to be in control of what I want and how I think. When I was sick, I didn’t care what happened, whereas in that moment
when the doctor said that to me, it was more like okay, this is real. I need to be honest with myself, and I think that was the big shift"

Jane went on to observe that this experience triggered a lot of self-reflection and a subsequent engagement with Buddhist teachings.

Another example of pain and suffering being a catalyst for a movement towards nonattachment came from Grace (31) who had experienced an intense psychological and emotional low point in her life:

*I think that pain and that angry energy gave me the motivation to want to do better and to change my life and not to be the person I was being before... It was like the pain was a catalyst for me to get out of the hole because before I wasn’t depressed, but I wasn’t happy... I didn’t feel alive. After that, it was almost like the pain I felt made me want to get out of it.*

**Self-reflective and contemplative practice**

Almost all the interviewees referred to an engagement with self-reflection or contemplation. This took one of three forms; engaging in teachings and books, psychotherapy/counselling, and meditation/contemplative practice. For example, one individual spent time in a monastery and engaged in ongoing Buddhist practice, while others had read books relating to the philosophy of impermanence or had engaged in psychotherapy or counselling. Self-reflective practice was described as a guide to assist along the path towards letting go, rather than them necessarily being a direct catalyst. Grace (31) explained that although the pain associated with her low point (see above) was the trigger for change, her psychotherapy after this shift assisted her in developing further and letting go more. She mentioned that psychotherapy helped her to:
let go of the story of my childhood and embrace what all those situations gave me...
and have bad experiences come up and let myself feel the pain but let myself move forward and know and trust that it happens for a reason, and to take the weight off me.

Other individuals identified the benefits of more formal meditation practices. Two discussed attending an intensive Vipassana (insight meditation) retreat, and learning the importance of letting things go through meditation:

The Vipassana helped out too because it is all about sitting with uncomfortable situations, so through that practice you then learn that you will survive those difficult sensations, and this gives you some clarity and peace of mind (Charlotte, 38).

Similarly, an ex-truck-driver and concreter who had left his possessions, house and job and spent a lot of time at a monastery, reported that a Vipassana retreat had helped him build nonattachment:

After I came out of Vipassana I just felt blissful and I knew what to do with the rest of my life, in every second of it, it’s just ‘being’... Vipassana was definitely a huge accelerator of that stopping and letting go, it was huge...I guess it is really just the practice of being present, being in the present moment, and I suppose that’s what I learnt (Damian, 53).

Low nonattachment group

Individuals from the low nonattachment group displayed varying levels of insight into the development of their attachments. Some reported they felt attachment had always been there, while others identified specific contributors. The two major themes that arose were; (a) early childhood experience, and (b) traumatic experiences in later life.
Early childhood experience

Although some interviewees recalled specific childhood experiences related to attachments, many identified attachments from a very young age, and felt as though they had always exhibited signs of anxiety, worry or controlling-type behaviours. This is exemplified by Claire (18) who explained her attachment to others:

*Ever since I was a baby I was told that I could never sleep in a room alone... my aunts would usually come in and comfort me and if I felt their presence leave, or if I felt like I was alone, I would immediately wake up and start crying. Since I was a child, it’s always been like that. I don’t like to be left on my own and I would prefer the comforts of someone that would comfort me as it’s soothing, happy and nice.*

Others recounted their coping strategies as young children and described feeling like some of these early behaviours were the origins of a lot of their attachment behaviours as adults. Bianca (38) developed a need to be perfect to gain approval from her father and others:

*This is something I’ve experienced from a very long time ago. I always used to joke that my brother was the chosen one. I kind of felt like he got everything handed to him on a silver platter, and I really had to work for it. I always was the one blamed even when he did something wrong. So, it was tough, I became a bit of a perfectionist out of that, to try and get approval and attention.* (Bianca, 38)

Traumatic experiences in adulthood

Several interviewees discussed the impact of traumatic experiences that resulted in them trying harder to control their experiences. They felt that even though they may have had early traits of attachment, these major life experiences exacerbated them in their later life.
Amy (41) described the intensely traumatic experience of having her 5-year old son die in her arms 10 years prior, and that subsequently she was not given the support she needed to get through the experience. The flow on effect from this experience was that she became more withdrawn and felt less comfortable around others:

“I’m not the same person, I’m very withdrawn…. Now I don’t even like going out to dinner with my Mum and Dad, I can stand about an hour but after that I have to come back here, here is my safety zone… It’s probably made me seek out my safety zone more.”

Although Amy recalled elements of engaging with attachments before this experience, she believed the experience had cemented those attachments and caused them to get stronger and stronger.

Another example of the impact of major life experiences on attachments came from Kath’s (43) account of a being in a domestic violent relationship for 17 years. Kath associated her present high levels of attachment with having her life controlled by her ex-husband. Even though the relationship had ended, she was still living with its effects and she described that controlling her environment was the way she coped in her life.

**Summary and discussion**

The data highlight the impact life experiences have in developing nonattachment and attachment. The findings suggest nonattachment is a quality that develops over time (Sahdra et al., 2010, 2016), and that the suffering associated with individuals’ most challenging life experiences, combined with their engagement in contemplative or self-reflective practice, provides the ideal conditions for a shift from attachment towards nonattachment. These findings support the notion that nonattachment can be developed through contemplative practice (Feliu-Soler et al., 2016; Montero-Marin et al., 2016; Sahdra et al., 2010, 2016), but
uniquely indicate it can also be developed through other self-reflective practice such as psychotherapy or contemplative teachings. The combination of the transformational growth gained from their most difficult life experience (e.g., Weststrate & Gluck, 2017; Whitehead & Bates, 2016), with the meta-awareness and self-understanding gained from engagement in self-reflective or contemplative practice, appeared to assist people to develop insight into the transience of experience and the unhelpful nature of their attachment behaviours.

In contrast, the low nonattachment group believed traumatic experiences contributed to their attachments. The major difference between the two groups was that the most challenging experiences of the low nonattachment group remained unresolved and had not been positively transformative. These individuals were still strongly affected by their challenging life experiences and engaged in attachments as coping strategies formed in response to the lasting impact of these experiences. This suggests the lowest moments in a person’s life that are unresolved can hinder positive self-transformation (Pals, 2006). Furthermore, the results show attachments can be linked with early childhood relationships (Sahdra et al., 2010; Sahdra & Shaver, 2013). Attachments emerged as protective strategies developed in response to traumatic experiences in adulthood and challenges to emotional, psychological or physical safety that occurred early on in life.

**Personal Development**

**High nonattachment group**

In general, highly nonattached people saw personal development as a fluid process that was always changing. The two major themes that arose were: (a) inner peace or contentment and (b) letting go of goals.
**Inner peace or contentment**

Most individuals saw personal development as an inner journey towards emotional and psychological development, aimed at building a sense of inner contentment and/or removing unhelpful behaviours. Serena (34) viewed personal development as:

“*Not needing external validation, getting to the point where I am totally one hundred percent comfortable with myself and my role in what I’m doing, not needing validation from anywhere else and being able to accept things really calmly and gracefully.*”

Similarly, Kate (35) stated:

“*I view personal development as something that you do to work on yourself, to better yourself and to be a better human in your interactions with people and your environment. And, allowing yourself to be vulnerable enough to work on that.*”

**Letting go of rigid goals**

A majority of the highly nonattached group regarded the setting of personal development goals, especially fixed goals, as unhelpful as these are things you can fixate on or fail at. They mentioned that having more general goals, such as being more present or letting going of worry, were more helpful because they allowed them to be open to life as it unfolded, rather than fixating on specific outcomes. For example, Paul (61), who had been engaging with a spiritual growth and development process for 16 years noted:

“*The longer I do spiritual work...the more I feel like there is no goal, really. The goal is just being in the moment and enjoying what you have and being a human being in this place in time and space.*”

This sentiment was echoed by Adam (27):
“For me, it just feels like there’s isn’t a goal, it doesn’t feel like I have to force it. It is just something I want to do and so I don’t really have an attached idea of the outcome... I don’t really have a plan to reach a certain outcome, things are happening but they’re happening step-by-step and day-by-day. I feel like there is an absence of forcing the journey. There is effort but no forcing of anything.”

**Low nonattachment group**

Unlike the high nonattachment group, the low nonattachment group identified more rigid goals and notions of personal development that encompassed both personal change and personal achievement. The two major themes that arose were; (a) external achievement, and (b) personal growth

**External achievement**

External achievement was the most prevalent theme and, in this context, referred to a perception of personal development equated to succeeding in education and vocation, being financially stable, and other examples of achievement. For example, Emma (22) described her developmental goals as:

“Finishing university, getting a job, moving out of home, having a long career, starting a family, getting married.”

Similarly, Amy (41) saw her personal development as moving towards:

“Being able to get the house, and a better car and set up, and get some horses so I can go back to where I was when I was younger... My goal is to get to the point where I can become a psychologist or counsellor.”
**Personal growth**

This theme captures notions of personal development that involve a letting go of behaviours perceived to be unhelpful, and a journey towards feelings of contentment and personal growth. For example, Claire (18) explained her view of personal developmental as:

*Moving towards stability. Everything would have a balance, so it doesn’t tip and everything doesn’t go sideways. It is a mental and emotional stability.*

Irene (30) also discussed her personal development goal:

*I think I would be more sure of myself, I think I’d be more comfortable socially... Just being easier in the world, I guess. A lot less tension and anxiety in situations that I feel that in now. More confident.*

Interestingly, even though some described quite elaborate notions of personal growth-focused development, some found it difficult to apply these same notions to themselves. For example:

*I think because of who I am it would be a bit more difficult to feel contentment and inner peace but for other people it might be a bit easier* (Nadine, 23).

**Summary and discussion**

Nonattachment and attachment had implications for the way interviewees viewed personal development and their personal goals for the future. The high nonattachment group viewed personal development as movement towards contentment, however, they also displayed a lack of fixed goals and a greater focus on letting go or being present. Nonattachment appeared to be linked with a greater sense of presence and acceptance of experience, and a comfort with letting it unfold (Whitehead et al., 2018b). Not having fixed (or any) overarching goals, removed a constant yardstick with which to measure the self, and
thus facilitated greater flexibility, allowing for deviations from the path and an acceptance of where an individual is at any given time. In contrast, the low nonattachment group had more clearly set goals. Having clearly definable, achievable goals was perceived as providing greater control when looking towards the future. However, some of the goals of the low nonattachment group remained slightly out of reach and contributed to an ongoing pattern of attachment. Interestingly, both the high and low nonattachment groups shared themes aligned with inner growth and development and being more content. However, the goals of the low nonattachment group captured a more rigid view of how they wanted their life to be, whereas the high nonattachment group had more general notions of personal development leading towards a sense of inner peace.

**General Discussion**

The present study is the first qualitative investigation of the lived experience of high and low levels of nonattachment. The present findings were generally consistent with the theory behind nonattachment, and underscore the positive impact nonattachment has on a range of areas in a person’s life. Highly nonattached individuals interacted flexibly with their experience, showed a strong capacity for self-reflection and could view things from multiple perspectives. In contrast, the individuals with low levels of nonattachment described more rigidity in their thinking, had difficulties seeing things from others’ perspectives, could struggle with their mental health, and often engaged in unhelpful cognitive strategies such as rumination and worry. Interestingly, suffering was seen as a major contributor to the development of nonattachment and attachment, with highly nonattached individuals using these experiences as a catalyst for the development of growth and nonattachment, while people with low nonattachment remained stuck in the negative effects of the suffering. Furthermore, individuals with high levels of nonattachment viewed personal development in terms of an inner journey towards contentment and did not have fixed goals for their
development. In contrast, individuals with low levels of nonattachment had more specific goals focused on external achievement and personal growth.

**Implications and Methodological Considerations**

The present findings provide insight into the lived experience of nonattachment and attachment and have implications for understanding how individuals’ interaction with their experience impacts them in areas such as relationships and mental health. For example, the thematic analysis suggests that fixed beliefs about what a relationship entails may underlie people’s interpersonal challenges, and that removing fixed expectations on others appears to underlie healthy relationships, allowing them to flexibly grow and change. Similarly, letting go of fixation on specific outcomes, appears to allow life to flow with fewer experiences of distress and a greater sense of ease and balance. The data also contribute to understanding the possible pathways to building nonattachment. In addition to supporting the theoretical links between contemplative practice and nonattachment (Montero-Marín et al., 2016; Sahdra et al., 2010), the findings highlight the role that taking a self-reflective and open approach to processing difficult life experiences can have on building nonattachment.

The findings also highlight the negative impact that attachments can have on mental health. This has implications for the way in which negative mental health symptoms, such as anxiety and worry, may be conceptualised. Understanding mental health symptoms in the terms of attachment, or fixation on specified outcomes, may provide insight into how best to assist individuals suffering from these symptoms. Future research on interventions designed specifically to build nonattachment and reduce fixation on experience being a specific way, may present an effective avenue to assist in ameliorating the impact of the negative psychological symptoms. The data also suggest that nonattachment is best developed through cognitive and experiential pathways. Cognitive pathways, that focus on the
acceptance and resolution of difficult life experiences, combined with experiential pathways, such as practices aimed at building wisdom into the transient nature of experience, may prove most efficacious for building nonattachment and letting go of fixation on experience.

There were a number of methodological considerations in the present study. The samples used in were predominantly from a university student population thus, the generalisability of the findings is limited, and future research may benefit from investigating other cohorts. Another potential limitation is that participants were informed whether they were in the high or low nonattachment group. This may have played a role in causing participants to answer in line with the group they had been assigned, rather than answering more freely. However, as a focus of the present study was to investigate how nonattachment/attachment behaviours were experienced, it was necessary to alert interviewees to the focus of this study. Furthermore, for three cases, attachment behaviours may not have been as openly discussed unless their scores on the nonattachment scale were mentioned. Another consideration is that the high and low groups were assigned using a self-report scale which may or may not have accurately captured individuals’ levels of nonattachment. However, the interviewees identified with the descriptions of nonattachment and attachment and appeared to display behaviours exemplifying high and low levels of nonattachment.

**Personal Reflection**

It is important in undertaking applied thematic analysis of text or voice to take into consideration that the researcher responsible for the process has an effect on the analysis (Guest, MacQueen & Namey, 2014). To add in interpreting the findings, we therefore acknowledge the background of the first author as interviewer and data analyst, and provide context into why the research was undertaken. R.W. is an experienced psychotherapist who
has a personal experience with nonattachment associated with the teaching of the Eastern contemplative traditions of Buddhism and Vedanta. This personal experience with nonattachment was developed initially through Mahayana Buddhism while studying in a monastery in Nepal, and then later through the teachings of Advaita/Vedanta. These experiences, in collaboration with a number of personal ‘peak’ experiences, provided him with insight into the interdependent and transient nature of experience, and the benefits of letting go of control. This initial understanding combined with countless books and articles on the subject have informed his understanding about the nature of nonattachment. Furthermore, his experience as a psychotherapist over the previous 10 years provided an avenue to witness the impacts of attachment and nonattachment and provided personal insight into the synthesis between the Eastern contemplative notion of nonattachment and Western psychological theory.

Aside for the general assumption that nonattachment would have a positive impact in individuals’ lives, R.W. assumed originally that there would be a spiritual component to the development of nonattachment that may have involved an understanding about the transient, interdependent nature of experience. He expected that those high on nonattachment may have engaged with spiritual texts and/or teachers or may have had spiritual-type experiences that played a role in cultivating nonattachment. This assumption was only supported in some cases, with the impact of suffering in major life experiences being a primary factor. This was perhaps one of the most interesting findings as it provided unique insight into the cultivation of nonattachment and highlighted an avenue for future research. Similarly, when it came to the notion of personal development, R.W.’s assumption was that most highly nonattached people would discuss personal development in terms of self-transcendence or moving beyond self, or enlightenment. This assumption was not supported, with individuals displaying varying notions of personal development and an absence of fixed goals.
In summary, R.W. felt privileged to interview these 25 people who gave their time and energy and appeared to be open, honest and vulnerable in their responses. The responses from both groups were interesting, engaging and often moving. The data gathered supported some initial assumptions that nonattachment was an important and adaptive quality affecting multiple facets of individuals’ lives. The data thus provided unique and important findings beyond expectations that provided insight into the lived experience of nonattachment and attachment.

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Chapter 7: Letting go of Self: The Development of the Nonattachment to Self Scale

7.1 Brief Introduction
During the author’s investigation into the Eastern contemplative traditions and the many books read over several years, the non-existence of a separate static self and the realisation of nondual, empty self has always been an intriguing notion. An early challenge for the author was to find a way to measure some of the most seemingly abstract and non-conceptual themes of no-self and nondual awareness. However, over the course of the research undertaken in the previous three studies, and multiple consultations with supervisors and experts in the field, a theoretical construct emerged that captured the extent to which individuals can let go of the rigid fixation on the self. Once this theory emerged, the decision was made to measure the extent to which individuals are nonattached/attached to their self.

7.2 Article 4: Letting go of self: The development of the nonattachment to self scale
Letting go of self: The creation of the nonattachment to self scale

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Abstract
The Buddhist notion of nonattachment relates to an engagement with experience with flexibility and without fixation on achieving specified outcomes. The present study sought to define, create and validate a new measure of nonattachment as it applies to notions of the self. A new construct of ‘nonattachment to self’ (NTS) was developed, defined the absence of fixation on self-related concepts, thoughts and feelings and a capacity to flexibly interact with these concepts, thoughts and feelings without trying to control them. Two studies were conducted in the development of the new scale. With expert consultation, study 1 ($n = 445$) established a single factor, internally consistent 7-item scale via exploratory factor analysis. Study 2 ($n = 388, n = 338$) confirmed the factor structure of the new 7-item scale using confirmatory factor analyses. Study 2 also found the new scale to be internally consistent, with evidence supporting its test-retest, criterion, and construct validity. Nonattachment to self emerged as a unique way of relating to the self, distinct from general nonattachment, that aligned with higher levels of well-being and adaptive functioning.

Introduction
A person’s notion of self has become an important element in research on individual suffering. The sense of self, and fixations on self-focused thoughts and feelings are
associated with a range of negative psychological symptoms such as depression and anxiety (Kyrios, 2016; Lemogne et al., 2009). Recently, concepts from Buddhist psychology have been investigated in relation to a negative relationship with self. Interventions based on self-compassion and mindfulness that positively address how individuals relate to their self, have been associated with a range of positive psychological outcomes (Shonin, Van Gordon & Griffiths, 2014; Wayment, Bauer & Sylaska, 2014; Woodruff et al., 2014). Nonattachment is another Buddhist construct that has recently been shown to have major psychological benefits (Ju & Lee, 2015; Sahdra, Ciarrochi & Parker, 2016; Tran et al., 2014) but is yet to be investigated in relation to the self.

Nonattachment directly captures an individual’s relationship with their experience and highlights a capacity to suspend attempts to control experience through clinging to experiences perceived as desirable or avoiding experiences perceived as undesirable (Sahdra, Shaver & Brown, 2010; Sahdra, et al., 2016). An important dimension of nonattachment that is central to the Eastern contemplative traditions, is nonattachment to an independent, static self (Hanh, 1999; Hanson 2009; Rāhula, 1959; Thubten, 2009). Although a measure has been developed to assess nonattachment in terms of how it relates to one’s life in general (Sahdra et al., 2010), currently there is no measure that directly assesses nonattachment in relation to the self. The present study aimed therefore, to develop a measure of ‘nonattachment to self’, conceptualised as the extent to which individuals can interact with their self-related concepts, thoughts and feelings without fixation, and without a need for the self to be different than it is.

The role of the self in suffering
The way we perceive and interact with ‘self’ is an important determinant of our behaviour and quality of life. While there is no agreed framework in psychology for researching the important folk idea of ‘self’, there is a resurgence of interest in self-related constructs, especially in clinical psychology (Kyrios et al., 2016). One theme in the current literature posits that many facets of well-being are negatively impacted by an intrapersonal stance which elevates the self-concept as a fixed thing through which experience is filtered and weighed. Perceptions of this fixed self-concept which are overly negative have shown to relate to negative mental health symptoms such as anxiety and depression (Beck, Brown, & Steer, 1989; Lemogne et al., 2009; Mor & Winquist, 2002), whereas fixating on positive self-concepts can be associated with narcissism, excessive defensiveness (Rhodewalt & Eddings, 2002) or feelings of superiority over others (Egan, 1997).

In the Buddhist psychological literature, it is this identification of the self as fixed, and the fixation on either positive or negative aspects of self, that can be defined as attachments toward the self. Theoretically, it is attachment to the self that creates egoic functioning (Ardelt, 2008; Van Gordon, Shonin & Griffiths, 2016) and thus lies at the core of individual suffering (Dalai Lama, 2001; Hanh, 1999). The Buddhist path involves a drive towards letting go of this attachment to the static self (Donner, 2010) and thus a transcendence of personal suffering.

Within Buddhism, attachments manifest as attempts to control experience by holding on to positive experiences and avoiding negative experience (Altobello, 2009; Sahdra et al., 2010). In the Buddhist view, it is the attachments themselves that cause suffering, such as the anxiety and fear associated with trying to hold on to or avoid experience, and the negative affective responses when these attempts fail (Whitehead, Bates, Elphinstone, Yang & Murray, 2018). Attachment to the self is also a central theme in Buddhism (Harris, 2014;
Thubten, 2009). In Buddhism, a self that exists independent of experience is seen as illusory, and it is considered a delusion to believe that happiness arises out of fulfilling the desires of such a permanent self (Scarborough, 2009). Ignorance is also defined by the grasping at the separate self, in which power is given to the perceived existence of a self that is the ruler of experience (Dalai Lama, 2009). This mistaken perception drives people’s attempts to protect the self-delusion causing anxiety and suffering (Chang et al., 2014). In theory, fixation and protection of the self as an independent entity gives rise to unhelpful behaviours such as egocentrism, fear and aggression (Levenson et al., 2001) as well as constant comparison with others in order to feel better or worse about the self (Neff, 2008; Wolsko, 2012).

Attachments to the self can emerge in many forms. The construct of inner defences, or defence mechanisms highlight attachments to the self. In theory, such defences aim to preserve the self-concept by keeping away anything perceived to be incongruent with the self-structure, even if this is detrimental to the self (Kernis & Heppner, 2008; Rogers, 1965). For example, if an individual receives criticism they perceive as a threat to self-esteem, they can engage in defences such as dismissing the experience or the person communicating it, as a means to protect their self-esteem and view of self. Similarly, it is argued that self-criticism occurs when attachment to the expectations and standards of the ideal self-concept are challenged (Shahar & Schiller, 2016). Experiences that underlie a vulnerability to depression such as excessive shame or guilt (Kim, Thibodeau, & Jorgensen, 2011) can also be viewed as attachments towards a static, unchanging self (Whitehead, Bates & Elphinstone, 2018) and arise when the self is harshly judged or is judged to be fundamentally flawed (Kyrios et al., 2016).

Many psychological interventions address factors associated with the self-concept that exacerbate negative psychological symptoms (Kyrios et al., 2016). For example, schema therapy aims to draw attention to maladaptive schemas about the self and seeks to heal
unhelpful schemas and build healthier responses to experience (Rafaeli, Maurer, Lazarus & Thoma, 2016). Similarly, cognitive behavioural therapy aims to produce therapeutic change by modifying individuals’ biased and unhelpful self-representations (Clark, 2016). More recently, mindful self-compassion interventions have been shown to reduce the impact of depressive symptoms (Friis, Johnson, Cutfield & Consedine, 2016; Krieger, Altenstein, Baetigg, Doerrig & Holtforth, 2013; Pauley & McPherson, 2010) through building a kinder, accepting and more compassionate relationship to self (Neff, 2008).

Self-compassion is a further construct rooted in Buddhist psychology, and research indicates that taking a more self-compassionate, balanced stance towards the self can be beneficial for mental health. Self-compassion involves a nonattached position towards negative self-focus and “requires taking a balanced approach to one's negative emotions so that feelings are neither suppressed nor exaggerated.” (Neff, 2008, p. 98). Higher levels of self-compassion are related to increased well-being (Neff, 2003) and reduced negative psychological symptoms such as anxiety and depression (Friis et al., 2016; Krieger et al., 2013; Pauley & McPherson, 2010). Like nonattachment to self, self-compassion incorporates the benefits of taking a less rigid approach to self. This involves withdrawal of attempts to suppress or exaggerate thoughts or feelings about the self. One difference between self-compassion and nonattachment to self is that self-compassion emphasises overcoming negative self-focus, whereas nonattachment to self involves removal of an over-focus on the self, regardless of valence. In theory, any attachment or fixation on the self-concept whether good or bad can be problematic due to the ever-changing nature of experience. For example, if an individual clings to positive notions of self, such as being a ‘good student’, if this positive view is challenged by receiving a bad mark on an exam, this can elicit feelings of defensiveness, putting others down, or further attempts to compensate for the incongruence between that ideal self-concept and the reality of the situation which is ever-changing.
Being nonattached towards the self, therefore, limits incongruence between experience and the self-concept, allowing an individual to move through their life with greater flexibility, an understanding of the ever-changing nature of the self and a view of self that is free from expectation and fixation.

In addition to Buddhist conceptualisations, the notion of being nonattached towards the self also appears to be a key theme in the optimal stages of psychological health (Ardelt, 2008). Moving beyond self-fixation and the concerns of the individual self is a core component of a range of theories of optimal psychological functioning. Rogers (1961) and Maslow (1954) both proposed that individuals operating at the higher stages of psychological development demonstrate a reduced fixation on the self and a propensity to move beyond self-interest towards a more other- and universal-focus. Similarly, theories of adult development such as Levenson et al.’s (2001) liberative model of adult development or Loevinger’s (1976) stages of ego development propose the higher stages of adult development involve a reduction of attachment towards the ego and a transcendence of self-focus and self-fixation.

Although the benefits of nonattachment to the self have been outlined in theory, no research has been conducted on the construct of nonattachment to self. In the absence of any established measure of nonattachment to self, research on the more general construct of nonattachment shows that letting go of attachments and attempts to control experience in general, is beneficial for well-being. Research using Sahdra et al.’s (2010) nonattachment scale (NAS) shows that higher levels of nonattachment are associated with greater short-term, subjective well-being (Sahdra et al., 2010) as well as more longer-term, pervasive well-being that spans a range of areas in a person’s life (Ju & Lee, 2015; Whitehead et al., 2018a). These findings suggest the energy spent trying to cling to or avoid experience limits the
unhindered flow of experience and inhibits a greater sense of presence and well-being across a range of different areas in a person’s life (Sahdra et al., 2010).

Nonattachment also relates to the reduction of negative psychological symptoms (Arch, Landy & Brown, 2016; Coffey & Hartman, 2008; Sahdra et al., 2010; Tran et al., 2014). Coffey and Hartmann (2008) found that nonattachment was related to reduced rumination which predicted lower levels of psychological distress. Tran et al. (2014) also reported that higher levels of nonattachment were correlated with reduced amounts of depressive symptoms and Sahdra et al. (2010) established a negative correlation of nonattachment with depression, anxiety and stress. Theoretically, failed attempts to control the environment through attachments, increases levels rumination, anxiety and stress, thus letting go of these attachments reduces stress and anxieties associated with trying to manage failed attempts to control experience (Whitehead et al., 2018a).

The present research

The present research involved two sequential studies directed at creating a psychometrically valid measure of nonattachment to self. As general nonattachment appears to have psychological benefits, nonattachment specific to the self may be equally, or more beneficial. Study 1 details the development of a scale to measure nonattachment to self in the general population. This involved an initial consultation with primary and secondary texts as well as consultations with experts in the field to develop an item pool. These items were then subjected to exploratory factor analysis (EFA), and internal consistency of items in identified factors was established. Study 2 examined the validity of the factors identified in Study 1 via two confirmatory factor analyses (CFAs). The new scale was also tested for internal consistency and test-retest reliability, as well as criterion, convergent and discriminant validity. Furthermore, establishing a nonattachment to self measure that is distinct from
general nonattachment was crucial to the validity of the new measure. Therefore, a discriminant analysis using nested models in CFA was conducted to test the distinctiveness of the new scale.

**Study 1: Scale development and content validation.**

**Preliminary item construction**

The first stage of scale development involved creation of an initial item pool. Various primary texts were consulted (e.g., Abhidhamma, 3rd century BCE; Upanishads, 8th-5th BCE.) as well as contemporary texts from Eastern contemplative traditions that address notions of no-self and nonattachment to self (e.g., Adyashanti, 2012; Hanh, 1999, 2006; Thubten, 2009). A total of 30 items was developed from this research. The second stage involved a two-step consultation process with seven experienced teachers and practitioners from relevant disciplines (i.e., Theravadin Buddhism, Mahayana Buddhism, Advaita/Vedanta). These experts were experienced in theory and practice relating to ego-attachment and letting go of attachment to the egoic self. This consultation helped define the construct and the item pool was increased based on this definition. As the existing measure of nonattachment is a reliable and well-validated measure (e.g., Arch et al., 2016; Sahdra et al., 2016; Van Gordon et al., 2016), Sahdra et al.’s (2010) definition of nonattachment was used in consulting with experts. Nonattachment was defined as the “subjective quality of not being stuck or fixated on ideas, images, or sensory objects and not feeling an internal pressure to acquire, hold, avoid, or change” (Sahdra et al., 2010, p.118).

The first step of the consultation process produced a definition of nonattachment to individuals’ self related thoughts, feelings, concepts. Nonattachment to self was defined as the absence of fixation on self-related concepts, thoughts and feelings and a capacity to flexibly interact with these concepts, thoughts and feelings without trying to control them.
On the basis of suggestions given by the experts and insights gained during discussion, 86 new items were created, resulting in a total item pool of 116 for further investigation.

In the second step of the consultation process, experts rated the 116 items on clarity and the extent to which each item captured the construct. A number of items were found to lack clarity or failed to capture the agreed upon nature of the construct. Other items were identified as lacking appropriateness for non-meditators, or for inadvertently assessing related but distinct constructs (e.g., mindfulness). The process of consulting relevant texts and experts highlighted that in Buddhism, nonattachment to self is discussed in terms of developing an understanding of the illusory nature of the self. However, as the construct of nonattachment to self needed to be applicable to the general population, with or without meditation experience, items referring to the non-existence of a separate self, or illusory nature of the self were removed. On completion of the review stage of the consultation process, 64 items remained for exploratory factor analysis (EFA).

**Method**

**Participants**

The sample of 445 comprised 124 men and 321 women who aged from 18 to 77 years ($M = 35.77, SD = 11.84$). Most respondents did not report any religious or spiritual affiliation (51.2%), others identified as Christian (22.2%); 10.8% identified with a general, non-religious spirituality, 8.3% identified with a contemplative tradition (i.e., Buddhism, Vedanta), 2.7% identified as Muslim, 1% identified as Hindu and 3.8% other. The majority of participants (51.7%) engaged with a contemplative practice (e.g., meditation, mindfulness) for an average of 3.4 hours per week.
**Procedure**

Participants were recruited in two ways. First, psychology students from a mid-sized university in Melbourne, Australia were given course credit for completing the questionnaire ($n = 363$). Second, participants were sourced by a snowball method via a social media website where a brief description of the study was posted with a link to the online questionnaire ($n = 82$). This method has been used in similar scale development papers on self-compassion (Raes, Pommier, Neff, & Van Gucht, 2014) and follows previous studies (Brown & Ryan, 2003; Sahdra et al., 2010) which have utilised community samples when developing measures to assess Buddhist psychological constructs.

All participants completed an online questionnaire containing the 64 items in their own time. Before being presented with the items, participants were prompted with the statement “Below are a number of statements related to your experiences and how you view yourself. Please read each item carefully and rate the extent to which you agree with each statement. Please answer according to what reflects your experience rather than what you think your experience should be.” All items were rated on a scale from 1 (Strongly Disagree) to 7 (Strongly Agree). All participants were presented with a consent information statement and provided their consent to participate by completing the questionnaire. Ethical approval for the study was granted by Swinburne University Human Research Ethics Committee.

**Results**

An exploratory factor analysis (EFA) was conducted on the 64 items to determine the underlying factor structure of the items. The Keiser-Meyer-Olkin (KMO) measure of sampling adequacy was .93 and Bartlett’s test for sphericity was significant ($p < .001$) indicating the data were appropriate for analysis (Tabachnick & Fidell, 1996). Factors were extracted with the principal-axis method of estimation, and an oblique rotation was used as any factors were expected to be correlated. Based on the sample size, a factor loading cut-off
of .30 was selected in accordance with the recommendation of Hair, Tatham, Anderson, and Black (1998).

Using Kaiser’s criterion (i.e., Eigenvalues above 1), one clear factor was identified explaining considerably more than each of the other factors (24.9%). The next closest factor identified explained 7.2% of the variance in the items. However, 20 items did not load on the first factor and cross-loaded on multiple factors. These items were removed from further analysis. Another 32 items (mostly negatively worded) were removed as they cross-loaded on multiple factors with factor loadings above .32 (Worthington & Whittaker, 2006).

A second EFA was conducted to examine the new 16-item scale. Again, one factor explained considerably more variance than the others, however, seven items did not fall cleanly on the single factor. It was noted that items that displayed a specific emotional valence (e.g., “I worry about the negative thoughts I have about myself”, “I consciously try to only focus on the positive aspects of myself.”) tended not to load on a single factor. The decision was made to remove cross-loading items and two further items that had factor loadings < .30.

A final EFA was conducted using only the seven items. EFA revealed a single factor that accounted for 44.63% of variance in the items. Factor loadings for these items are shown in Table 1. Furthermore, the items were internally consistent ($\alpha = .84$). Alpha-if-item deleted results also indicated that the overall Cronbach’s alpha coefficient would not increase if any items were removed. From this point on the seven items were referred to as the nonattachment to self (NTS) scale.
Table 1

Means, Standard Deviations, Alpha-if-Items-Deleted and Factor Loadings of Items for the Nonattachment to Self Scale.

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
<th>FL</th>
<th>AID</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I can let go of unhelpful thoughts about myself.</td>
<td>4.63</td>
<td>1.54</td>
<td>.72</td>
<td>.81</td>
</tr>
<tr>
<td>2. I can let go of the need to control my life.</td>
<td>3.91</td>
<td>1.67</td>
<td>.72</td>
<td>.83</td>
</tr>
<tr>
<td>3. I don't get too caught up in the thoughts I have about myself.</td>
<td>4.11</td>
<td>1.51</td>
<td>.71</td>
<td>.81</td>
</tr>
<tr>
<td>4. As time goes on I feel less and less defined by the thoughts I have about who I am.</td>
<td>4.23</td>
<td>1.43</td>
<td>.54</td>
<td>.83</td>
</tr>
<tr>
<td>5. As time goes on I feel less and less of a need to be a certain way.</td>
<td>4.85</td>
<td>1.51</td>
<td>.52</td>
<td>.83</td>
</tr>
<tr>
<td>6. I can experience my personal ups and downs without getting caught up in them.</td>
<td>4.46</td>
<td>1.63</td>
<td>.79</td>
<td>.80</td>
</tr>
<tr>
<td>7. I can observe the positive and negative thoughts I have about myself without engaging in them.</td>
<td>4.32</td>
<td>1.50</td>
<td>.80</td>
<td>.80</td>
</tr>
</tbody>
</table>

\(N = 445, \, M = \text{Mean}, \, SD = \text{Standard deviation}, \, FL = \text{factor loading}, \, \text{AID} = \text{Alpha if item deleted}\)

**Study 2: Confirmatory factor analysis and validity assessment**

The purpose of Study 2 was to replicate the 7-item factor structure and internal reliability of the NTS scale through two separate confirmatory factor analyses (CFAs) on two new samples. Study 2 also sought to establish the test-retest reliability of the new scale and examine criterion, convergent and discriminant validity of the NTS scale. As NTS is expected to be a relatively stable quality, scores on the scale were expected to be consistent over time. Further, as a dissolution of self-focus often occurs within the meditation process (Berman & Stevens, 2015), criterion validity was tested by comparing levels of NTS for those who engaged in contemplative practice relative to those who do not. It was expected
that those who engaged with a contemplative practice would have higher levels of NTS than those who did not. The number of hours spent in contemplative practice was also expected to be positively related to NTS.

To establish convergent validity, the new scale was expected to correlate with the conceptually similar constructs of; nonattachment, mindfulness and self-compassion. NTS was also expected to correlate with measures of psychological functioning; emotional stability, reduced rumination, self-transcendence, wisdom and self-actualisation. Further, as an over self-focus has been shown to be relate to negative psychological outcomes (Kyrios et al., 2016; Mor & Winquist, 2008), negative correlations were expected between NTS scores and symptoms of depression, anxiety and stress, and positive correlations were expected with life satisfaction and psychological well-being. As nonattachment does not represent a detached state and requires presence and self-reflectiveness (Sahdra et al., 2015), to determine discriminant validity, weak-to-nonsignificant correlations were expected with measures of detachment; dissociation, depersonalisation, absorption, amnesia and lack of self-awareness. In addition, to ensure its distinctiveness from conceptually similar constructs; nonattachment and self-compassion, discriminant validity was tested with CFA, using nested models (Bagozzi, Yi & Phillips 1991), and when comparing unique variance explained in well-being variables.

Study 2 Method

Participants and procedure

Two separate samples were used for the two confirmatory factor analyses (CFAs). Participants in Sample 1 and Sample 2 were first-year psychology students from a mid-sized Australian university that received course credit for participation. All respondents completed an online survey at a time and place of their choosing. All respondents were presented with a consent information statement and provided their consent to participate by completing the
questionnaire. Ethical approval for the study was granted by Swinburne University Human Research Ethics Committee. As these two samples were obtained after Study 1, further demographic data was collected not previously collected in Study 1.

Sample 1 comprised 388 respondents (71 men & 317 women) aged from 18 to 77 ($M = 35.33, SD = 10.80$). Eighty percent of participants were born in Australia or New Zealand, 4.4% in the UK, 1.3% from India, 1.3% South Africa 1% from Iran, 1% from Malaysia and 11% Other. Most respondents did not state any religious or spiritual affiliation (64.2%) or identified as Christian (21.9%); 5.4% identified with a general, nonreligious spirituality, while 2.6% identified with a contemplative tradition (i.e., Buddhism, Vedanta), 2.3% identified as Muslim, 1% identified as Hindu and 2.8% other.

Sample 2 comprised 338 respondents (76 men & 262 women) ranging from 18 to 75 years ($M = 34.43$ $SD = 11.60$). The respondents predominantly identified as Anglo-European (82.6%), followed by Asian (7%), Indian and sub-continent (2.6%), Middle Eastern (2%), African (1.7%), New Zealander or Pacific Islander (1.7%) or other (2.2%). Most respondents did not state any religious or spiritual affiliation (51.2%) or identified as Christian (24.4%); 13.1% identified with a general, nonreligious spirituality, while 5.2% identified with a contemplative tradition (i.e., Buddhism, Vedanta), 1.7% identified as Muslim, 1.2% identified as Hindu and 3.1% other.

**Measures**

In addition to the new 7-item NTS scale developed in Study 1, a range of other measures was included to establish validity of the new scale. The measures included for this purpose are established measures of the constructs with strong reliability and validity statistics.

**Criterion validity**
Meditation experience. Participants from sample 1 and sample 2 were asked: “Do you engage with a meditative or contemplative practice?” Participants were also asked to: “Please provide the approximate amount of hours you spend engaged in meditative/contemplative practice per week.”

Convergent validity

Nonattachment. Nonattachment was assessed using a 7-item version of the original nonattachment scale (NAS-7; Elphinstone, Sahdra, & Ciarrochi, 2015; Sahdra et al., 2016). The NAS-7 was drawn from the larger 30-item nonattachment scale (NAS; Sahdra et al., 2010) and has shown to have good reliability and validity when compared to the original NAS. Participants rated their agreement with 7 items (e.g., “I can let go of regrets and feelings of dissatisfaction about the past”) using a 7-point Likert scale from 1 (Strongly Disagree) to 7 (Strongly Agree).

Mindfulness. A 20-item short form of the Five Factor Mindfulness Questionnaire FFMQ (Tran et al., 2014) was used. The FFMQ consists of 20-items (e.g., “I am easily distracted”, “In difficult situations, I can pause without immediately reacting”). Capturing five factors of mindfulness, observing, describing, awareness, nonjudgment and nonreactivity, which are summed to provide an overall score of mindfulness. Items are rated on a 5-item Likert scale from 1 (Never, or very rarely true) to 5 (very often, or always true).

Self-Compassion. The Self-Compassion Scale- Short Form (SCS-SF; Raes et al., 2011) is a 12-item measure drawn from the original 26 item self-compassion scale (SCS; Neff, 2003) designed to “measure self-compassion from the perspective of Buddhist Psychology” (Neff, 2003, p. 226). The 12-item scale has shown near perfect correlation ($r = .97$) with the larger SCS when measuring the single factor of self-compassion. All items (e.g., “When something upsets me I try to keep my emotions in balance”) are rated on a
Likert scale capturing the frequency of experiences from 1 (almost never) to 5 (almost always).

**Emotional Stability.** The Emotional Reactivity Scale (ERS; Nock, Wedig, Holmberg & Hooley, 2008) assesses emotional sensitivity, emotional intensity, and emotional persistence across 21 items (e.g., “I get angry at people very easily”) rated on a 5-point Likert scale ranging from 0 (not at all like me) to 4 (completely like me). Scores were reversed and summed to give a total out of 84 with higher scores indicating higher levels of emotional stability.

**Rumination.** The rumination scale (Treynor et al., 2003) consists of 10 items, designed to measure repetitive thoughts about negative feelings, and their associated meanings. The scale is an adapted short form of the original Ruminative Response Scale (RRS; Nolen-Hoeksema & Morrow, 1991) to improve its construct validity. The frequency of items (e.g., “analyse recent events to try to understand why you are depressed”) are rated on a 4-point scale from 1 (almost never) to 4 (almost always).

**Self-transcendence** – The self-transcendence subscale from adult self-transcendence inventory (ATSI; Levenson et al., 2005) is an 9-item measure of self-transcendence with items (e.g., “I do not become angry as easily”) rated on a Likert scale from 1 (Disagree Strongly) to 4 (Agree Strongly). The ATSI is a well-established measure of self-transcendence when assessing the construct as a process of adult development.

**Wisdom.** The 12-Item Three-Dimensional Wisdom Scale (3D-WS-12; Thomas et al., 2017) was used to capture the dimension of wisdom. The 3D-WS-12 is a recently developed abbreviated version of the larger three-dimensional wisdom scale (3D-WS; Ardelt, 2003) and shows good reliability and validity when measuring a higher order single factor of wisdom (Thomas et al., 2017). Items (“When I am confused by a problem, one of the first things I do...”)
is survey the situation and consider all the relevant pieces of information”) are rated on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree).

**Self-actualization.** The Short Index of Self-actualization (SISA; Jones & Crandall, 1986) measured self-actualisation characterized as a process of maximizing full potential. The scale consisted of 15 items (e.g., “I do not feel ashamed of any of my emotions”) rated on a four-point scale from 1 (Disagree) to 4 (Agree), with higher scores representing greater amount of self-actualisation.

**Depression, anxiety and stress.** The 21-item Depression, Anxiety, and Stress Scale (DASS-21; Lovibond & Lovibond, 1995) was used to measure depression, anxiety and stress. The DASS-21 comprises three subscales of 7 items each capturing symptoms of depression (e.g., “I felt that life was meaningless”), anxiety (e.g., “I felt scared without any good reason”) and stress (e.g., “I felt I found it difficult to relax”). Respondents rate the extent to which they have experienced symptoms over the previous week on a scale ranging from 1 (“Did not apply to me at all”) to 4 (“Applied to me very much, or most of the time”).

**Psychological well-being** - Psychological well-being was measured by a 30-item version of the Psychological Well-being (PWB) Scale (Ryff, 1989; Ryff & Keyes, 1995). The PWB scale yielded a total score by summing the 30 items as well as individual scores for the six dimensions of Autonomy, Purpose in Life, Environmental Mastery, Positive Relationships with Others, Personal Growth, and Self-Acceptance, consisting of 5 items each. All items (e.g., “I like most aspects of my personality”) are rated on a 6-point scale from 1 (Strongly Disagree) to 6 (Strongly Agree).

**Life satisfaction.** Life satisfaction was measured with the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larson & Griffen, 1985). The SWLS consists of five items (e.g.,
“in most ways my life is close to ideal”) rated on a 7-point scale from 1 (Strongly Disagree) to 7 (Strongly Agree) for scale totals ranging from 5 to 35.

**Discriminant validity**

**Dissociation.** The Curious Experiences Survey (CES; L. R. Goldberg, 1999) is a 31-item measure amended from the Dissociative Experiences Scale (Bernstein & Putnam, 1986) to be more concise and easily understood. The CES assesses three factors of dissociation: depersonalization (e.g., “Had the experience of feeling that my body did not belong to me.”), amnesia (e.g., “Found evidence that I had done things that I do not remember doing.”), and absorption (e.g., “Found that I became so involved in a fantasy or daydream that it felt like it was really happening to me.”). Items are rated on a 5-point scale from 1 (This never happens to me) to 5 (This almost always happens to me).

**Self-awareness.** The Situational Self-Awareness Scale (SSAS; Govern & Marsch, 2001) is a 9-item measure of self-awareness. The SSAS measures 3 subscales capturing private self-awareness or internal state awareness (e.g., “Right now, I am aware of my innermost thoughts.”), public self-awareness (e.g., “I am concerned what other people think of me.”) and awareness of immediate surroundings (e.g., “Right now, I am keenly aware of everything in my environment”). Item are measured on 7-point scale from 1 (Totally Disagree) to 7 (Totally Agree).

**Results**

**Confirmatory factor analysis**

An initial CFA using a structural equation model (SEM) was conducted to test the model fit for Sample 1. The initial model fit fell outside accepted criteria (CFI = .92, TL= .88, RMSEA = .14, and SRMR = .06). Examination of the modification indices in the model revealed covariances between items 4 and 5 and items 6 and 7. Examination of the content of these items (See Table 1) revealed they were semantically similar but addressing subtly
different aspects of self. Items 4 and 7 appear to directly capture how individuals interact with their thoughts about self, while items 5 and 6 capture aspects of the self in experience. As these items were determined to be semantically similar but importantly distinct constructs, a CFA with covariance parameters was conducted on Sample 1 (See Figure 1). This analysis revealed a good fit with the data in Sample 1 ($\chi^2(11) = 22.94, p = .02$, CFI = .99, TLI = .98, RMSEA = .05, SRMR =.02). The one factor solution was confirmed with seven items falling on a single factor an explaining 54.37% of the variance in the items. The internal consistency of these items was excellent with a Cronbach’s coefficient alpha of .88.

To confirm and replicate the factor structure of the CFA for sample 1, a second CFA with covariance parameters was conducted on Sample 2 (see Figure 2). This analysis revealed an adequate model fit with the data ($\chi^2(11) = 23.90, p = .01$, CFI = .98, TLI = .97, RMSEA = .08., SRMR = .02). Further confirming the factor structure, the single factor solution explained 60.3% of the variance in the items and Cronbach’s coefficient alpha was again excellent at .91.

![Figure 1](image-url)

**Figure 1.** Confirmatory Factor Analysis Using Structural Equation Model for the 7-item Nonattachment to Self Scale for Sample 1
Figure 2. Confirmatory Factor Analysis Using Structural Equation Model for the 7-item Nonattachment to Self Scale for Sample 2

**Test-retest reliability**

Test-re-test reliability was obtained from a sub-sample of 29 participants who originally completed the scale in Study 1, who consented to complete the NTS scale at a later date. The modal time between completions of the NTS scale was 36 days. Respondents’ scores at both timepoints were highly correlated ($r = .80, p < .001$) indicating that scores on the NTS scale are consistent over time.

**Criterion validity**

An independent samples t-test was conducted to test whether participants who engaged in a contemplative practice had higher levels of NTS that those who did not. In both samples, NTS scores for respondents engaging in contemplative practice (Sample 1, $M = 33.34, SD = 8.04, n = 163$; Sample 2, $M = 32.93, SD = 8.81, n = 173$) were higher than respondents who did not (Sample 1, $M = 30.39, SD = 8.21, n = 225$; Sample 2, $M = 29.72, SD$).
= .8.60, n = 166). This difference was significant in both samples (Sample 1 \( t(386) = 3.53, p < .001; \) Cohen’s \( d = .35 \), Sample 2 \( t(337) = 3.42, p = .001; \) Cohen’s \( d = .48 \)). NTS scores also showed a weak positive correlation with hours spent in contemplative practice per week: Sample 1, \( r = .10, p = .04 \); Sample 2, \( r = .23, p = < .001 \).

**Convergent and discriminant validity**

**Convergent validity**

Correlations for the convergent validity measures (See Table 2) indicate the NTS scale showed weak-to-moderate to moderate-to-strong correlations with each of the convergent measures (\( r = -.34 \) to \( r = .72 \)). Results showed a moderate-to-strong positive relationship between NTS and the theoretically aligned constructs of nonattachment and self-compassion, and moderate positive relationship between NTS and mindfulness. NTS also showed weak-to-moderate negative correlations to rumination, and moderate positive correlations with emotional stability, self-transcendence, self-actualisation and wisdom.
Table 2

Internal Reliabilities Coefficients and Correlations of Nonattachment to Self to Convergent Validity Measures

<table>
<thead>
<tr>
<th></th>
<th>Sample 1</th>
<th>Sample 2</th>
<th>Alpha Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=388</td>
<td>n=338</td>
<td></td>
</tr>
<tr>
<td>Convergent Validity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonattachment</td>
<td>.71**</td>
<td>.95</td>
<td></td>
</tr>
<tr>
<td>Mindfulness</td>
<td>.56**</td>
<td>.91</td>
<td></td>
</tr>
<tr>
<td>Self-Compassion</td>
<td>.72**</td>
<td>.95</td>
<td></td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>.55**</td>
<td>.96</td>
<td></td>
</tr>
<tr>
<td>Rumination</td>
<td>-.34**</td>
<td>.84</td>
<td></td>
</tr>
<tr>
<td>Self-Transcendence</td>
<td></td>
<td>.56**</td>
<td>.87</td>
</tr>
<tr>
<td>Self-actualisation</td>
<td></td>
<td>.54**</td>
<td>.73</td>
</tr>
<tr>
<td>Wisdom</td>
<td></td>
<td>.41**</td>
<td>.76</td>
</tr>
<tr>
<td>PWB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Mastery</td>
<td>.67**</td>
<td>.92</td>
<td></td>
</tr>
<tr>
<td>Personal Growth</td>
<td>.60**</td>
<td>.81</td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>.32**</td>
<td>.72</td>
<td></td>
</tr>
<tr>
<td>Self-acceptance</td>
<td>.45**</td>
<td>.75</td>
<td></td>
</tr>
<tr>
<td>Life Purpose</td>
<td>.63**</td>
<td>.86</td>
<td></td>
</tr>
<tr>
<td>Relationships</td>
<td>.56**</td>
<td>.61</td>
<td></td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>.47**</td>
<td>.81</td>
<td></td>
</tr>
<tr>
<td>DASS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>-.51**</td>
<td>.91</td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>-.46**</td>
<td>.89</td>
<td></td>
</tr>
<tr>
<td>Stress</td>
<td>-.52**</td>
<td>.88</td>
<td></td>
</tr>
</tbody>
</table>

Note: ** = p = <.001, * = p = <.05

Correlations for the well-being variables (See Table 2) were all in the expected direction with the NTS scale showing weak to moderate ($r = .32$ to $r = .67$) relationships to all the well-being measures. Specifically, the NTS scale displayed weak-to-moderate positive correlations with all facets of PWB and life satisfaction, and displayed moderate negative correlations with symptoms of depression, anxiety, stress. However, the internal reliability of
the subscale ‘life purpose’ was below acceptable. As the scale was short and represented a subscale of the PWB scale, the decision was made to proceed with the analysis.

**Discriminant validity**

Correlations for discriminant validity (See Table 3) were either non-significant or weak and fell within expected parameters (r ranged from .06 - .39). Specifically, the NTS scale was not significantly related to measures of amnesia, absorption or total situational self-awareness, and only showed a weak negative relationship to dissociation, depersonalisation and public self-awareness, and a weak a positive relationship to environmental self-awareness and private self-awareness.

Table 3.

*Internal Reliabilities Coefficients and Correlations of Nonattachment to Self to Discriminant Validity Measures*

<table>
<thead>
<tr>
<th>Discriminant Validity</th>
<th>Sample 2</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dissociation (total)</strong></td>
<td></td>
<td>.96</td>
</tr>
<tr>
<td>Amnesia</td>
<td>-.08</td>
<td>.81</td>
</tr>
<tr>
<td>Absorption</td>
<td>-.07</td>
<td>.85</td>
</tr>
<tr>
<td>Depersonalisation</td>
<td>-.11*</td>
<td>.91</td>
</tr>
<tr>
<td><strong>Situational Self-awareness (total)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self in Surroundings</td>
<td>.25**</td>
<td>.85</td>
</tr>
<tr>
<td>Private Self-awareness</td>
<td>.18*</td>
<td>.73</td>
</tr>
<tr>
<td>Public Self-awareness</td>
<td>-.39**</td>
<td>.81</td>
</tr>
</tbody>
</table>

N = 338
Distinctiveness from nonattachment and self-compassion

Due the strength of the correlation between NTS and self-compassion, the decision made to test the distinctiveness of NTS from general nonattachment and self-compassion. To test the distinctiveness of NTS from general nonattachment and self-compassion, Two SEMs were conducted using nested models (Bagozzi et al., 1991). Using nested models to test discriminant validity involves comparing the model fit of two SEMs. The original (unconstrained) model is compared with a nested (constrained) model where the correlation between the latent variables is set to 1, indicating that both constructs are identical (Schweizer, 2014). The fit of the constrained and unconstrained models are then compared using a chi-square difference test, and comparing the difference in comparative fit index (CFI) and root mean square error of approximation (RMSEA). If the constrained model shows a significantly worse fit than the unconstrained model, then discriminant validity is confirmed. Nested models are a rigorous and widely-accepted SEM-based approach to discriminant validity (Shaffer, DeGeest & Li, 2016). Two separate nested model comparisons were conducted to test discriminant validity of NTS to nonattachment and self-compassion. The constrained model was showed to be a worse fit than the unconstrained model for nonattachment ($\Delta \chi^2 = 177.16, df = 1, p<.001; \Delta \text{CFI} = .07; \Delta \text{RMSEA} = .02$) and self-compassion ($\Delta \chi^2 = 262.90, df = 1, p<.001; \Delta \text{CFI} = .05; \Delta \text{RMSEA} = .02$). Based on accepted criteria (CFI $\geq .01$; Cheung & Rensvold, 2002; RMSEA $\geq .015$, Chen, 2007), the results revealed the difference between the models was significant, providing evidence for the distinctiveness of the NTS scale from nonattachment and self-compassion.

To further investigate how NTS was distinguished from nonattachment and self-compassion, regression analyses were conducted to determine whether NTS explained
significant unique variance in four well-being variables when compared to nonattachment and self-compassion (see Table 4). Multiple regression analyses revealed that NTS explained significant unique variance in PWB, depression, anxiety, and stress when compared to nonattachment. Multiple regression analyses further revealed that NTS explained significant unique variance in PWB, depression, anxiety and stress when compared to self-compassion.

Table 4.

Unique Variance in Well-being Variables Predicted by Nonattachment to Self when Compared to Nonattachment and Self-compassion.

<table>
<thead>
<tr>
<th>Measures</th>
<th>PWB</th>
<th>Dep</th>
<th>Anx</th>
<th>Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
</tr>
<tr>
<td>Nonattachment</td>
<td>.34**</td>
<td>-.20*</td>
<td>-.21*</td>
<td>-.19*</td>
</tr>
<tr>
<td>NTS</td>
<td>.26**</td>
<td>-.37**</td>
<td>-.32**</td>
<td>-.38**</td>
</tr>
<tr>
<td>Self-compassion</td>
<td>.39**</td>
<td>-.33**</td>
<td>-.28**</td>
<td>-.31**</td>
</tr>
<tr>
<td>NTS</td>
<td>.38**</td>
<td>-.25*</td>
<td>-.23**</td>
<td>-.27*</td>
</tr>
</tbody>
</table>

Note: **p = <.001, * p < .01, PWB = Psychological Well-being, Dep = Depression, Anx = Anxiety

General Discussion

The aim of the research was to develop and validate a reliable measure of nonattachment to self (NTS). This resulted in the creation of a new 7-item measure of NTS loading on a single factor that was confirmed using two separate CFAs. The new scale shows good internal consistency, test-retest reliability and criterion validity. The scale was also shown to have good convergent and discriminant validity and importantly, is an empirically distinct construct from nonattachment and self-compassion. As expected, NTS related to measures of positive psychological functioning and well-being and did not represent a
detached or dissociated state. The results suggest the NTS scale is valid, reliable over time, and distinct to nonattachment in general. Accepting any self-related feelings, thoughts or concepts, regardless of valence, and not forcibly try to change these to fit with an ideal, appears to be a way of relating the self that is related to positive psychological outcomes.

The validity process provided empirical evidence that NTS is empirically distinct from general nonattachment. This was important as it supports the continued study of NTS as a separate construct. Distinguishing NTS from nonattachment indicates there are differences between how individuals attach to external experience and how they attach to their self-related experience. As the construct of the self has been integrated into many aspects of life and is central to the many roles individuals play (Bhar & Kyrios, 2016; Shiah, 2016), taking a nonattached stance towards the self can affect many, if not all aspects of individuals’ lives. In contrast, an individual may have attachments to external experience that may be specific (e.g., physical injury, interpersonal confrontation) but that may not necessarily affect other aspects of their life.

The differentiation between NTS and nonattachment indicates that developing NTS may be of specific benefit to certain individuals and nonattachment may be more beneficial for others. Research has shown that general nonattachment can have a major impact on a variety of areas of life such as well-being (Sahdra et al., 2010; Chao & Chen, 2014), psychological development (Whitehead et al., 2018b) and interpersonal relationships (Sahdra et al., 2015; Wang et al., 2016). However, the present results indicate that NTS may be more beneficial that general nonattachment for ameliorating the impact of negative psychological symptoms; depression, anxiety and stress. This may be due to the self playing a central role is psychopathology (Kyrios et al., 2016) and an over self-focus being linked negative mental health symptoms (Levenson et al., 2001; Mor & Winquist, 2004). For individuals that are negatively impacted by how they view themselves, taking a flexible, nonattached stance
towards the self-related experience may protect against the symptoms of such a negative self-focus.

In addition to nonattachment, NTS was also shown to be distinct from self-compassion. This means that taking a nonattached stance towards the self differs from taking a balanced and compassionate stance towards negative emotions (Neff, 2008). This distinction points to the notion that reducing any self-fixation, regardless of valence, is different from reducing the impact of negative self-related experience. The findings also highlight that, in addition to the effects of being more self-compassionate, reducing fixation on the self, whether positive or negative, can positively impact an individual’s well-being and reduce negative psychological symptoms. NTS appears to capture a unique way of interacting with the self that is related but distinct from self-compassion. Whereas, self-compassion involves a balanced, kind and loving approach to self (Neff, 2003), NTS involves a flexible acceptance to self-related thoughts, feelings and concepts, regardless of their content. This suggests even feelings that are not compassionate or kind towards the self can be acknowledged and viewed in the same way was as more positive thoughts and feelings. Theoretically, this reduces less tension between the ideal self-concept and the reality of the self-related experience (Epstein, 2007), even if this is negative.

The convergent validity also found that NTS was related to measures of positive psychological functioning. NTS was related to greater emotional stability and less ruminative thinking. Emotional stability refers to an individuals’ capacity to be able to be balanced when responding to emotionally provoking stimuli (Hills & Argyle, 2001). The findings suggest that emotional reactivity to self-referent stimuli, such as negative self-evaluations or criticism from others, may be ameliorated by taking a more flexible approach to the self-concept and reducing the incongruence between stimuli and self-concept. Similarly, whereas rumination involves unintentional recurring thoughts with a positive or negative self-focus,
that can perpetuate symptoms of depression (Krieger et al., 2014), NTS indicates a reduction in the positive or negative self-focus and a more flexible self-concept. This would assist in reducing obtrusive thoughts or letting them pass without having them reoccur. These findings support the theorised benefits of taking a more flexible stance toward the self-concept on the way individuals manage their emotions and cognitions.

In addition to adaptive functioning, NTS related to wisdom, self-actualisation and self-transcendence. Wisdom, self-actualisation and self-transcendence are taken as measures of optimal psychological development that indicate the higher stages of psychological growth (Whitehead et al., 2018b). The present findings indicate that being flexible and nonattached in relation to the self may facilitate a transcendence of self-focus that is implicit in the later stages of psychological development (Cook-Greuter, 2000; Hartman & Zimberoff, 2008). Potentially, by removing fixation on the self and the need for self-related experience to be one way or other, individuals may be able to reduce the self-bias that can limit development of wisdom and self-transcendence (Whitehead et al., 2018b). The present findings indicate that NTS can be associated with the growth process and supports the Buddhist notion that nonattachment to the self develops over time and is a goal that is worked towards (Donner, 2010). This is also supported by the observed relationship between contemplative practice and NTS and indicates NTS can develop over time, in conjunction with contemplative practice. Practices like meditation can assist in a dissolution of self-focus (Berman & Stevens, 2015; Emavardhana & Tori, 1997) and can create distancing from the immediacy of experience (Bishop et al., 2004; Neff, 2008), which can facilitate the letting go of attachment to thoughts, feelings and concepts about the self.

There are a number of implications of the current research. The development and validation of the NTS scale provides empirical support for a construct of NTS distinct from nonattachment and self-compassion. NTS appears to be a distinct quality that can make a
positive unique contribution to individuals’ mental health and psychological growth, beyond the more widely studied constructs of nonattachment and self-compassion. This research also provides insight into the possible benefits of understanding the self as a fluid rather than a static entity and invites research on the Buddhist notion of the self as a dynamic process. As individuals’ notions of self play a central role in their well-being (Kyrios et al., 2016), understanding the self as a more dynamic process and taking a more nonattached stance towards the self-concept, rather than taking a positive stance towards the self, may be a fruitful area of study in relation to individuals’ well-being and quality of life in general.

The findings also have implications for individuals whose self-related feelings make it difficult to have any positive self-interactions. Individuals whose negative psychological symptoms impact their ability to benefit from strategies such as self-compassion (Gilbert, McEwan, Matos & Rivis, 2011; Pauley & McPherson, 2010), may still be able to gain benefit from taking a more nonattached stance towards their self. As NTS does not require a positive interaction with self, it is not in opposition to feelings of low self-worth or hopelessness. It could therefore be met with less resistance than strategies that require a positive self-focus. Future research comparing NTS with constructs like self-compassion, investigating whether NTS acts as a protective factor against negative psychological symptoms, and whether specific interventions can target NTS could further elucidate the construct.

A number of methodological considerations are relevant to the present studies. As the samples were predominantly of university students and with considerably more women than men, the generalisability of the findings is limited. Nevertheless, the gender bias may not detract markedly from the findings as previous studies have found no gender differences in nonattachment (Sahdra et al., 2010). However, further research is needed on larger samples drawn from across the community to establish generalisability. Additionally, as this study did not use a clinical sample, the findings in relation to depression, anxiety and stress may not
apply to individuals experiencing clinical levels of these symptoms and future work is needed to establish whether the relationships found also hold in a clinical population. Longitudinal studies on NTS are also needed to examine how NTS develops over time. Despite these limitations, the present study provides a robust development and validation process for the new measure of NTS that appears relevant to a range of areas associated with mental health and quality of life in general.

In conclusion, the present studies established the reliability and preliminary evidence of validity on a new measure of NTS. NTS emerged as a quality related, but distinct from other Buddhist psychological constructs, and that taking a more flexible, nonattached stance towards self-related thoughts, feelings and concepts can be beneficial for individuals’ well-being and psychological functioning. The findings also indicate that NTS may provide unique benefit to individuals’ well-being over and above the effects of other similar measures and may provide an avenue for healthy interaction with the self-concept for individuals that struggle with a positive self-focus.

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*Doi:*


Chapter 8: Discussion

8.1 Chapter Guide

This chapter provides a concluding discussion of the dissertation and the research presented in the previous four chapters. This chapter provides a summary of each of the studies, including an outline of their findings, highlighting their interrelationship, and the synthesis provided by the dissertation. This chapter also aims to highlight the significant contributions of this thesis in building knowledge about the nonattachment construct, and how individuals relate to their experience, including the experience of the self. Furthermore, this discussion explores the implications of this thesis and examines the limitations and directions for future research.

8.2 Investigation into Nonattachment and Nonattachment to Self

The present dissertation provides a comprehensive investigation of the construct of nonattachment, using quantitative and qualitative methodology, and investigates nonattachment as it directly applies to the self. A collection of four papers explored the relationships of nonattachment to a range of well-being variables (study 1), as well as measures of optimal psychological development: wisdom, self-actualisation and self-transcendence (study 2). Nonattachment was also explored alongside mindfulness and, specifically, as a mechanism of mindfulness that mediates its impact on well-being, ill-being, and optimal psychological development (studies 1 and 2). The third study in this dissertation was the first to provide a qualitative investigation of the lived experience of nonattachment.
This study explored the impact of nonattachment and attachment in individuals' lives, how nonattachment had developed in their lives, and how it impacted their views for the future. Finally, based on a strong theoretical underpinning, and the results from studies 2 and 3, the fourth study provided the rationale for, and subsequent creation of, a new measure of nonattachment as it applies to the self; the nonattachment to self (NTS) scale.

8.3 Summary of key research findings

The aim of study 1 was to investigate whether nonattachment related to psychological and subjective well-being, depression, anxiety, and stress, and whether nonattachment mediated the relationship between mindfulness and these variables. In accordance with expectations, nonattachment and mindfulness were positively related to well-being and negatively related to depression, anxiety, and stress. Also supporting expectations, the findings replicated and extended previous research by indicating that nonattachment mediated the relationship of mindfulness to all measures of well-being and ill-being. The findings provided evidence that nonattachment may be an important quality to possess for improved quality of life in a range of areas, and in some cases, can be a stronger predictor of positive psychological outcomes than mindfulness. These findings also provided a comprehensive investigation of nonattachment as a mechanism of mindfulness, in relation to a range of positive and negative well-being variables. In addition, these results provide a greater understanding of the most effective pathways to gaining benefit from mindfulness. The outcomes of study 1 provide evidence for the importance of nonattachment in the well-being literature, and as an important area for future study.

Study 2 built on the findings of study 1 and aimed to test whether the positive effect of nonattachment extended beyond well-being and ill-being, to more growth-focused measures of psychological development: wisdom, self-actualisation, and self-transcendence.
Further, the study sought to extend the findings of study 1 to ascertain whether the established relationship between mindfulness and positive psychological development was due to the impact of nonattachment. The findings were the first to demonstrate positive relationships between nonattachment and wisdom, self-actualisation and self-transcendence, and that nonattachment partially mediated the relationships between mindfulness and wisdom, self-actualisation and self-transcendence. This provided supporting evidence for nonattachment as a potential mechanism of mindfulness, demonstrating that the mediating role of nonattachment extends beyond the impact of mindfulness on well-being, and helps to explain the impact of mindfulness on developmental outcomes. The findings provide further evidence for the wide range of benefits of nonattachment and supports the notion that constructs aligned with growth and development in Eastern contemplative traditions, are also important in relation to Western psychological notions of growth and development.

The first two studies provided empirical support for the benefits of nonattachment as a mechanism of mindfulness and as a stand-alone construct. Study 3 sought to build upon the first two studies to further elucidate the construct by conducting a qualitative investigation on nonattachment. This study was an exploratory study on the lived experience of nonattachment and how it impacts individuals (scoring high and low in levels of nonattachment) across a range of areas in their lives. The findings provide unique insights into individuals’ experiences of nonattachment and attachment and how it has impacted them. Key themes were highlighted in individuals’ experiences of attachment and nonattachment. Individuals scoring very high on nonattachment tended to display greater openness and flexibility as well as an ability to see things from a wider perspective. They tended to consciously engage in a process of letting go that assisted their lives to flow with minimal self-obstruction. They exhibited mature relationships that involved empathy and compassion and removed expectations on others to be a certain way. Interestingly, in addition to
engaging in contemplative and self-reflective practice, individuals with high levels of nonattachment discussed the important role that transformative suffering played in their development of nonattachment.

In contrast, individuals with low levels of nonattachment tended to be quite rigid in their thinking, placing often unachievable expectations on themselves and others. They also tended to experience mental health issues that adversely impacted their lives, and tended to engage with unhelpful psychological strategies such as rumination and worry. The interpersonal relationships of these individuals also tended to be problematic. There were active attempts to avoid challenging aspects of the relationships and a rejection of relationships that did not meet expectations. The interviewees’ attachments appeared to develop in early childhood, or in relation to major life traumas that were unresolved, and were used as strategies to minimize harm and stay safe. The findings of this study, for both the high and low nonattachment groups, provide the first qualitative research on nonattachment and attachment and generate insights into the lived experience of nonattachment and how it can be developed.

The fourth and final study was informed by Studies 2 and 3, with the findings in study 3 providing evidence that individuals’ attachment and nonattachment towards self-related thought and feelings, tended to have a major impact in their life. The aim of the fourth study was to investigate and create a potentially related, but empirically distinct, construct to nonattachment; nonattachment to self (NTS). The focus of study 4 was the creation and validation of the NTS scale. Through exploratory factor analysis (EFA) and multiple confirmatory factor analyses (CFAs), the NTS scale was shown to be empirically distinct from general nonattachment and self-compassion, consistent over time, internally reliable, with good convergent and discriminant validity. The findings in this study provide preliminary evidence of a potentially beneficial method of interacting with the self, that
neither focuses on building up the self or putting it down. Preliminary evidence suggests that letting go of fixation on self-focused thoughts, feelings and concepts, can be beneficial for individuals’ adaptive functioning and overall mental health.

8.4 Integrated Discussion

The combined findings of the studies presented provide comprehensive support for the benefits of nonattachment for individuals’ quality of life, and the continued study of nonattachment in the field of psychology. This integrated discussion of the present research concentrates on the common findings present within the four studies. These include: the relationship of nonattachment to individuals’ quality of life, nonattachment and personal development, the development of nonattachment, and nonattachment to self.

8.4.1 Nonattachment and Quality of Life

A major theme supported by all four studies was the impact of nonattachment on individuals’ quality of life, including their levels of well-being, ill-being and the quality of their relationships. Nonattachment appeared to impact a wide array of individuals’ life experiences, as well as their personal thoughts and feelings. The findings support the limited correlational research that nonattachment is positively related to well-being (Chao & Chen, 2013; Feliu-Soler et al., 2014; Sahdra et al., 2010, 2016) and negatively related to ill-being (Coffey & Hartman, 2008; Coffey et al., 2010; Tran et al., 2014), and highlights that letting go of fixation on specified outcomes is beneficial for improving overall quality of life.

The findings support the theory that nonattachment is related to a greater flexibility and ability to interact with experience, without the self-inflicted worry and rumination
involved in trying to be in control. Overall, individuals that were highly nonattached displayed psychological flexibility and an ability to move with life as it changed, including navigating their most challenging moments. Being more psychologically flexible can be a protective factor against pathology and can also promote positive psychological health (Kashdan & Rottenberg, 2010). When an individual is nonattached, it allows them to move through life unperturbed, not becoming unnecessarily caught up, or stuck in experiences, thus allowing them to respond to life with a freedom and balance, independent of the experiences itself. This means that the usual ups and downs of life, that cause both positive and negative affective experiences, can be negotiated with minimal involvement of unnecessary fixations which adversely impact individuals’ well-being, or underlie pathological symptoms such as depression, anxiety and stress.

In further support of the link between nonattachment and quality of life, the findings from study 3 highlight the adverse effect that attachments can have on individuals in all areas of their life. This supports the theory that individual suffering does not come from the person’s experiences, but from the way they interact with these experiences (Dalai Lama, 1997, 2001; Hanh, 2006). Individuals’ attempts to control experience, by fixating on specified outcomes, tended to relate to greater anxiety and worry, separate from the experience itself. The fixation on experience appeared to keep individuals feeling stuck in the negative affect associated with difficult life experiences, where they found it hard to let go of the feelings and move on. Their avoidance of specific stimuli perceived as unsafe appeared to make the avoided stimuli more salient (Hayes et al., 2006), and thus resulted in greater negative affective responses towards the stimuli (Hayes et al., 1996). For example, a fear associated with leaving the house tended to grow the more it was avoided. Although, on the surface, attachments were engaged with for self-protective purposes, they tended to prevent individuals from feeling a sense of contentment. For example, individuals would
continually place expectations on themselves that were just beyond reach, which would result in always wanting or needing to be better. This example, and numerous others, highlights the negative impact that attachments have (even if they are well-meaning) on individuals’ well-being and quality of life in general.

Another theme fundamental to quality of life is the quality of relationships (Ryff, 1989). The association of nonattachment to measures of optimal psychological development indicated that nonattachment could be an important factor in assisting people to move beyond a rigid self-focus, towards a greater other-focus (Adyashanti, 2017; Cook-Greuter, 2000; Levenson et al., 2001). This finding was also supported in the interviews with highly nonattached individuals, where their levels of nonattachment allowed them to move beyond their own points of views towards others’ perspectives (Adyashanti, 2017; Hanh, 1986, 2006). Engaging in nonattachment enabled a distance from self-focused thoughts and feelings to see self-biases, which allowed individuals to understand things from others’ perspectives and be open and empathetic towards them. The results support correlational findings that nonattachment relates to greater empathy (Sahdra et al., 2015) and relationship harmony (Wang et al., 2016), and indicate that being nonattached and less self-fixated may create a greater space to focus on other people and the dynamics of those relationships (Sahdra et al., 2015).

In contrast, attachments appeared to negatively impact relationships, as they manifest as ongoing attempts to control them by trying to fit them with subjective expectations, or by a strong aversion towards disrupting the relationship, even at individuals’ own detriment. Further, individuals’ attachments to their own points of view, such as how a relationship should operate, potentially limit their ability to remain open to others’ points of view (Adyashanti, 2017; Dalai Lama, 2011; Hanh, 1986). This inhibits healthy interpersonal
interactions. Whereas nonattachment allows relationships to move, grow and progress healthily, attachments appear to stagnate their growth and development.

In combination, the studies provide evidence for the positive impact that nonattachment can have on quality of life. Nonattachment appears to positively contribute to short-term well-being, as well as to longer-term pervasive well-being, aligned with growth and positive relationships. Being able to let go of control and fixation of specified outcomes appears to reduce unhelpful psychological strategies such as rumination (Lamis & Dvorak, 2013), and is related to a greater acceptance of experience (Sahdra et al., 2010, 2016). This translates to increased quality of life through reduced self-inflicted suffering, healthier relationships, and a greater capacity to experience positive affective experiences and psychological growth.

8.4.2 Nonattachment and personal development

The findings of the combined studies highlight the relationship of nonattachment to psychological developmental outcomes. The findings of studies 2 and 3 provided evidence that, in addition to a quality that is beneficial for well-being, nonattachment is a quality aligned with optimal psychological development. This indicates that, as individuals develop greater wisdom and grow towards actualisation and transcendence of the self, they lessen attempts to control experience and become less fixated on needing it to be a certain way. The findings suggest that in addition to being aligned with the growth process in Buddhism (Donner, 2010), nonattachment is also aligned with Western notions of positive psychological development (Cook-Greuter, 2000; Jeste et al., 2010). Being nonattached can reduce rigid thinking and draw attention to self-biases that might otherwise limit inner personal development. Being nonattached facilitates greater reflexivity and a deeper
understanding of experience on multiple levels, allowing individuals to learn, grow and mature towards optimal levels of psychological development.

The findings from study 2 were supported by the data gathered from the interviews with highly nonattached individuals. These individuals presented as psychologically mature and had observable levels of insight into their own experience, and knowledge of their own biases; qualities that are central to optimal qualities of wisdom (Thomas et al., 2017) and self-transcendence (Le, 2011). They also showed a propensity to be able to learn and grow from their experiences and a demonstrated wisdom into the ever-changing nature of experience. Being able to objectively view experience without attachment appeared to provide the optimal conditions for psychological growth and development, as individuals could move through their life experiences and life-lessons without becoming stuck or fixated. This allowed for greater learning and development to occur, rather than remaining stuck on specific experiences, which could impede the flow of self-reflection and growth.

### 8.4.3 Developing nonattachment

The present studies are the first to provide an understanding of the various ways in which nonattachment can be developed. Studies 1 and 2 provided support for previous findings on the relationship of nonattachment with age (Sahdra et al., 2010, 2016; Feliu-Soler, 2016), indicating it is a quality that grows over the lifespan. Interestingly, study 3 provided qualitative support for this contention, with highly nonattached individuals clearly discussing their development of nonattachment as a process of growth over time, as they moved from attachment to nonattachment.

Study 3 also provides support for the theory and research that engaging in contemplative practice can build nonattachment (e.g., Dhiravamsa, 1975; Montero-Marín et al., 2016; Sahdra et al., 2010; Tran et al., 2014). This may be due to practices, such as
meditation, fostering objectivity (Adyashanti, 2012), and an ability to distance oneself from the immediacy of the experience (Bishop et al., 2004). Through being able to engage with experience more objectively, and without bias, there is an ability to witness the transient, ever-changing nature of experience and the negative effects associated with trying to control it. A further, unique finding was that other self-reflective practices such as psychotherapy and counselling can play a role in building nonattachment. This indicates that nonattachment can be cultivated through multiple pathways and that self-reflection, however it is garnered, can play an important role in letting go of attachments (Sahdra et al., 2010). Interestingly, study 3 found that it was the combination of contemplative or self-reflective practice, coupled with the processing of life experiences, which appeared to have the biggest impact on building nonattachment.

The processing of challenging life experiences was the most common theme for highly nonattached individuals when discussing how nonattachment had developed in their life. They reported that some of the lowest points in their life had been a catalyst for growth and had propelled them towards engaging with their experience with greater nonattachment. This further supports the contention that experiences that involve self-reflection can build nonattachment (Sahdra et al., 2010), and indicates that the way individuals process their most challenging life experiences can have a lasting effect on the way they interact with experience. Research into the processing of challenging life experiences has found that individuals who are able to openly engage with their difficult experiences have higher levels of wisdom (Weststrate et al., 2017) and ego-resiliency (Pals, 2006b) than those who do not. The present findings indicate the same may be true for nonattachment.

The way negative experiences were processed also appeared to play an important role in building attachments. People low on nonattachment tended to be stuck in the emotions of negative life experiences, finding it difficult to objectively engage with the experience,
limiting the potential to learn and grow from it. This provides insight into why some individuals develop nonattachment while others can remain stuck in their attachments. The extent to which individuals can (potentially with support from self-reflective practice) openly and reflectively engage with their challenging experience, appears to be a key determinant in their growth from attachment to nonattachment. The present studies provide the first comprehensive evidence that there are many available pathways to building nonattachment and attachments, whilst also providing insight into the construct from a developmental perspective.

8.4.4 Nonattachment to self

The combined findings of studies 3 and 4 provide insight into the construct of nonattachment to self. Although letting go of attachment to self is a core theme in the Eastern contemplative traditions and is aligned with self-realisation (Harris, 2014; Thubten, 2009), the present studies were the first to empirically investigate the construct. The validation process of the NTS scale showed that NTS is a distinct phenomenon relative to general nonattachment and the construct of self-compassion. This provides evidence that the way individuals attach to their self-related thoughts and feelings is different from the way in which they attach to other experiences. The findings also indicate that NTS may play a more significant role in ameliorating the effects of negative psychological symptoms than general nonattachment. This may be due to the central role that the self plays in life (Kyrios et al., 2016; Shiah, 2016), its proneness to over-focus, and its centrality to pathological symptoms, such as depression and anxiety (Mor & Winquist, 2004).

The impact of attachment to self was also clear in study 3. For individuals who were highly attached, their self-focused thoughts and feelings were a major cause of suffering. Some individuals were able to remain relatively nonattached in situations that were outside
their control, however, situations involving self-focused thoughts and feelings seemed to have the strongest negative impact. As the self is the one apparent constant in life, it follows that the way individuals interact with their self is fundamental to their overall mental health (see Kyrios et al., 2016). In contrast to the low nonattachment group from study 3, individuals high on nonattachment displayed a greater NTS and were able to utilise self-focused thoughts and feelings as things to learn and grow from, rather than fixate or ruminate on.

The combined findings also provide evidence that NTS is not a detached state and is developed through wilful reflection and contemplation. NTS was shown to relate to mindfulness and contemplative practice, indicating that, similar to nonattachment in general, it can be cultivated through self-reflective practice. This supports previous findings that contemplative practice can reduce self-referential processing (Holzel et al., 2011), facilitate nondual awareness (Berman & Stevens, 2015), and reduce attachment towards the self (Emavardhana & Tori, 1997). The findings also provide evidence for the adaptive functioning of NTS, indicating that letting go of control towards self-focused thoughts and feelings, is related to greater wisdom and self-actualisation, as well as reduced maladaptive functioning, such as rumination and emotional reactivity.

The findings of the present studies provide preliminary evidence for a construct, previously aligned with theory in the Eastern contemplative traditions, to be studied in Western psychology. The findings also provide preliminary evidence to support further study of NTS as a potential protective factor against negative psychological symptoms, and as a potential adaptive quality that is related to positive psychological functioning and development.

8.5 Significant Contributions and Implications for Future Research
The combined studies presented in this dissertation have contributed significantly to the field of psychology, specifically in relation to the study of nonattachment, and a number of implications can be drawn from the findings. This section outlines the key contributions and implications for future research from the combined studies presented in this thesis. These include the key contributions and implications for nonattachment in relation to; mindfulness and mindfulness-based interventions, quality of life and personal development, and nonattachment as it relates to the self.

8.5.1 Nonattachment as a mechanism of mindfulness

The combined findings of studies 1 and 2 make a unique contribution to the mindfulness literature when understanding the specific mechanisms that help to explain its positive impact. Although there had been some preliminary findings on nonattachment as a mechanism of mindfulness (e.g., Lamis & Dvorak, 2013; Sahdra et al., 2016; Tran et al., 2014), the present findings are the first to investigate the mediating role of nonattachment in relation to mindfulness, when examining a range of well-being and developmental outcomes. These findings further elucidate the pathways underlying mindfulness construct and address the growing interest in its mechanisms of action (e.g., Gu et al., 2015; Lindsay & Creswell, 2017).

The results from study 3 provide the first qualitative support for the relationship between mindfulness and nonattachment in lived experience. This provides further support for the relationship between mindfulness and nonattachment (Montero-Marin et al., 2016), and extends previous empirical findings. The findings provide phenomenological insight into the conscious process, whereby experiences are mindfully and objectively engaged with before a secondary process of acceptance and letting go can take place. This provides support for the mechanistic relationship outlined in studies 1 and 2 and highlights a process
whereby mindful observation provides the capacity for nonattachment, which can then reduce
the intensity and length of negative affect resulting from experience. This provides insight
into the process of mindfulness from a phenomenological perspective, that helps further
elucidate how mindfulness can be beneficial for individuals when dealing with challenging
experiences.

The combined findings support growing evidence for the benefits of mindfulness-
based interventions for psychological health (see Hedman-Lagerlöf, Hedman-Lagerlöf & Öst,
2018; Keng et al., 2011), and provide insight into the mechanisms underlying these benefits.
This has implications for the development and evaluation of the efficacy of mindfulness
interventions. Since nonattachment has been shown to act as a mediator of the effects of
mindfulness practice (Montero-Marín et al., 2016), whether an intervention promotes
nonattachment may be an important factor in the formulation and projected outcomes of
mindfulness-based interventions. The findings also highlight a distinction between
mindfulness practices directed at trying to feel good or ‘at peace’, and those whose goal is to
let go of control. The results indicate that mindfulness practices which facilitate a letting go
of the need for experience to be a certain way (even if that way is calm or happy) may be
most beneficial for overall psychological health.

8.5.2 Nonattachment and quality of life

The combined studies make a significant contribution to the nonattachment literature
in relation to well-being and quality of life. The combined findings add to the limited
research on the relationship of nonattachment to well-being (e.g., Chao & Chen, 2013; Feliu-
Soler et al., 2016; Montero-Marín et al., 2016; Sahdra et al., 2010, 2016; Tran et al., 2014),
and provide evidence that the way individuals interact with their experience, either through
nonattachment or attachment, significantly impacts their well-being and quality of life. The
findings are also the first to detail how nonattachment impacts well-being in lived experience, in addition to its correlations with well-being constructs. Taking a nonattached stance towards experience, by letting go of control and removing fixation of specified outcomes, appears to be a pervasive factor that impacts individuals’ well-being and ill-being, spanning multiple areas of life (Sahdra et al., 2010). Understanding how nonattachment relates to well-being provides further support for the study of nonattachment in psychology and has implications for future research into quality of life. The results support future research efforts to investigate the role of nonattachment as a possible protective factor against negative psychological symptoms, and in developing further insight into the negative impact that fixation and control can have on individuals’ mental health in general.

The qualitative findings also provide a unique insight into how nonattachment and attachment impact individuals’ sense of well-being. The results indicate the impact of nonattachment on well-being is associated with other factors such as interpersonal relationships, and behaviours such as social anxiety, perfectionism and isolation. Understanding these pathways provides greater insight into the pervasive role that nonattachment can have in individuals’ quality of life. This has implications for research in areas such as interpersonal relationships and understanding how individuals’ interactions with their experience may be of benefit or detriment to their relationships. For example, the findings help to identify that fixed beliefs about what a relationship entails may underlie people’s interpersonal struggles. Or, that having fixed expectations on others can hinder the growth of healthy relationships.

The findings of the present studies also have implications for the development and implementation of nonattachment-based interventions to improve quality of life. The combined results support the theory that nonattachment is not only cultivated through pathways such as meditation and mindfulness (Montero-Marín et al., 2016), but can be
facilitated through more cognitive pathways that facilitate self-reflection and insight into the subjective and transient nature of experience (Hanh, 1998; Sahdra et al., 2010). This has implications for individuals who may not find the experiential nature of mindfulness-based practices beneficial (e.g., Chambers et al., 2016). For these individuals, interventions that focus on self-reflection and building insight into the subjective and transient nature of experience and thus, greater nonattachment, may be of greater benefit.

Additionally, the findings indicate interventions that focus on nonattachment may have benefits in a range of areas associated with quality of life such as perfectionism, worry and anxiety. Assisting individuals to remove fixations on experience being one way or other may allow them to let go of unhelpful psychological strategies, such as worry and rumination (Lamis & Dvorak, 2013) that are associated with poorer mental health. By building greater nonattachment, individuals may remove expectations on specified outcomes, have greater acceptance, and feel greater congruence with experience, however it unfolds.

### 8.5.3 Psychological development

The present studies provided the first investigation of the relationship between nonattachment and psychological development. The studies are the first to look at nonattachment in relation to measures of optimal psychological development: wisdom, self-actualisation and self-transcendence. Furthermore, the studies are the first to qualitatively investigate how nonattachment and attachment may affect psychological development and individuals’ notions of personal development and developmental goals. The findings provide support for the Buddhist theory that nonattachment is aligned with spiritual growth and development (Donner, 2010), and indicate that it is also related to Western psychological measures of optimal growth and development.
These findings have implications for research aligned with psychological development and the way constructs such as wisdom and self-actualisation can be understood. The findings highlight the importance of nonattachment when investigating the pathways to building qualities such as wisdom and provides a unique understanding of how letting go of attachment aligns with optimal development. Having a less biased, less self-centric, and more nonattached interaction with experience, appears to assist individuals in their continued psychological growth and development, well into adulthood. Through increased self-awareness and insight into experience (Sahdra et al., 2015), nonattachment appears to provide the ideal conditions for optimal psychological development, and the presence (or not) of nonattachment may help to determine why some individuals reach these developmental levels and others do not.

Interestingly, the findings provide insight into how nonattachment can impact individuals’ views of the personal developmental process. The findings highlight the potential benefits of taking a less rigid approach to the personal developmental process and to focus on internal rather than external goals. This has implications for fields, such as psychotherapy, teaching, and parenting, where there is a focus on building psychological growth and development, or when assistance with setting goals for the future is required. For individuals wishing to facilitate their own, or others’ psychological development process, understanding the specific pathways to nonattachment may provide insight into how to best facilitate growth. Encouraging individuals to be less attached to their opinions, thoughts and feelings can assist individuals to grow and develop to optimal levels and build qualities such as wisdom and self-transcendence.

8.5.3 Nonattachment to self
The present research was the first to specifically investigate and measure nonattachment as it applies to the self, and provides empirical support for the theory in Buddhism relating negative impact of attaching to the concept of a separate static self (Dalai Lama, 2001; Hanh, 1998). This makes a major contribution to the field of Buddhist psychology by creating an empirical measure of a construct that is central to the teachings of Buddhism (Thubten, 2009). The development and validation of the NTS scale also provides empirical support that NTS is a distinct construct from general nonattachment and self-compassion. This distinction and validation process has implications for the way psychology understands the unique way of relating to the self. These findings highlight that understanding and interacting with the self, as a fluid process rather than a static entity, can be psychologically healthy. This has implications for the way in which the self, and relationship to self is investigated. Understanding and interacting with the self as a fluid process, can make a positive unique contribution to individuals’ mental health and psychological growth, in addition to the more widely studied constructs of nonattachment and self-compassion.

The findings also have implications for self-psychology research on the self-concept. The findings in study 3 indicate that attachments to the self can have a significant negative impact on mental health, and are related to rumination, self-judgment, self-criticism and anxiety. As the self plays such a central such role in well-being (Kyrios et al., 2016; Mor & Winquist, 2002) and quality of life, the present findings indicate that removing attachment to the self may be an important focus of future studies addressing negative mental health symptoms. And, uniquely, the present findings provide evidence that taking a nonattached stance towards the self-concept, rather than taking a positive stance towards the self, can be associated with positive psychological health. Understanding and interacting with the self as
a fluid, transient process has implications for a range of psychological research into the self, as well as various psychological interventions.

The findings highlight the benefits of building NTS and indicate that interventions that do not aim to build a positive relationship to self, but to remove attachment to self-related thoughts and feelings, regardless of valence, may be an important and fruitful area of future focus. This has implications for individuals whose self-related feelings may make it difficult to have any positive self-interactions. Individuals whose negative psychological symptoms can impact their ability to benefit from strategies such as self-compassion (Gilbert, McEwan, Matos & Rivas, 2011; Pauley & McPherson, 2010), may still be able to gain benefit from taking a more nonattached stance towards their self. As NTS does not necessitate a positive interaction with self, it is not in opposition to feelings of low self-worth or hopelessness, thus it may be met with less resistance than strategies that require a positive self-focus. Future research on the effect of NTS-based interventions, comparing NTS with constructs like self-compassion, investigating whether NTS acts as a protective factor against negative psychological symptoms, and whether specific interventions can target NTS, may further elucidate the construct and examine its potential benefits.

8.6 Methodological considerations

There are a number of methodological considerations in the present studies. One consideration was that the majority of participants in each study were university students, which may not have captured a sample representative of the general population. Also, there were more women than men in the samples, which raises the possibility of gender bias. Even though the gender bias may not detract markedly from the findings in relation to nonattachment (Sahdra et al., 2010), future research with more even levels of men and women may address the possibility of bias. Additionally, all respondents were residing in
Australia, which further limits the generalisability of the findings. Future studies are needed with a more diverse and representative sample, to determine the generalisability of the findings.

Another limitation of the research is that the results from studies 1 and 2 were cross-sectional and causality cannot be determined. Although, theoretically, nonattachment is believed to emanate from mindfulness (Dhiravamsa, 1975; Montero-Marín et al., 2016; Sahdra et al., 2016), the results of studies 1 and 2 themselves do not determine this, and longitudinal studies are needed to determine the causal effects of nonattachment. Interestingly, the findings of study 3 did suggest a process whereby mindfulness leads to nonattachment, however, future research investigating this pathway is needed to further elucidate the causal nature of this relationship, if one exists. Similarly, although in theory, developing greater nonattachment would seem to result in developing greater well-being (Sahdra et al., 2016) and optimal development, it is also probable that greater well-being and optimal psychological development may assist a person to develop greater nonattachment. A longitudinal study on the effects of interventions designed to promote nonattachment on mental health and psychological development, would provide insight into the proposed causal relationship if one exists.

Another methodological consideration is the absence of measures of social desirability in the studies. Although social desirability is an important factor to acknowledge for self-report measures, research shows that social desirability may only have a limited impact in relation to well-being (Kozma & Stones, 1987; Mancini & McKeel, 1986; McCrae, 1986), mindfulness (Brown & Ryan, 2003) and nonattachment (Sahdra et al., 2010). However, as social desirability was not tested specifically in this study, its effects cannot be known and future studies on nonattachment and NTS should also include measures of social desirability.
A limitation in the qualitative investigation in study 3 was the way in which the sample was selected. The samples were haphazard and drawn from three other studies. Although this does not present any immediate issues, future research with a more targeted sample, or comparing specific cohorts may be beneficial. A further potential limitation of study 3 was that during the interviews, participants were informed which nonattachment group (high or low) they belonged to. This may have played a role in causing the participants to answer in line with the group they belonged to, rather than answering more freely. An alternative to this would have been to give no indication of what levels of nonattachment individuals possessed, and then evaluate their response to certain topics (e.g., the quality of relationships). However, as the focus of the study was the lived experience of attachment and nonattachment, it was necessary to ask questions specifically focused on how nonattachment presented, not just it’s possible relationship to other factors. Further, as attachment appeared to be less outwardly expressed (especially in three cases), discussing the participants scores on the nonattachment scale assisted the interviewees in understanding and discussing their attempts to control experience. Finally, the biases of the interviewer need to be mentioned as a potential limitation, however, these were acknowledged, and it not possible to remove the researcher’s subjectivity entirely (Guest et al., 2014).

A final methodological consideration was that these studies did not use a clinical sample. Thus, findings in relation to negative mental health symptoms may not apply to individuals experiencing clinical levels of these symptoms, and future research is needed to establish if the relationships found also hold in a clinical population. Future studies utilising a clinical sample could assist in understanding the impact of nonattachment/attachment on clinical levels of mental health symptoms and would assist in ascertaining whether the findings in the present studies are applicable to clinical populations.
8.7 Summary

In summary, the present thesis provides a comprehensive investigation into nonattachment and its benefits for well-being, psychological development, its role as a mechanism of mindfulness, how individuals experience it, and how it applies directly to the self. The findings of the present thesis add to the limited amount of research in the area and provides empirical support that nonattachment mediates the impact of mindfulness on a range of quality of life measures, and is a quality aligned with the Western notions of optimal psychological development. Furthermore, the present thesis presented the first qualitative investigation of nonattachment, finding that nonattachment had a pervasive effect on individuals' lives. Nonattachment appears to allow individuals to move through their life with greater ease and flexibility, and reduced self-inflicted suffering associated with trying to control experience. Finally, this thesis provided evidence for a related but distinct construct to nonattachment, nonattachment to self, that specifically addresses how individuals interact with their self-focus thoughts, feelings and concepts. The combined studies provide support for the continued study of nonattachment and nonattachment to self, and highlight their importance in assisting individuals to navigate their life experiences with minimal unnecessary obstruction.

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Appendices
Appendix A – Original 64 Item pool for the development of the nonattachment to self scale

Table 1.

Initial 64 items of Nonattachment to Self used for Exploratory Factor Analysis

<table>
<thead>
<tr>
<th>64-Items for Exploratory Factor Analysis</th>
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<tbody>
<tr>
<td>1. I feel no need to protect or defend who I am.</td>
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<td>3. As time goes on I have become less self-centred.</td>
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<td>5. I can let go of unhelpful thoughts about myself.</td>
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<td>7. I can observe myself from an external perspective.</td>
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<td>9. I wish I was a better person.</td>
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<td>11. I can admit my shortcomings without shame or embarrassment.</td>
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<td>15. I am aware that my beliefs and opinions can be biased.</td>
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<td>17. I am rarely worried by thoughts I have about myself.</td>
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<td>19. Who I am cannot be defined.</td>
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<td>21. At times, I can see that my ‘self’ is just a thought.</td>
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<td>23. I invest a lot in my self-image.</td>
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<td>25. I am very critical of myself.</td>
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<td>27. It is important for me to feel I am right.</td>
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<td>29. I rarely engage with negative self-talk.</td>
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<td>31. I can let go of the need to control my life.</td>
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<td>33. As life goes on, I worry less and less about myself.</td>
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<td>35. I often rate myself as better or worse than others.</td>
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<td>37. I feel strongly invested in the way my life turns out.</td>
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<td>39. I am accepting of myself when things don't work out.</td>
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*Note: Items in bold represent the final 7-item NTS scale*
Appendix B – Additional Quotes from Thematic Analysis in Article 3

Nonattachment in General Life

High nonattachment

Mindful engagement

thoughts come to mind and you let it pass without attaching to, without going out and chasing the thoughts, you’re just aware of before and let them pass (Adam)

I feel anger arising feelings of frustration, then the mind starts putting ideas behind it about what this person is doing, what this person is thinking but then as soon as you detach yourself from the situation then you can say hang on a minute, this is not I want to be doing (Adam)

if there is enough space in my head to assess each situation so I would ask myself, for example, a question like when I’m on my deathbed will I look back on this moment and will this be a significant moment that I will remember, and usually the answer is no. (Cara)

Acceptance

“trusting that it’s (Life) guiding me into another direction and diverting my life” (Sarah)

There is no doubt. Yes, much more accepting of myself and my feelings (Cara)

Ease and Flow

taken me out of that victim mentality and always feeling sorry for myself and it opened up another side which is like, where to from now, what can I make out of this situation and how can I make this situation make me grow rather than keep me stuck and feeling sorry for myself and holding me back. (Grace)
I used to worry about a lot of things and get stressed out a lot and then I just realised that things are gonna happen, you’ve just got a deal with them as they come. There is no reason to stress out about things, there’s no reason to try and manipulate things around you, just keep going. I think it impacts all or most areas of my life. (Adi)

I feel that it assists me in dealing with my stress in general, I think it lets things flow more easily and am capable of doing a lot more. (Cara)

It’s helped me to live more of a simple life and just, just understand that I am who I am and just be more content in my own skin and not try and change things, and not try and control things, so it’s absolutely helped every aspect of my life. (Anna)

There is no aspect of my life that it doesn’t impact. So, if I’ve got to help a guy fencing and there’s 100 palings there to go then I think great, walking meditation. And it doesn’t matter, I used to have such an aversion to weeding or doing menial jobs and now, it’s a great time to be present. It’s just really beautiful. (Damian)

**Low nonattachment group**

**Suffering**

I don’t have many positive things to say about myself. I do tend to ruminate a lot about these negative thoughts. It’s really difficult to not believe that those thoughts are not true. (Amy)

I guess, I never have that feeling of being settled, I’m always unsettled. A lot of anxiety. Yeah, I don’t know where it comes from but it’s always been there. I don’t like discomfort, even when I’m at home. (James)
My negative thoughts can definitely make me feel more negative. If I’m feeling okay then something goes wrong and I start kicking myself it can turn it from an okay day into a really bad day. (Nicole)

Control/perfectionism

I have very, very high standards of myself and if I don’t meet those particular goals then I do get pretty upset and pissed off with myself. It triggers our negativity and getting down on myself (Bella)

In terms of having high standards and being a perfectionist it is a massive negative because my expectations are so unrealistic that I almost always end up in a position where I feel really, really down on myself. (Claire)

Interpersonal Relationships

High nonattachment

Perspective taking

You need to understand their point of view and not getting attached to their point of view, and just realise you’re coming from your perspective. Hopefully, when you can do this, then it has a flow on effect with the other person.

Reading the books definitely helped shift my perspective and see things from other people’s perspective

Empathy and compassion

a negative emotion that comes to me, I just stop and observe that, so I catch myself and I analyse it and think hang on why am I thinking that, why am I feeling this way and then just try and change it to come from a loving place and understand that this person isn’t against you, just try and understand that there are lots of reasons why
this is happening at the moment and as long as you come from a loving place, you’ve done your best. That’s all you can do. (Anna)

I feel like with that idea of compassion, I would go in there with more about neutral playing field and just check on them and make sure they’re okay and if the situation warrants it and then get down to the root of what it was about. (Jane)

I just try and come from a loving place with all my engagements that I interact with, and just realise that all we have and all we ever have is now. (Anna)

I really care about people and I try and understand them and I work with them but at the end of the day it’s up to them to do what they need to do with their lives. (Jen)

**Low nonattachment**

**Expectations on others**

It impacts the friendship a lot because the friendships have pulled apart through a sense of neediness from my side of it. And, I guess from me, it becomes very negative because of a bit of the bitterness gets involved (James).

I think that it’s more that I feel like I’ve been wronged and I can’t quite let go of that feeling of being wronged. (Isla)

**Fear of losing/disrupting the relationship**

I do anything to avoid feeling like people don’t like me and I don’t want to feel like I have to confront anybody. (Amy)

I’ve always been a people pleaser I’ve always wanted people to like me and I’ve always felt like I have to do my best for people to like me. (Bianca)
But also with your friendships, although they are quite comfortable there is an element where you don’t want confrontation so you may not say certain things to them because you don’t want them to be negative (Claire)

The Development of Nonattachment

High nonattachment

Suffering (as a catalyst for growth), and

It was probably one of the hardest times in my life. I was feeling like, I don’t want to feel like this I don’t want to be angry all the time, I don’t want to feel what I’m feeling. So, I decided not to. (Adi)

I think it was suffering. The suffering I’ve had. Well, I suppose I completed suicide at 17 and then was revived and then every decade I’ve seen a crash, and emotional crash which has been less and less from the one at 17. So they have become less and less because of the skill level that I have gained, but there’s been a lot of suffering... I thought that there’s got to be a better way, how can this be, life’s not meant to be like this. How can it be like this, what’s causing all this? And, it was attachment. (Damian)

Definitely the experience at home between my immediate family members and just wanting to, just be away from that, it was full of conflict and the anxiety, like I mentioned. That has sort of pushed me to rethink the way that I behave and what causes all of that. And then, letting go of it, seeing the way my life has progressed from doing; that has pushed me (Cara)

Active engagement with self-reflection/contemplation.

I just reflected more about it with my mum and Buddhism, I guess I reflected on that to help me through that and then realised what’s real and what’s important and then what do I want to hang onto and what do I want to let go... I think the (Buddhist)
books were also the key, it was almost like my mum had planted the seed and then it was something that I was just drawn to while I was sick. (Jane)

So nonviolent communication and Buddhism have really helped me and they go hand-in-hand to go with nonattachment and letting go. (Damian)

I remember there was a moment in the book and where I was sitting down reading it and I just had this overwhelming feeling of just wow, it felt really calm, relaxed and detached but attached if that makes sense? Not really like I needed to detach myself or attach myself to experience I just was. A feeling of being present. (Adam)

Lots of reading, so I don’t know how I started to get interested in it, but getting interested in some of the Dalai Lamas books for example, and then starting that journey and learning more about meditation, and learning more about Buddhism. (Anna).

Low nonattachment

Early childhood experience

(I developed) the need to control my environment because it wasn’t being, it wasn’t around me naturally... as long as people could say good job, well done, that was my happy space, so my fear of letting go of things or missing out, is possibly a fear of not getting that reassurance that I craved as a younger person. (James)

From what my psychiatrists and everyone have figured out, what happened to me is that my brain has developed as a coping mechanism for me. In a way that if I’m able to control people and form particular attachments to people that I see are safe for me, that’s a positive for me... But as it is developed over the years it’s gotten worse and worse and worse... the positive has turned into more of a negative behaviour. (Bella)
I think I’ve always been like that, I’ve always held on to everything. I don’t really like change, I guess. Because you don’t know about it, it’s uncertain, it’s worrying.

(Emma)

**Personal Development**

**High nonattachment**

**Inner peace or contentment**

I see that as really expanding my mind and understanding of myself and I would say my role in the world but I’m not particularly attached to that. It’s more expanding the way that I view the world and what I bring to it and the person that I am and how I impact those around me (Serena)

inner peace. Definitely, inner peace. It would be a great place I think, to be in a place like that. (Kate)

Personal development for me is basically a practice of self-awareness where our I am paying attention to myself and paying attention to my life and working on what’s not quite right and letting go of things that are not bringing good feelings or happiness or whatever you want to call it. (Grace)

**Letting go of goals.**

I guess it’s about getting to where you want to be, where you’re happy in life.

Fulfilling your purpose, what you’re here for and finding that out, they’re not goals but it’s what I like, and I trust the path will take me there. (Sarah)

I struggle with goals, because if you got your goal up on the fridge, say I don’t want to drink milk but you go in there and next thing you know you’re drinking milk. And then you think I’ve let myself down, I feel terrible. Or are, your goal weight, and you
think old, I haven’t got there yet through no fault of your own because you’ve been trying, then you think stuff it, who cares anyway and then you lose motivation. So, for me, it is to have the ultimate vision, so you have this really clear vision of where you want to be and where you want to go. And then, you just work towards it. You’re always working towards it, you get side-tracked along the way but you still have that vision and then you work a little bit further on and a bit further on and you might be off the track but you’ve still got that vision and then you come back on the road and then you do it a bit further but you’ve still got that vision. For me, goals allow you to fail. (Jen)

**Low nonattachment**

**External achievement**

*All of my overall goals if I were to say on this path, would be to be a registered psychologist. That was my initial, long-term plan on that trajectory (Bella)*

*I want to become a psychologist. So I have that ambition now to move forward to do that... getting into a regular exercise routine and to do meditation and stuff like that... I will have a successful business as a counselling psychologist, even if it’s only part-time, but in 20 years I want to own a house, I want to set the kids up so that there settled and they have a good start in their adult life. (Kath)*

*I do want to be able to get my bachelor they do want to get good marks (Bianca)*

*My developmental goals would be to pursue studying, to get a good career out of that. That is my personal development goal (Nadine)*
Personal growth

I think I would be more sure of myself, I think I’d be more comfortable socially... Just being easier in the world, I guess. A lot less tension and anxiety in situations that I feel that in now. More confident. (Irene)

I look at personal development as getting to where you want to be emotionally, having a stable high emotional like you, and just general contentment (Sophie)

I think I would like to be able to shed attachments but I don’t know if I’ll be able to. (Emma)
Appendix C – Ethics confirmation for all studies

To: Richard Whitehead for Mr Sean Tinker, Student Advancement

Dear Richard/Sean,

SUHREC Project 2013/310 - MyLEAD undergraduate student survey

Mr S Tinker, Mr Richard Whitehead, Mr James Williams - Student Advancement

Approved duration: 10/01/2014 To 31/12/2015; extended to 31/12/2016 [June 2015]


I refer to your e-mails of 03 June 2015 in which you requested a modification to the project by presenting the survey in three modules, removal/addition of scales, addition of a research assistant (James Williams) and extension of ethics clearance to 31/12/2016. The documentation was reviewed by a SHESC2 delegate.

I am pleased to advise that, as modified to date, the project/protocol may continue in line with standard ethics clearance conditions previously communicated and reprinted below.

Please contact me if you have any queries about on-going ethics clearance, citing the SUHREC project number. Copies of clearance emails should be retained as part of project record-keeping.

As before, best wishes for the project.

Kind regards,

Astrid Nordmann

---------------------------------------------

Dr Astrid Nordmann

Research Ethics Officer

Swinburne Research (H68)

Swinburne University of Technology
I refer to the ethical review of the above project by a Subcommittee (SHESC2) of Swinburne's Human Research Ethics Committee (SUHREC). Your response to the review as e-mailed on 20 June 2016 was put to the Subcommittee delegate for consideration.

I am pleased to advise that, as submitted to date, ethics clearance has been given for the above project to proceed in line with standard on-going ethics clearance conditions outlined below.

- All human research activity undertaken under Swinburne auspices must conform to Swinburne and external regulatory standards, including the National Statement on Ethical Conduct in Human Research and with respect to secure data use, retention and disposal.

- The named Swinburne Chief Investigator/Supervisor remains responsible for any personnel appointed to or associated with the project being made aware of ethics clearance conditions, including research and consent procedures or instruments approved. Any change in chief investigator/supervisor requires timely notification and SUHREC endorsement.

- The above project has been approved as submitted for ethical review by or on behalf of SUHREC. Amendments to approved procedures or instruments ordinarily require prior ethical appraisal/clearance. SUHREC must be notified immediately or as soon as possible thereafter of (a) any serious or unexpected adverse effects on participants and any redress measures; (b) proposed changes in protocols; and (c) unforeseen events which might affect continued ethical acceptability of the project.

- At a minimum, an annual report on the progress of the project is required as well as at the conclusion (or abandonment) of the project. Information on project monitoring and variations/additions, self-audits and progress reports can be found on the Research Internet pages.

- A duly authorised external or internal audit of the project may be undertaken at any time.

Please contact the Research Ethics Office if you have any queries about on-going ethics clearance, citing the Swinburne project number. A copy of this email should be retained as part of project record-keeping.
Best wishes for the project.
Yours sincerely,

Sally Fried
Secretary, SHESC2
**SHR Project 2016/151 - The presentation of nonattachment in Australian adults and its role as a mediator between mindfulness and well-being**

Prof Glen Bates – Office of Student Advancement/Dr Paul Healy, Dr Brad Elphinstone, Yan Yang/Mr Richard Whitehead (Students) – FHAD/Dr Kathryn Fletcher - BPsyC

Approved duration: 21-06-2016 to 21-10-2017 [Adjusted]; further extended to 01-04-2018 [April 2017]

Modified: September 2016 (x2), April 2017

I refer to your modification request of 5 April 2017 in which you requested a modification to the project by the use of a revised survey; addition of Associate Investigator Brad Elphinstone; and extension of project to 1/4/2018 from 21/10/17. The documentation was reviewed by a SHESC2 delegate.

I am pleased to advise that, as modified to date, the project/protocol may continue in line with standard ethics clearance conditions previously communicated and reprinted below.

Please contact me if you have any queries about on-going ethics clearance, citing the SUHREC project number. Copies of clearance e-mails should be retained as part of project record-keeping.

I note that Paul Healy is/was on the project – if you wish to remove him from the project, please submit a modification request.

As before, best wishes for the project.

Kind regards,

Sally Fried

Secretary, SHESC2
SHR Project 2016/274 – The relationship between mindfulness and quality of life: An investigation of the shared and unique roles of mindfulness mechanisms

Approved duration: 15-11-2016 to 15-11-2019 [Adjusted]

Prof Greg Murray, Dr Kathryn Fletcher – BPscC/Yan Yang, Richard Whitehead (Students) – FHAD

Modified: December 2016, January 2017

I refer to your e-mail of 13 January 2017 in which you requested a modification to the project by the use of an additional three measures. The documentation was reviewed by a SHESC1 delegate.

I am pleased to advise that, as modified to date, the project/protocol may continue in line with standard ethics clearance conditions previously communicated and reprinted below.

Please contact me if you have any queries about on-going ethics clearance, citing the SUHREC project number. Copies of clearance e-mails should be retained as part of project record-keeping.

As before, best wishes for the project.

Kind regards,

Sally Fried

Secretary, SHESC1
Appendix D – Reviewers comments and replies from Journal of Happiness Studies (Study 1), Journal of Adult Development (Study 2), and Frontiers in Psychology (Study 4)
COMMENTS TO THE AUTHOR:

Associate Editor, Tatjana Schnell:

Dr. Schnell,

We appreciate your time and energy spent reviewing this article. We have done our best to address each concern mentioned by yourself and the reviewers and have made changes throughout the manuscript to address these concerns. We feel this has added to the overall quality of the article and look forward to any future correspondence.

Both reviewers saw value in your manuscript, but also mentioned several critical points.

Reviewer #1 misses a discussion of the demarcation between nonattachment and acceptance, which is considered to be a major component of mindfulness. Since both seem to overlap, it is important to also make reference to what is known about the role of acceptance when it comes to mindfulness and well-being, and to explain in which ways your study yields results that go beyond what is already known.

We have carefully considered this concern and have read the suggested articles and discussed the conceptual issues regarding this concern. We have done our best to address this point (see below). Although we have not been able to elaborate the point in detail, we have included two new paragraphs to try and demarcate nonattachment from acceptance and then (in the discussion) we have tried to highlight that the findings go beyond what is already known. Although we have not previously seen the demarcation between nonattachment and acceptance in the literature before, we feel the addition adds to the paper.

Previous research (Sahdra et al., 2016) has found that nonattachment is empirically distinct from measures of acceptance (e.g., non-reactivity, nonjudgment) and that it explains variance in positive psychological outcomes over and above acceptance, in some cases being a stronger predictor than acceptance (Lamis & Dvorak, 2013; Sahdra et al., 2016). The present results also suggest that nonattachment adds something more (and greater) than acceptance, especially in depression anxiety and stress.

We have tried to address the concerns in the manuscript in these paragraphs below.

On Page 2, paragraph 2:

A quality that is closely related, but distinct from nonattachment, is mindfulness.

Mindfulness is at the core of Buddhist teachings (Hanh, 1999) and has been investigated both
as a trait and in the context of mindfulness-based interventions. Although mindfulness is conceptualised in a number of different ways, two consistently identified aspects of mindfulness are: an open awareness and observing of experience, and a mindful ‘acceptance’ of experience (Bishop et al., 2004; Coffey, Hartman & Fredrickson, 2010; Lindsay & Creswell, 2015, 2017). Being more mindful is associated with better mental health in a range of areas such as psychological well-being (e.g., Brown & Ryan, 2003), depression and anxiety (e.g., Desrosier et al., 2014; Tran et al., 2014), cognitive rigidity (Greenberg, Reiner & Meiran, 2010) and emotional regulation (Teper, Segal & Inzlicht, 2013).

Research shows mindfulness to be consistently related to nonattachment (Feliu-soler et al., 2016; Ju & Lee, 2015; Lamis & Dvorak, 2013; Sahdra et al., 2010, 2016). However, it is also empirically distinct from each of its components (Sahdra et al., 2016). This distinction is important as nonattachment shares similarities to the mindfulness component of ‘acceptance’. The ‘acceptance’ component of mindfulness involves a non-reactive and non-judging interaction with experience, and is theorized to explain the positive effect of mindfulness training on reducing negative affective experiences (Lindsay & Creswell, 2017). Measures of acceptance, such as nonjudgment and non-reactivity (from the five factor mindfulness questionnaire; FFMQ; Baer et al., 2006), capture a non-judgment of self-related stimuli (e.g., “I criticize myself for having irrational or inappropriate emotions” - reversed) and an absence of automatic reactions to challenging situations (e.g., in difficult situations, I can pause without immediately reacting). In contrast, nonattachment captures a broader quality associated with the process of letting go of unhelpful thoughts and feelings, as well as a general attitude of non-clinging/non-aversion towards experience (e.g., “I can enjoy my family and friends without feeling I need to hang on to them.”). Theoretically, an individual’s mindful, nonreactive, present-centred awareness of what is happening in their
field of consciousness (Desbordes et al., 2014), can facilitate a letting go of control and a general nonattached attitude towards experience, without the need for specified outcomes.

The again, in the discussion, page 18, paragraph 4

These combined results support the contention of Lindsay & Creswell (2017) that to reduce negative affective responses, the most important aspect of mindfulness and mindfulness practice is a non-reactive, nonjudgmental acceptance of experience. However, as the FFMQ contains factors measuring nonreactivity and nonjudgment, the present findings indicate that nonattachment also mediates the role of non-reactive acceptance on negative psychological symptoms. Theoretically, the results indicate that the most efficacious pathway to reducing negative psychological symptoms is to mindfully engage with experience without attempts to try and control it.

As Reviewer #1 also noted, you imply causality of your findings throughout the manuscript. Given the cross-sectional nature of your study, you should not talk about ‘impact’ or ‘determination’.

We have now addressed this issue and changed the language throughout the paper and have been referring to the relationship rather than the impact or determination.

Both Reviewers rightly wonder why you used two different instruments to measure mindfulness. They also point out several other critical or unclear passages, as you will see.

There are a number of reasons to use multiple measures across studies. In relation to the use of multiple scales to measure mindfulness: Using multiple measures across studies can increase the external validity of the findings (Norris, Lambert, Dewall & Fincham, 2012), showing that they are replicable using multiple measures for the construct. Combining two distinct scales for the measurement of mindfulness; (1) that focuses on the Buddhist origins of the construct aligned with insight meditation (Bergomi et al., 2001), (2) a multifactor scale garnered from 5 other well-used scales, provides further evidence that the documented mediational relationship is present for two-distinct measures of mindfulness and that the findings are independent of the measure used.

We have provided a justification for the use of different mindfulness measures. On page 15 paragraph 3, in now reads:
The Five Factor Mindfulness Questionnaire (FFMQ; Baer et al., 2006) was chosen as a measure of mindfulness as using multiple measures across studies can increase the external validity of the findings (Norris, Lambert, Dewall & Fincham, 2012). Using the FFMQ in the second study also sought to replicate Sahdra et al.’s, (2016) successful model using the FFMQ in a mediation model with nonattachment.

As a side note: we also had a sample measuring the FMI with depression, anxiety and stress, with almost identical (actually slightly stronger) mediational findings to study 2, however, the decision was made to utilise the present second sample as it had a larger sample size and a different measure of mindfulness.

I’d like to add that in the current literature on mediation (i.e. Hayes, 2018) – to which you also referred (older publications) – the use of ideas like partial and complete mediation is seen as outdated.

Thanks for pointing this out, I have changed all references to the partial mediation in the paper.

Please also report indirect effects with confidence intervals, as is appropriate for this kind of analysis.

We have addressed this concern and decided to add tables (see below) to report the indirect effects, SE, and confidence intervals. We think this now makes the text read more smoothly.
Table 3.

Indirect Effects of Nonattachment on the Relationship of Mindfulness to Psychological Well-being, Positive Affect, Negative Affect, and Life Satisfaction.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Effect</th>
<th>SE</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWB</td>
<td>.29</td>
<td>.35</td>
<td>.23</td>
<td>.37</td>
</tr>
<tr>
<td>Positive Affect</td>
<td>.15</td>
<td>.04</td>
<td>.08</td>
<td>.23</td>
</tr>
<tr>
<td>Negative Affect</td>
<td>-.21</td>
<td>-.04</td>
<td>-.30</td>
<td>-.14</td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td>.25</td>
<td>.04</td>
<td>.17</td>
<td>.34</td>
</tr>
</tbody>
</table>

\( N = 516 \)

Reviewer #1:
This interesting study showed that non-attachment mediated the relation between mindfulness and a range of positive and negative psychological outcomes. Although the study seems to be well-designed, I have a few majors concern, as well as some other concerns, outlined below.

Thank you for the time and energy spent reviewing this article. We have done our best to address each of your concerns and have made changes where appropriate.

Major concerns:
(1) The authors should illustrate the common point and difference between nonattachment and acceptance in mindfulness, since in definition by Bishop (2004), and Monitor and Acceptance Theory by Lindsay and Creswell’s (2017) acceptance is one of the most importance components of mindfulness. According to my knowledge, there should be many common points in nonattachment and acceptance. Then the authors should illustrate the contribution of this study, based on discussion of nonattachment and mindfulness.

We agree that there are many points of similarity and overlap between nonattachment and acceptance (as well as other constructs such as, decentering etc). After reading the suggested article, we can see the common points but also feel there is a distinction. When looking at the scales used in the article to represent acceptance (e.g., nonjudgment and non-reactivity from the FFMQ), there is an evident distinction between accepting experience nonjudgmentally and non-reactively, and nonattachment. Whereas nonjudgment and
nonreactivity appear to capture a lack of negative self-judgment (e.g., “I criticize myself for having irrational or inappropriate emotions”) or an action of self-distancing and acceptance (e.g., “When I have distressing thoughts or images, I ‘step back’ and am aware of the thought or image without getting taken over by it”), nonattachment captures a broader quality associated with both the process of letting go and a general attitude of non-clinging/non-aversion towards experience (e.g., “I can enjoy my family and friends without feeling I need to hang on to them.”). We feel nonattachment represents an outcome and mechanism of mindfulness, including nonreactivity and non-judgment, where the more you engage in mindful, nonjudgmental and non-reactive practice, the more you develop a nonattachment towards life. Recent research by Sahdra et al., (2016) has investigated nonattachment in relation to nonjudgment and non-reactivity and found that although nonattachment was related to measures of nonreactivity and nonjudgment, it was empirically distinct from both. It was also a stronger predictor of well-being and life effectiveness than both and mediated their impact. From the combined research on nonattachment as a mechanism of mindfulness, it appears to mediate the impact of mindfulness, including the role of acceptance.

As a side note: we have recently completed a qualitative investigation of nonattachment and found support for the findings of the current study. Those high on nonattachment discussed engaging in a process of mindful observing of experience, an acceptance of the inevitability of experience, and then a letting go of the affective component of experience, involving a shift towards trying to learn and grow from it.

Although it is not possible to go through these points in detail in the article, we have taken onboard your suggestion and have added two new paragraph demarcating nonattachment from acceptance and have cited the article mentioned. We have also added another paragraph in the discussion section when explaining the current findings. (see below for details)

On Page 2, paragraph 2:

A quality that is closely related, but distinct from nonattachment, is mindfulness.

Mindfulness is at the core of Buddhist teachings (Hanh, 1999) and has been investigated both as a trait and in the context of mindfulness-based interventions. Although mindfulness is conceptualised in a number of different ways, two consistently identified aspects of mindfulness are: an open awareness and observing of experience, and a mindful ‘acceptance’ of experience (Bishop et al., 2004; Coffey, Hartman & Fredrickson, 2010; Lindsay & Creswell, 2015, 2017). Being more mindful is associated with better mental health in a range of areas such as psychological well-being (e.g., Brown & Ryan, 2003), depression and anxiety (e.g., Desrosier et al., 2014; Tran et al., 2014), cognitive rigidity
Research shows mindfulness to be consistently related to nonattachment (Feliu-soler et al., 2016; Ju & Lee, 2015; Lamis & Dvorak, 2013; Sahdra et al., 2010, 2016). However, it is also empirically distinct from each of its components (Sahdra et al., 2016). This distinction is important as nonattachment shares similarities to the mindfulness component of ‘acceptance’. The ‘acceptance’ component of mindfulness involves a non-reactive and non-judging interaction with experience, and is theorized to explain the positive effect of mindfulness training on reducing negative affective experiences (Lindsay & Creswell, 2017). Measures of acceptance, such as nonjudgment and non-reactivity (from the five factor mindfulness questionnaire; FFMQ; Baer et al., 2006), capture a non-judgment of self-related stimuli (e.g., “I criticize myself for having irrational or inappropriate emotions” - reversed) and an absence of automatic reactions to challenging situations (e.g., in difficult situations, I can pause without immediately reacting). In contrast, nonattachment captures a broader quality associated with the process of letting go of unhelpful thoughts and feelings, as well as a general attitude of non-clinging/non-aversion towards experience (e.g., “I can enjoy my family and friends without feeling I need to hang on to them.”). Theoretically, an individual’s mindful, nonreactive, present-centred awareness of what is happening in their field of consciousness (Desbordes et al., 2014), can facilitate a letting go of control and a general nonattached attitude towards experience, without the need for specified outcomes.

The again, in the discussion, page 18, paragraph 4

These combined results support the contention of Lindsay & Creswell (2017) that to reduce negative affective responses, the most important aspect of mindfulness and mindfulness practice is a non-reactive, nonjudgmental acceptance of experience. However, as the FFMQ
contains factors measuring nonreactivity and nonjudgment, the present findings indicate that nonattachment also mediates the role of non-reactive acceptance on negative psychological symptoms. Theoretically, the results indicate that the most efficacious pathway to reducing negative psychological symptoms is to mindfully engage with experience without attempts to try and control it.

(2) Though authors admitted that the study design was cross-sectional and the findings are correlational and cannot determine causality, the expression is causality style in some sentences. Such as, in abstract, "impact of mindfulness on a broad range of psychological outcomes is at least partially determined by nonattachment.", P14, "The impact of mindfulness on an individual's positive and negative feelings is partially determined by their levels of nonattachment." P19. "nonattachment represents a quality that is influential in relation to PWB, SWB and depression, anxiety and stress." etc.

Thank you for providing these examples. We have gone through and changed these examples as well as all other mentions of 'impact' and 'determined' and changed the language throughout the paper. The paper now refersto the relationship rather than the impact or determination, or in some cases have referred to the theoretical impact.

(3) Why to choose different questionnaires to measure mindfulness in two studies?

There are a number of reasons to use multiple measures across studies. In relation to the use of multiple scales to measure mindfulness: Using multiple measures across studies can increase the external validity of the findings (Norris, Lambert, Dewall & Fincham, 2012), showing that they are replicable using multiple measures for the construct. Combining two distinct scales for the measurement of mindfulness; (1) that focuses on the Buddhist origins of the construct aligned with insight meditation (Bergomi et al., 2001), (2) a multifactor scale garnered from 5 other well-used scales, provides further evidence that the documented mediational relationship is present for two-distinct measures of mindfulness and that the findings are independent of the measure used.

We have provided a justification for the use of different mindfulness measures. On page 15 paragraph 3, in now reads:

The Five Factor Mindfulness Questionnaire (FFMQ; Baer et al., 2006) was chosen as a measure of mindfulness as using multiple measures across studies can increase the external validity of the findings (Norris, Lambert, Dewall & Fincham, 2012). Using the FFMQ in the
second study also sought to replicate Sahdra et al.'s, (2016) successful model using the FFMQ in a mediation model with nonattachment.

As a side note: we also had a sample measuring the FMI with depression, anxiety and stress, with almost identical (actually slightly stronger) mediational findings to study 2, however, the decision was made to utilise the present second sample as it had a larger sample size and a different measure of mindfulness.

Minor concerns:
(1) P1. "attachment can manifest as an aversion to embarrassment." Why?
This was presented as an example of what attachment is in everyday life. The aversion is the attachment, and embarrassment was used as an example as it is a common feeling people try to avoid.

(2) P14. 4, 1% from Iran. Should be 4.1% from Iran?
Thanks for catching that. This has been updated accordingly.

Reviewer #2:
Thank you for the time and energy you have given to reviewing this article. We have considered all of your suggestions and done our best to address all of your concerns. We have made changes to the article. We feel it is now better as a result.

Introduction
1) A meta-analysis (Gu, Strauss, Bond and Cavanagh, 2015) performed mediations between participation in mindfulness-based interventions (MBIs), worry (i.e. repetitive negative thinking) and various mental health outcomes. Given worry is presented here as an example of attachment and mindfulness is also observed to be fostered in MBIs, it counts as a previous exploratory study on how a part of nonattachment mediates between mindfulness and mental health. This needs to be mentioned and taken into account.

We have previously read the Gu article and feel it presents interesting findings in relation to the study. As it did not explicitly mention nonattachment, we had not included it in the present paper. However, the point made here is a good one, and we have included a reference to it as an example of how attachments can mediate the impact of mindfulness training.
On page 7, paragraph 2, it now reads:

The present study also investigated nonattachment as a mediator of mindfulness in relation to depression, anxiety and stress. There is some previous evidence to suggest that the extent to which individuals engage in attachments can mediate the impact of mindfulness-based interventions (MBIs). When conducting a meta-analysis on the mechanisms of MBIs, Gu et al. (2015) found evidence that worry and rumination significantly mediated the effect MBIs on reducing negative mental symptoms. As worry and rumination both represent attachments and an inability to let go of fixation on experience, the findings indicate that the impact of mindfulness practice on mental health can be mediated by reducing levels of attachment.

2) Nonattachment is presented here as a mechanism of mindfulness, but mindfulness is measured and quantified separately. Thus, I wonder how can a mechanism of a construct (implying it is an essential component of it) be measured separately, or even proposed as a different but related construct.

As you state, nonattachment is presented as a mechanism of mindfulness that helps to explain its positive effect, however, it is also presented as a related but distinct construct. In the context of this study, both of these statements are true. Nonattachment is not only a mechanism of mindfulness but is a separate construct, as nonattachment is not solely cultivated by mindfulness. Although one pathway towards building nonattachment is mindfulness, theory also suggests other pathways are involved. Just as reduced worry may be a mechanism of mindfulness (as outlined in Gu et al., 2015), it is also a separate construct. Previous studies have shown that nonattachment is a related but distinct from mindfulness, but also, at least partially mediates its impact (e.g., Sahdra et al., 2016). The methodology used in the present study is following similar studies investigating the mechanisms of mindfulness, utilising separate measures (e.g., Coffey et al., 2010; Gu et al., 2015; Sahdra et al., 2016).

Method
- (Tables 1 and 4) Cronbach’s alpha is, although a standard, sensitive to bias when common psychommetric characteristics take place (e.g. Tiziano-Hermosilla and Alvarado, 2016), and this is due to breaking its assumptions (equal factor loadings or tau-equivalence, and
continuous + normally distributed items). Given Likert-type of data are discrete, frequently non-normal and loadings tend to not be equal, more robust measures like McDonald’s omega, Guttman’s lambda or Greatest Lower Bound (GLB) are necessary to assess reliability in the study. An easy way to obtain omega can be through Jamovi (https://www.jamovi.org/).

We have taken your suggestion in this area (and read the Tiziano-Hermosilla and Alvarado, article) and have included the measure of McDonald’s Omega (using the Jamovi program) as a measure of internal reliability in the tables. We have however, chosen to present McDonald’s Omega in conjunction with Cronbach’s alpha, as many researchers may be more familiar with the latter. Considering that there is little difference between both reliability coefficients in the current study – and indeed, Cronbach’s alpha appears to slightly underestimate the reliability of the measures used – this was not considered to be problematic. However, if the reviewer would prefer only McDonald’s Omega to be used, we are more than happy to make this revision.

We have mentioned the addition of Omega on Page 11 paragraph 2 states:

*Cronbach’s alpha was used as a test of internal reliability, however, as Cronbach’s alpha can be sensitive to bias (Tiziano-Hermosilla & Alvarado, 2016), Macdonald’s Omega was also included in the analysis."

- Pearson's correlations are sensitive to bias with non-normally distributed data,
discrete/ordinal data or outliers. I suggest an assumption check and, if broken, proceed with more robust correlations (e.g. Spearman's rho, Kendall's tau-b, etc.).

The data for study 1 appear to be approximately normally distributed and as such we have left the Pearson’s r correlations. However, as depression, anxiety and stress are not normally distributed in the population (or the sample), we have tested the relationships using Spearman’s rho. When comparing Spearman’s rho with Pearson’s r, these relationships only slightly varied, with Spearman’s rho increasing the relationships between all variables slightly. Do to this, and the explanation given above regarding researcher familiarity, we decided to keep the original Pearson’s r statistic. However, we have added some information about these tests in the results section on page 16 paragraph 2:

*Additionally, due the non-normal distribution of depression, anxiety and stress in the sample, Spearman’s rho was also used to test the correlations. Spearman’s rho revealed similar relationships of mindfulness and nonattachment to depression, anxiety and stress, with
minimal difference from Pearson’s r, thus the decision was made to proceed with Pearson’s r in the analysis.

- Although valid instruments, a justification is needed on why use the FMI and the FFMQ to measure the same construct (mindfulness).

There are a number of reasons to use multiple measures across studies. In relation to the use of multiple scales to measure mindfulness: Using multiple measures across studies can increase the external validity of the findings (Norris, Lambert, Dewall & Fincham, 2012), showing that they are replicable using multiple measures for the construct. Combining two distinct scales for the measurement of mindfulness; (1) that focuses on the Buddhist origins of the construct aligned with insight meditation (Bergomi et al., 2001), (2) a multifactor scale garnered from 5 other well-used scales, provides further evidence that the documented mediational relationship is present for two-distinct measures of mindfulness and that the findings are independent of the measure used.

We have provided a justification for the use of different mindfulness measures.

On page 15 paragraph 3, in now reads:

The Five Factor Mindfulness Questionnaire (FFMQ; Baer et al., 2006) was chosen as a measure of mindfulness as using multiple measures across studies can increase the external validity of the findings (Norris, Lambert, Dewall & Fincham, 2012). Using the FFMQ in the second study also sought to replicate Sahdra et al.’s, (2016) successful model using the FFMQ in a mediation model with nonattachment.

As a side note: we also had a sample measuring the FMI with depression, anxiety and stress, with almost identical (actually slightly stronger) mediational findings to study 2, however, the decision was made to utilise the present second sample as it had a larger sample size and a different measure of mindfulness.

Results
- Path diagrams would be recommended aimed to improve readers’ comprehension. This was a decision we had previously considered, and we have now included two path diagrams for the mediation pathways. We agree that this makes this easier for reader comprehension.
References:


Reviewer comments and replies Journal of Happiness Studies second correspondence

Ref.: Ms. No. JOHS-D-18-00106R1

"Nonattachment mediates the relationship between mindfulness and psychological well-being, subjective well-being, and depression, anxiety and stress."

Journal of Happiness Studies

Thank you for submitting your revised manuscript to the Journal of happiness Studies. Below please find a letter by dr. Schnell and the reviewers’ comments. You are invited to include further minor changes in your manuscript.
In order to submit a revised manuscript, together with a detailed letter indicating all the changes included on the basis of each substantive comment, please access the following web site:

I look forward to receiving your revised manuscript within the next 8 weeks.

"Please note: when uploading your revised files, please make sure only to submit your editable source files (i.e. word, text)."

Kind regards,

Antonella Delle Fave, M.D.
Editor in Chief
Journal of Happiness Studies

COMMENTS TO THE AUTHOR:

Co-Editor, Tatjana Schnell:
Thank you for submitting your revised manuscript. Both reviewers thought that the revision was fruitful! Both, however, suggested some further minor revisions.

Thanks for your time and energy in editing and reviewing this manuscript. We feel the article is now better as a result of the current changes.

Reviewer #2 suggests deletion of those statistical coefficients that are inadequate due to unmet assumptions, even if they differ only slightly from the alternatives.

Reviewer #3 asks for exact values of both rho and r.
I agree with Reviewer #2 that the statistically correct coefficients should be used. I am also aware that the ‘conventions’ in psychological publications still favour the use of Pearson’s r.
I’d thus suggest reporting rho (and omega) first and foremostly. Should you still favour reporting r and alpha, e.g. for reasons of better interpretability, please do so in brackets.

This was also a concern of ours when deciding which statistics to include. We have taken on board the suggestions and chosen to focus on the Omega and Rho statistics and leave out the r statistic (in study 2) and the alpha statistic.

Reviewer #3 also asks for further clarification regarding samples, the use of different measures, and contradictions in findings and theory. Please read the Reviewers’ comments carefully and consider revising your manuscript.
We have considered reviewer #3’s comments and have addressed each one and made changes accordingly.

Reviewer #2:
The reviewed manuscript has increased its added value undoubtedly, specially regarding the incorporated discussion about differences and similarities of mindfulness and non-attachment, and thus I want to congrat the authors for their efforts.

Regarding methodological reviews, however, I found appropriate responses from the authors but some minor but important revisions are needed. As it is known, psychology research is, alongside other disciplines, facing a replication crisis (Open Science Collaboration, 2015), and the proposed cause of this phenomenon are questionable research practices (QRPs) (John, Loewenstein & Prelec, 2012; Fiedler & Schwarz, 2015), which vary across an spectrum of questionability (from the slightest and almost meaningless, to more intense ones like creating hypotheses based on data to ensure confirmation). Therefore, research community needs a better use and understanding of research methods and techniques, and start spreading these better uses across the community. This is, using papers as an example of good practice.

In this paper, obviously, I do not find any QRPs but the inclusion of Cronbach’s alpha and Pearson’s r in data contexts defying their assumptions, and they also seem to have a mild impact as the authors report little variations between classic and alternative techniques, and thus they chose to keep the standards. 
The issue here is that in the literature assumption checking is excessively ignored/skipped, and therefore the majority stick to these “gold standards” while there are enough evidence showing how bias impacts these measures in nonoptimal conditions (for correlations, see Bishara & Hittner, 2012; for reliability, previously recommended paper was valid, if authors need more info, see Dunn, Baguley & Brunsden, 2014).

I find therefore necessary to substitute Cronbach’s alpha for McDonald’s omega, and Pearson’s r for Spearman’s rho when nonnormal variables are met or outliers are produced. Not for concrete data issues in this paper, but for the social impact this publication will have and the necessity to change research community regarding these issues.

In short: I find necessary to use robust alternatives for reliability and correlation, for better quality in this paper but specially for the impact on the community.

References

Thank you for your comments regarding the reporting of reliability and relational statistics. We appreciate your clear passion on the subject and agree with your focus on the need to adopt best practice, regardless of what has become convention. We had also discussed this after your initial comments and had read the previous article you had suggested, and discussed our ongoing use of these statistics, especially the omega for reliability. In response to your comments, we have changed the statistics to focus on the Omega for reliability and Rho for the relationships in Study 2. We appreciate the time and energy you have given to this review.

In addition to the changes in the tables, we added the text:

“Macdonald’s Omega was used as a test of internal reliability due to Cronbach’s alpha being sensitive to bias in self-report data (Tiziano-Hermosilla & Alvarado, 2016).”

And

“Additionally, due the non-normal distribution of depression, anxiety and stress in the sample, Spearman’s rho was also used to test the correlations (Bishara & Hittner, 2012).”

Reviewer #3:
Dear authors,
You did an excellent job revising the paper, and I believe there is no much room left for improvement. Therefore, I only have a few suggestions:

We appreciate your comments and suggestions, and the time and energy spent in reviewing this article. We have addressed each of your comments below.
1. State the exact correlations in the brackets: "Spearman’s rho revealed similar relationships of mindfulness and nonattachment to depression, anxiety and stress, with minimal difference from Pearson’s r..."

In response to this comment, and the comment of the other reviewer, we have decided to only focus on the Rho statistic and leave out the r value altogether where the assumptions have not been met.

In addition to the changes in the tables, we added the text:

“Macdonald’s Omega was used as a test of internal reliability due to Cronbach’s alpha being sensitive to bias in self-report data (Tiziano-Hermosilla & Alvarado, 2016).”

And

“Additionally, due the non-normal distribution of depression, anxiety and stress in the sample, Spearman’s rho was also used to test the correlations (Bishara & Hittner, 2012).”

2. Although the data suggests that mindful acceptance and non-attachment are distinct constructs, this does not fit with the theoretical knowledge. Thus, the second sentence here fits with a description of mindful acceptance, although you are attempting to give an example of non-attachment: “Thus, when an individual is experiencing depressive symptoms, including self-focused ruminative thinking, being engaged with an open, present-centred awareness can be helpful. However, reducing fixation and trying to avoid or change experience may have a stronger impact on reducing these negative psychological symptoms.”

We acknowledge this comment. We have changed this line to better reflect nonattachment and not mindful acceptance:

“…However, reducing fixation on experience, and letting go of attempts to control it, may have a stronger impact on reducing these negative psychological symptoms.”

3. Where participants from study 1 also psychology students as those from study 2? If not, why?

The initial sample from study 1 was not only made up of psychology students as the survey link was sent out to all students at the university and was part of a well-being initiative where students could receive feedback. In the method it currently states:
“Participants were students from a mid-sized Australian university who participated in a university-wide project on student well-being. Students received an email inviting them to complete an online survey which provided the opportunity to receive personalised feedback relating to a number of psychological constructs (e.g., nonattachment, academic motivation, adaptability).”

Study 2 was completed after this, and the questionnaire designed to extend the results of Study 1 in relation to depression, anxiety and stress.

4. I disagree that using two different mindfulness measures improves external validity in this case. FFMQ is obviously a better choice for mediation analysis because it offers interesting subscales and it should be pointed out, at least briefly, in the discussion section that the 2 studies used different measures of mindfulness. I would suggest looking for studies that examined the relationship between FMI and FFMQ, and if you don't manage to find them, then put your hypothesis about it and how you think the results might change if you used FFMQ in study 1 and FMI in study 2.

Thanks for this suggestion. We have taken this on board and have added some words in the discussion referencing the use of two scales, we have also looked at evidence that has shown the FMI to be strongly related to the FFMQ ($r = .70$; Siegling & Peyrides, 2014). We have included the words:

“It is also important to acknowledge that different measures of mindfulness were used in study 1 and 2. Although having multiple measures of the construct can increase the external validity of the findings (Norris et al., 2012), it can also be seen as a limitation as the studies are not directly replicating other. It may be that using the FMI in Study 2 would not have yielded significant findings or vice versa, however, the FMI and the FFMQ have shown to be highly correlated ($r = .70$; Siegling & Peyrides, 2014) and both discuss measuring mindfulness that includes elements of acceptance and awareness (Kohls et al., 2009; Tran et al., 2013) thus, utilising two different measures of mindfulness that are highly related was not seen a major conceptual issue in this study.”


Reviewers comments and replies for Journal of Adult Development

(All replies written in red)

Ref.: Ms. No. JADE-D-18-00044
Growing by letting go: Nonattachment and mindfulness as a qualities of optimal adult development
Journal of Adult Development

I have now reviewed your paper and the comments by the reviewers. The reviewers have suggested a number of revisions. If you are prepared to make the revisions, I would be pleased to have the paper reviewed again.

Please indicate in colored font any new or changed text added to the paper.

This invitation to submit a revision does not imply that we will accept the revised paper. After we receive the revisions, your paper will be carefully reviewed again. Please address all of the reviewers’ comments and document how they have been addressed in your response. Also make sure that the style of your paper (structure, format, references etc.) is consistent with the requirements set out in our instructions to authors available at the journal website.

Your revision is due by Sep 01, 2018.

To submit a revision, go to https://jade.editorialmanager.com/ and log in as an Author. You will see a menu item called 'Submissions Needing Revision'. You will find your submission record there.

Thank you very much.

Yours sincerely,

Dr. Peter Martin
Editor-in-Chief
Journal of Adult Development

Reviewers’ comments:

Reviewer #1: This manuscript explores the association between the Buddhist construct of nonattachment as a possible explanatory mediating mechanism between mindfulness and three aspects of optimal adult development (wisdom, self-transcendence, and self-actualization). Overall, this is a very clear, well-written manuscript that I very much enjoyed reading and reviewing. I appreciate its simplicity. The author(s) provides a thorough analysis as to how nonattachment is an underlining facet for wisdom, self-transcendence, and self-actualization, and how mindfulness facilitates nonattachment and in turn, the three optimal outcomes of adult development.
The literature review is thus presented in a cogent and compelling way, with supporting studies (albeit limited). The measures and analysis are pretty straightforward and easy to understand and to replicate.

Thank you for your positive and constructive comments, and the time and energy spent reviewing this manuscript. We have tried to address each of your comments and suggestions and have made a number of changes to the manuscript as a result.

It is surprising that the undergraduate sample has a median age of 34, which is atypical of an undergraduate sample, so a bit more context about the sample would be helpful.

Thank you for picking this up. You are right, this is atypical of an undergraduate psychology sample. The main reason for this is that at the time students were given the opportunity to complete this survey, the main cohort were students studying online, who tend to mostly be mature age students. We have added some text to explain this in the method:

“It is also important to note that the majority of participants were mature age, studying psychology online, which increased the mean age in the sample.” (p.10)

My main concern relates to the analysis. As the author(s) noted, one of the limitation of this study is its cross-sectional nature and thus causality cannot be determined. The author(s) explored the meditation model as one in which nonattachment served as the mediator between mindfulness and the three optimal developmental outcomes, and found confirmation for this. Yet the author(s) did not explore the converse - whether mindfulness could be the mediator between nonattachment and the developmental outcomes. It could very well be that nonattachment (through critical self-reflection) results in increases in mindfulness (seeing things as they are, without the inherent self-focus, biases), and thereby wisdom, self-transcendence. It could also be that wisdom leads to greater non-attachment and mindfulness. In any case, because it is not a longitudinal sample, author(s) should consider and examine competing models, and see whether there is evidence for this as well.

Thank you for your comments and suggestions in this area. You have raised some interesting points, especially in relation to the pathway from nonattachment > mindfulness > wisdom etc. Our initial analyses were based on the theory that directly states nonattachment is developed through mindfulness (Dhiravamsa, 1975; Sahdra et al., 2016; Shapiro, Carlson, Astin, & Freedman, 2006). There is also some empirical evidence to suggest that engaging in insight
(mindfulness) meditation over a one-month period can increase levels of nonattachment (Montero-Marin et al., 2016). Currently there is no theory suggesting the pathway from nonattachment to mindfulness. However, the point you raise about nonattachment being developed through self-reflection, which we have also mentioned in the paper, possibly leading to being more mindful is very interesting. In our opinion there is no doubt that being more mindful can facilitate greater nonattachment, but whether nonattachment that is developed thorough other pathways (personal growth, psychotherapy, self-reflection etc.) leads to greater mindfulness, is probably true too.

We have addressed you comments and suggestions in text. By analyzing competing models looking at the pathway from nonattachment > mindfulness > optimal development. Our analyses found that Yes, mindfulness did mediate the relationship of nonattachment to all measures of optimal development to a relatively similar degree as the originally stated mediational pathways of mindfulness > nonattachment > optimal development.

We have sought to address this in text in the results section:

**Alternate mediational model**

*Although the results for mediation support the hypotheses, when testing for mediation, in addition to having a strong theoretical basis, it is also important that nonequivalent mediation models are not found to be statistically equivalent (Little, Card, Bovaird, Preacher & Crandall, 2007). There is a strong theoretical and empirical basis for nonattachment as a proposed mediator of mindfulness (Dhiravamsa, 1975; Montero-Marin et al., 2016; Sahdra et al., 2016; Shapiro, Carlson, Astin, & Freedman, 2006). However, it has previously been discussed that*
nonattachment is not only cultivated through mindfulness, and other experiences that foster self-reflection may also facilitate the development of nonattachment (Sahdra et al., 2010). Therefore, it is possible that building greater nonattachment, through self-reflection, may foster greater mindfulness, and thus, greater wisdom, self-actualisation and self-transcendence.

To test this, and rule out alternative mediation models, further bootstrapping analyses were conducted to test whether mindfulness mediates the relationship of nonattachment to wisdom, self-actualisation and self-transcendence. All variables were converted to z values and age was entered as a covariate. Results showed the 95% Confidence Interval for the indirect effect of mindfulness on wisdom was estimated to lie between .18 and .32, between .16 and .29 for self-actualisation, and between .10 and .23 for self-transcendence. As none of the estimations contained zero, the mediating effect of nonattachment in each analysis was significant. The results indicate that even though Hypothesis 2 was supported, multiple pathways may exist to building nonattachment and mindfulness which can in turn lead to greater wisdom, self-actualisation and self-transcendence. (p.13)

The following was added to the first paragraph of the Discussion:

“However, further analyses revealed an alternate mediation pathway indicating mindfulness mediates the relationship of nonattachment to advanced psychological development. This suggests that nonattachment and mindfulness can both facilitate each other, and that there may be multiple pathways to building nonattachment.” (p.14)

Further words were added in the implications section:
“This is highlighted by the findings suggesting mindfulness also mediates the relationship of nonattachment to each of wisdom, self-actualisation, and self-transcendence. This result indicates the multiple pathways to building nonattachment. Perhaps, nonattachment that is cultivated through pathways other than mindfulness (e.g., psychotherapy, post-traumatic growth), may also promote mindfulness which can assist in the psychological development process.” (p.17)

Some additional words have been changed and added in the methodological considerations section:

“Although, the results support previous theory that nonattachment is believed to emanate from mindfulness (Sahdra et al., 2016; Shapiro et al., 2006), the results of the current cross-sectional study suggest that the causal pathways may be more complex. It is likely that nonattachment may assists individuals to be more mindful, and that qualities such as wisdom and self-transcendence could also facilitate greater instances of mindfulness and nonattachment. Future longitudinal research comparing the mechanisms and outcomes of mindfulness and nonattachment-based interventions may help elucidate the specific causal pathways to wisdom, self-actualisation and self-transcendence. A longitudinal study would also be valuable to investigate changes in optimal psychological development over time.” (p.18)

Then future research could explore whether a mindfulness intervention or a non-attachment intervention results in optimal indicators via the respective nonattachment/mindfulness mechanism.

This is a good point and we agree (see above changes). We are currently underway of creating and implementing an intervention specifically targeting nonattachment through multiple pathways.

Reviewer #2: This study is the first to demonstrate that nonattachment in a Buddhist sense is related to what some psychologists have considered advanced and optimal psychological development over
the lifespan. Since these are important areas of interest today in adult development and spirituality, this study provides a significant step forward in understanding these complex phenomena with applications to many clinical areas of psychology. So, the paper is on target for JAD and will be of use and interest to many categories of JAD readers. The author used an appropriate methodology and suitable statistical analyses and made use of valid and reliable standard measures. The paper is well written. The author is aware of, and discusses, the limitations of this (first?) cross-sectional study which limit the generalizability of the results and limit the argument that these are developmental (as opposed to present-time) relationships.

We appreciate your time and energy in reviewing this manuscript. Thank you for your positive and constructive comments and suggestions, we have taken on board all your comments and have addressed each below.

Before I make content suggestions let me point out one comma-splice sentence on page 16, lines 23-28 (approximately). This could be fixed by a semi-colon after "gender bias". Also the references are not always APA style.

Thank you for pointing these out. A semi-colon has been added and numerous references have been updated to be in adherence to APA style.

In terms of more substantive ideas, I have a couple of considerations the resolution of which might improve this excellent manuscript. First, I suggest the author soften the emphasis and argument related to "OPTIMAL adult development". I realize that theories of transcendence and wisdom, etc., are written from the point of view that these are the "highest" or most optimal stages. But I don't know (do you?) if these development are indeed the best for a particular person or the highest for individuals to aspire to, i.e., "optimal" in an absolute sense. Perhaps arguing that the development we point to as "optimal" might be better understood as "advanced" or "at complex levels" within the theory being discussed would soften the judgment a little.

We have taken on board this comment and have made changes accordingly. Initially, the word optimal was used in its 'pop' sense referring to being highly regarded. However, the strict definition of the term does suggest 'the best/highest', and we cannot unequivocally say that these qualities are the best/highest. I'm sure there are other qualities that others could argue may be higher (e.g., compassion, inner peace etc.), depending on context/culture etc. Thus, we have taken this point on board and have substituted optimal for 'advanced' throughout the document, and in some cases have softened language to better show these qualitative could be considered advanced or optimal.

Second, the paper needs some clarification about the type of "nonattachment" being discussed. In developmental and personality psychology literature "attachment" usually refers to the style of ties with others (e.g., "secure," "ambivalent", "avoidant") developed in infancy and influencing intimate relations thereafter if nothing else intervenes. The Buddhist concept of nonattachment is not the same nor first thing that comes to mind, except to those of us like the reviewer who have been life-long meditators and long-time Buddhist-influenced psychologists. So I think it would make the paper stronger to briefly differentiate Buddhist and general and intimate relations meanings of "attachment" at the start of the paper.

Thanks for this suggestion. We had previously considered adding something similar to what you have suggested and had decided against it. However, as the readers of this journal are probably more familiar with attachment theory, we agree that further clarification is needed. We have added another paragraph at the start of the introduction to clarify and differentiate the attachment we are
referring to. We hope this addresses your concerns and makes it clearer. The second paragraph now reads:

**Nonattachment, mindfulness and advanced psychological development**

To understand the construct of nonattachment, it is important to define ‘attachment’, as the term has different meanings in different disciplines. In psychology, attachment often refers to attachment style, referencing a child’s attachment to the caregiver (see Bowlby, 1969; Ainsworth, Blehar, Waters & Wall, 1978) or the quality and safety of a person’s relationships as an adult (Hazan & Shaver, 1987). However, in the context of nonattachment, attachment refers to the energy involved in clinging to experiences perceived as positive and the avoidance of experiences perceived as negative (Altobello, 2009; Agarwal, 1992; Sahdra et al., 2010; Shone, 1992). Nonattachment, therefore, involves an interaction with experience without fixation or needing to control it though clinging or avoidance (Sahdra et al., 2010). The quality of nonattachment is at the core of the Buddhist teachings (Gammage, 2006; Hanh, 1999; Thubten, 2009), is identified as an ideal quality to possess (Banth & Talwar, 2012; Upadhyay & Vashishtha, 2014) and is associated with greater presence and maturity (Sahdra et al., 2010). (p. 1)
**Reviewers comments Frontiers in Psychology**

Dear Dr Whitehead,

The interactive review of your manuscript "Letting go of self: the creation of the nonattachment to self scale" submitted to Frontiers in Psychology, section Quantitative Psychology and Measurement has now been activated.

The reviewers recommended that you make substantial amendments to your manuscript. Please respond within the next 35 days to all comments raised by the reviewers in the online review forum. You can also submit a revised version of your manuscript at that time. We encourage you to submit your documents with tracked changes to highlight the revisions. There can be more than one iteration between authors and reviewers, but only when all comments by each reviewer have been addressed successfully can the review be finalized.

Jin Eun Yoo  
Associate Editor,  
[www.frontiersin.org](http://www.frontiersin.org)

**Comments**

**Editor**

**Participants and procedure**

p.12 When you split samples for the two CFAs, it would have been better that you did stratified sampling with religion and race as stratifying variables.

**Criterion Validity**

p. 18 'An independent samples t-test was conducted to test whether participants who engaged in a contemplative practice had higher levels of NTS …': What was your rule to grouping?

line 442 Wrong statement: NTS showed negative correlation to rumination, but its correlation with emotional stability was positive.

**Differences from nonattachment and self-comparison**

You need to explain how you conducted the comparison in detail.

What was your measurement model for this comparison? I am not sure if it is appropriate to set the constrained model's correlation between the two at 1, as the correlation of 1 is rarely encountered in social science.

lines 480 to 487

What is 'a number regression analyses? a number of? How many?

What were the regression models and what do you mean by 'unique variance?"
Reviewer #1

Overall I am positive about the paper. Nevertheless, the issues listed below must be addressed before the paper reaches its full potential.

1) The Introduction gets repetitive half-way through. State each idea only once to allow for a concise manuscript.

2) Explain the rationale for creating the 116 item pool. Provide citations to support your argument and include all items in the appendix/supplementary material file.

3) Please explain what you meant by "non-mediators" in page 8, line 177.

4) Remove "Melbourne" from the paper. Make sure that any other identifiable information is removed from the paper as well.

5) I am a bit puzzled by the term "Buddhist psychology". Buddhism precedes psychology. Where is this terminology coming from? Please briefly elaborate on this in the manuscript.

6) Justify your choice for using the principal-axis method of estimation.

7) Including the loadings and cross-loadings for all items in an appendix/supplementary material file (page 10).

8) It is unclear what you meant by "mediation process" (page 11, line 250). Please explain.

9) Why so many scales were used to test for convergent and discriminant validity? Please offer a rebuttal to this in the manuscript otherwise it seems like you were fishing for anything.

10) According to Table 2, the correlation between NTS and emotional stability is positive and not negative as stated in the text. Please correct this in the revised manuscript.

11) The Discussion is repetitive. State ideas only once and write as concisely as possible.

12) Constrained models comparing gender should be analysed and reported.

MINOR

Page 7, line 154: cite all texts used to create the items rather than only an "e.g.," sample of the sources.

We take this point onboard but there were many texts used that informed the original 30 items. This study had been researched for a few years before the creation of the scale where there were many books read and consulted. This statement is also in line with previous research into creating Buddhist-based psychological constructs (e.g., Sahdra et al., 2010)

Page 22, line 520: change to "central role in"

Check for anthropomorphism and delete all absolutist wording from the paper (e.g., "if not all"); "above and beyond"). Please revise throughout.
Reviewer #2

The ms's contribution is in developing a new self-report measure, which is then compared to other self-report measures. This is ok as a purpose, and it is more or less satisfactorily carried out. The paper could be considerably shortened, however, to enhance readability. Questionnaires are not a way to prove that a construct does or does not exist: for example, this paper does not (and cannot) provide any answer to the question, whether “nonattachment to self” is something distinct to “nonattachment” in general.

A high-ish correlation (0.71) between 7-item scales leaves room for both interpretations: (a) the two constructs are essentially the same; and (b) the two constructs are different from each other. The importance of the difference could be established, for example, by showing that the new scale predicts an important non-questionnaire outcome, and the old scale doesn’t. Given the lack of “hard evidence” for the necessity of the construct, much of the theoretical talk is simply irrelevant and could just as well be deleted. In addition, I do not see the need for that many references -- the refs list could be shortened by 50% without losing anything really important.

A few additional things need clarification.

1. The models reported p.20 (Distinctiveness from nonattachment and self-compassion): please describe the nested models you compared. (Add either a figure or verbal description of the model, plus the code in an online supplement.) The section makes no sense currently, as you compare two models without having even said, which variables are included in the model (you mention nonattachment, NTS, and self-compassion -- presumably at the item level -- but were the other questionnaires included as well?). The models should be described in sufficient detail for being reproducible.

2. Items 4 and 5 in your scale may not equally make sense for everyone. “As time goes on I feel less and less defined by the thoughts I have about who I am” (without some background knowledge of mindfulness, one might not understand what does it mean to be defined by the thought one has about who one is). “As time goes on I feel less and less of a need to be a certain way” (is this a typo? did you mean “to be in a certain way”? But both ways, again, a mindfulness-naive respondent might think that one is the way one is, without having to think about it, and definitely, without thinking about how one “needs” to be. The needs may also refer to social pressures to some people (suppose my father wanted me to become a doctor, but as time goes on, I am less and less reminded of this). Finally, both items refer to a change towards more NTS -- but what if the respondent has achieved a ceiling of nonattachment and there is no change “as time goes on”?

3. Your example item from the nonattachment scale is “I can let go of regrets and feelings of dissatisfaction about the past”. I checked out the 7-item NAS scale and most of it is about the self either directly (“I do not get “hung up” on wanting an “ideal” or “perfect” life”) or indirectly (the former sentence is about MY regrets and MY feelings -- rather than someone else’s). Or “I can take joy in others’ achievements without feeling envious.” -- One will be envious if one would rather keep all achievements to ONESELF … and if not, then not. What is your view of it, can there be “nonattachment” without “… to the self” part?

4. Rows 132-135: yes, failed attempts to control one’s environment are likely to lead to bad consequences -- but only if the attempts do fail in the first place. And they are more likely to fail if one lets everything go in the first place. (I don’t think there is a real contradiction between mastery experiences and self-efficacy beliefs on the one hand, and “letting go of the self” on the other. However, I do think that your argument here is a bit simplistic.)
Appendix E – Authorship forms
Swinburne Research

Authorship Indication Form
For PhD (including associated papers) candidates

NOTE
This Authorship Indication form is a statement detailing the percentage of the contribution of each author in each associated 'paper'. This form must be signed by each co-author and the Principal Coordinating Supervisor. This form must be added to the publication of your final thesis as an appendix. Please fill out a separate form for each associated paper to be included in your thesis.

DECLARATION
We hereby declare our contribution to the publication of the 'paper' entitled:
Nonattachment mediates the relationship between mindfulness and psychological well-being, subjective well-being, and depression, anxiety, and stress.

First Author
Name: Richard Whitehead
Signature:
Percentage of contribution: 80%
Date: 18/06/2016
Brief description of contribution to the 'paper': Data collection, data analysis, writing of paper

Second Author
Name: Glen Bates
Signature:
Percentage of contribution: 10%
Date: 19/06/2016
Brief description of contribution to the 'paper': Involved in conceptual discussion and many rounds of drafting

Third Author
Name: Bradley Elphinston
Signature:
Percentage of contribution: 5%
Date: 19/06/2016
Brief description of contribution to the 'paper': Involved in data analysis, conceptual discussions, and drafting process

Fourth Author
Name: Yan Yang
Signature:
Percentage of contribution: 2.5%
Date: 19/06/2016
Brief description of contribution to the 'paper': Data collection and analysis. Conceptual discussion.

Principal Coordinating Supervisor: Name: Glen Bates
Signature:
Date: 19/06/2016

In the case of more than four authors please attach another sheet with the names, signatures and contribution of the authors.
Swinburne Research

Authorship Indication Form
For PhD (including associated papers) candidates

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This Authorship Indication form is a statement detailing the percentage of the contribution of each author in each associated 'paper'. This form must be signed by each co-author and the Principal Coordinating Supervisor. This form must be added to the publication of your final thesis as an appendix. Please fill out a separate form for each associated paper to be included in your thesis.

DECLARATION
We hereby declare our contribution to the publication of the ‘paper’ entitled:
Nonattachment mediates the relationship between mindfulness and psychological well-being, subjective well-being, and depression, anxiety and stress.

Name: Fifth Author - Greg Murray
Signature: ____________________________
Percentage of contribution: 2.5%
Date: 18/3/2015
Brief description of contribution to the ‘paper’ and your central responsibilities on project: involved in conceptual considerations and final drafting process

Second Author
Name: ______________________________
Signature: ____________________________
Percentage of contribution: ___%
Date: ___/___/____
Brief description of your contribution to the ‘paper’:

Third Author
Name: ______________________________
Signature: ____________________________
Percentage of contribution: ___%
Date: ___/___/____
Brief description of your contribution to the ‘paper’:

Fourth Author
Name: ______________________________
Signature: ____________________________
Percentage of contribution: ___%
Date: ___/___/____
Brief description of your contribution to the ‘paper’:

Principal Coordinating Supervisor: Name: Glen Bates
Signature: ____________________________
Date: 18/4/2015

In the case of more than four authors please attach another sheet with the names, signatures and contribution of the authors.
Swinburne Research

Authorship Indication Form
For PhD (including associated papers) candidates

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DECLARATION

We hereby declare our contribution to the publication of the 'paper' entitled:
Growing by letting go: Nonattachment and mindfulness as qualities of optimal psychological development

First Author
Name: Richard Whitehead
Signature: [Signature]
Percentage of contribution: 80 %
Date: 18/1/2018
Brief description of your contribution to the 'paper': major conceptual development, data collection, data analyses, writing of manuscript

Second Author
Name: Glen Bates
Signature: [Signature]
Percentage of contribution: 12 %
Date: 14/6/2019
Brief description of your contribution to the 'paper': Involved in conceptual discussion and many rounds of drafting

Third Author
Name: Bradley Elphinstone
Signature: [Signature]
Percentage of contribution: 8 %
Date: 17/6/2018
Brief description of your contribution to the 'paper': Involved in data analysis, conceptual discussions, and drafting process

Fourth Author
Name: [Blank]
Signature: [Blank]
Percentage of contribution: [Blank]
Date: [Blank]
Brief description of your contribution to the 'paper':

Principal Coordinating Supervisor: Name: Glen Bates
Signature: [Signature]
Date: 14/6/2018

In the case of more than four authors please attach another sheet with the names, signatures and contribution of the authors.
Swinburne Research
Authorship Indication Form
For PhD (including associated papers) candidates

NOTE
This Authorship Indication form is a statement detailing the percentage of the contribution of each author in each associated 'paper'. This form must be signed by each co-author and the Principal Coordinating Supervisor. This form must be added to the publication of your final thesis as an appendix. Please fill out a separate form for each associated paper to be included in your thesis.

DECLARATION
We hereby declare our contribution to the publication of the 'paper' entitled:
Stories of suffering and growth: a qualitative investigation into nonattachment and attachment.

First Author
Name: Richard Whitehead
Percentage of contribution: 80 %
Date: 8/6/2018
Signature: [Signature]

Brief description of your contribution to the 'paper': [Signature]

Second Author
Name: Glen Bates
Percentage of contribution: 12 %
Date: 9/6/2018
Signature: [Signature]

Brief description of your contribution to the 'paper': [Signature]

Third Author
Name: Bradley Elphinston
Percentage of contribution: 8 %
Date: 12/6/2018
Signature: [Signature]

Brief description of your contribution to the 'paper': [Signature]

Fourth Author
Name: [Signature]
Percentage of contribution: [Signature]
Date: [Signature]

Brief description of your contribution to the 'paper': [Signature]

Principal Coordinating Supervisor: Name: [Signature]
Date: 16/6/2018

In the case of more than four authors please attach another sheet with the names, signatures and contribution of the authors.
Swinburne Research

Authorship Indication Form
For PhD (including associated papers) candidates

NOTE
This Authorship Indication form is a statement detailing the percentage of the contribution of each author in each associated ‘paper’. This form must be signed by each co-author and the Principal Coordinating Supervisor. This form must be added to the publication of your final thesis as an appendix. Please fill out a separate form for each associated paper to be included in your thesis.

DECLARATION
We hereby declare our contribution to the publication of the ‘paper’ entitled:

Letting go of self: The creation of the nonattachment to self scale

First Author
Name: Richard Whitehead
Signature:
Percentage of contribution: 80%
Date: 12/6/2018

Brief description of contribution to the ‘paper’ and your central responsibility on project:
Initial conceptualisation of scale, data collection, statistical analysis, writing involved in conceptual considerations and final drafting process

Second Author
Name: Glen Bates
Signature:
Percentage of contribution: 10%
Date: 12/6/2018

Brief description of your contribution to the ‘paper’:
Early conceptual considerations, discussed data analysis, major input in drafting process

Third Author
Name: Bradley Elphinstone
Signature:
Percentage of contribution: 5%
Date: 12/6/2018

Brief description of your contribution to the ‘paper’:
Discussion of concepts, statistical analysis, input in the drafting process

Fourth Author
Name: Yan Yang
Signature:
Percentage of contribution: 3%
Date: 12/6/2018

Brief description of your contribution to the ‘paper’:
Original conceptualisation discussion, data collection

Principal Coordinating Supervisor: Name: Glen Bates
Signature:
Date: 12/6/2018

In the case of more than four authors please attach another sheet with the names, signatures and contribution of the authors.
Swinburne Research

Authorship Indication Form
For PhD (including associated papers) candidates

NOTE
This Authorship indication form is a statement detailing the percentage of the contribution of each author in each associated paper. This form must be signed by each co-author and the Principal Coordinating Supervisor. This form must be added to the publication of your final thesis as an appendix. Please fill out a separate form for each associated paper to be included in your thesis.

DECLARATION
We hereby declare our contribution to the publication of the paper entitled:
Letting go of self: the creation of the nonattachment to self scale


First Author
Name: Greg Murray
Percentage of contribution: 2%
Signature: [Signature]
Date: 16/6/15
Brief description of contribution to the ‘paper’ and your central responsibilities on project: Involved in conceptual considerations and final drafting process

Second Author
Name:
Percentage of contribution:
Signature:
Date: _/_/_
Brief description of your contribution to the ‘paper’:

Third Author
Name:
Percentage of contribution:
Signature:
Date: _/_/_
Brief description of your contribution to the ‘paper’:

Fourth Author
Name:
Percentage of contribution:
Signature:
Date: _/_/_
Brief description of your contribution to the ‘paper’:

Principal Coordinating Supervisor: Glen Bates
Name: [Signature]
Date: 16/6/15

In the case of more than four authors please attach another sheet with the names, signatures and contribution of the authors.

Authorship Indication Form
1 of 1
Appendix F – Consent Information Statement for Study 3 Interviews

Consent Information Statement.

**Project Title:** The presentation of nonattachment in Australian adults and its role as a mediator between mindfulness and well-being

**Project Supervisor:** Professor Glen Bates.

**Principal Investigator:** Richard Whitehead

**Introduction to the project and invitation to participate**

Thank you for your interest in this project. As a follow-up to the questionnaire you have already completed, the interview conducted aims to provide a more in-depth account of nonattachment and specifically, how you have come to a position in your life where you are experiencing a certain level of nonattachment. If, once you have read this information contained in this statement you would like to participate in the interview, there is a consent form attached. The consent form outlines that you are free to withdraw your consent to participate at any time.

**What is the project and why is it being undertaken**

The term ‘nonattachment’ has been found in many spiritual traditions and is seen as a central theme in Buddhism, Hinduism and Christian Mysticism as a tenet involved in self-realization. The current study is investigating the construct of ‘nonattachment’ and how nonattachment affects a person’s life. Nonattachment involves a ‘letting go’ of trying to control experiences by not clinging on to good or avoiding bad experiences. The current study is investigating how it is that nonattachment develops more strongly in some people than others. Additionally, the present project seeks to investigate how people perceive that nonattachment has developed in their lives and what they feel has been important in its development. By conducting an in-depth face to face interview, it is hoped to gain a more qualitative view of nonattachment that is not limited to what can be written in a questionnaire.

**Project and researcher interests**

This project is being conducted as partial fulfilment of the principle investigator’s completion of a Doctor of Philosophy (Psychology).

**What participation will involve**

Participation will involve being asked a number of questions as part of a semi-structured interview concerning a number of experiences in your life. The interview will be recorded.
for the purposes of writing a transcript. If you feel any discomfort, or for any reason, you may stop the interview at any time.

**Participant rights and interests – Risks and Benefits**

This interview will consist of a number of questions aimed and investigating how you have dealt with various situations in your life, and how you currently deal with your experiences. Due to speaking about your experiences, there is a chance that some topics may be sensitive and may inadvertently cause discomfort. If you at any time feel discomfort or do not wish to continue please inform the interviewer and a number of supports will be provided. If you feel you need to talk with someone in person other than the interviewer please access the Swinburne Counselling Service (Hawthorn Campus) on 9214 8025.

There are a number of potential benefits from the proposed study. The investigation into the construct of nonattachment may provide evidence for the development of interventions aimed at developing nonattachment and other related qualities. Additionally, any materials published as a result of this study may assist in building a knowledge base relating to nonattachment which may inform future studies.

**Participant rights and interests – Free Consent/Withdrawal from Participation**

Participation in this interview is voluntary. After beginning the interview, you are also free to withdraw your participation at any stage. After completing the interview you can also withdraw your consent to have your interview used in the project. Not participating in this interview or withdrawing your consent after beginning will have no adverse consequences (i.e. if you are a student it will not affect your results, enrolment etc.). By signing the attached consent form you agree to consent to participate in the present project.

**Participant rights and interests – Privacy and confidentiality**

Any identifiable information about you which is gathered in the course of, and as the result of you participating in this study will be collected and retained for the purpose of this project only, and will be accessed and analysed by the researchers for the purpose of conducting this study. All collected data will remain completely confidential, securely stored, and accessible only to the researchers, and your anonymity will be preserved. All signed consent forms will be stored secured in a lockable filing cabinet.

**Research output**

The findings of the present study will form part of the PhD thesis for the principle investigator. It is also envisaged that the findings of this study will be submitted for publication, however, you will not be identified in publications or otherwise. If you would like a copy of any publications that result from this project please indicate this to the interviewer and any publications will be made available to you via your contact details.
If you have any questions or concerns about this project, please contact the researcher or research supervisor. If you have any complaint about the way this project has been conducted, or a query that the research supervisor is unable to satisfy, please contact the Research Ethics Officer via telephone in Australia (03 9214 5218) or email at: resethics@swin.edu.au.

**Researcher: Richard Whitehead**

Swinburne University SPS building room 238B  
Email: rwhitehead@swin.edu.au  
Ph. 0415918719

**Research Supervisor: Professor Glen Bates**

Swinburne University SPS building room 244  
Email: gbates@swin.edu.au  
Ph. 92148100

If anyway you feel affected by participating in this study, and require assistance you can call Lifeline on 13 11 44, or contact Swinburne University on (03) 9214 5218 to arrange a free counselling session at the Swinburne University Counselling Clinic.
Swinburne University of Technology

Project Title: The presentation of nonattachment in Australian adults and its role as a mediator between mindfulness and well-being

Principal Investigator(s): Richard Whitehead

1. I consent to participate in the project named above. I have been provided a copy of the project consent information statement to which this consent form relates and any questions I have asked have been answered to my satisfaction.

2. In relation to this project, please circle your response to the following:

- I agree to be interviewed by the researcher
  - Yes
  - No

- I agree to allow the interview to be recorded by electronic device
  - Yes
  - No

- I agree to make myself available for further information if required
  - Yes
  - No

3. I acknowledge that:
   (a) My participation is voluntary and that I am free to withdraw from the project at any time without explanation;
   (b) The Swinburne project is for the purpose of research and not for profit;
   (c) Any identifiable information about me which is gathered in the course of and as the result of my participating in this project will be (i) collected and retained for the purpose of this project and (ii) accessed and analysed by the researcher(s) for the purpose of conducting this project;
   (d) My anonymity is preserved and I will not be identified in publications or otherwise without my express written consent.

By signing this document I agree to participate in this project.

Name of Participant: ..................................................................................................................

Signature & Date: ...................................................................................................................
Appendix G – Questionnaire used for Study 1 in Article 1

**MyLEAD Student Survey**  
**Semester 2, 2015**

Dear Swinburne student,

The Office of Student Advancement invites you to participate in the Swinburne MyLEAD learning resources survey for 2015.

- Sean Tinker, Student Advancement - principle researcher
- Professor Glen Bates, Pro Vice-Chancellor, Student Advancement - research advisor
- Brad Elphinstone, Faculty of Life and Social Sciences - research associate
- Richard Whitehead, Faculty of Life and Social Sciences - research associate

The MyLEAD learning resources survey will collect information about student's approach and attitude to learning and attributes associated with their well-being that will help us to better understand the types of student programs that could improve learning outcomes for students. There is currently a gap in the knowledge about how Australian university students approach their learning and the information collected in this survey may contribute to the way courses are delivered and the support services that are provided to help students succeed in their studies.

The survey is presented as three modules, each taking around 10-15 minutes to complete and each can be completed separately. In return for the information you provide you will have the opportunity to receive personalised information reflecting your survey scores as well as entering the draw to win a prize. A report is provided for each module you complete. Plus, each module completed gives you a chance at winning a prize.

The first module captures your standing on several measures of academic motivation including motivation style, academic functioning, and self-directed learning. The second module captures important learning resources such as tendency to procrastinate, planning, adaptability, and mindfulness. The third module captures information about your well-being such as how you view the quality of your life, your sleep patterns and your levels of worry. The feedback provided for each of these modules also includes detailed self-help strategies that can further your effective learning strategies. The information provided as feedback and
self-help strategies can help you make informed decisions about improving your learning outcomes and where to seek help to assist you in becoming a more effective student. Information about these important learning resources can enable you to make decisions about improving your learning outcomes and to seek assistance to get the most out of your studies. The prize is a $500 travel voucher. Prizes will be drawn on Friday 25 November and winners will be contacted via email.

To provide you with information about your motivation and learning resources, and to enter the prize draw, you will be asked to provide your student email address. Providing your email address is voluntary. However, it will not be possible to provide you with feedback or contact you should you win a prize without this information. Student email address information is strictly confidential and will not be used for any purpose other than the distribution of personalised learning information and to notify prize winners. In the survey you will also be asked to provide your student number. This information will enable researchers to verify your student status as an enrolled Swinburne student and to match future survey information for longitudinal research. Your student number will not be used to identify you for any other purpose. Providing your student number is voluntary and you can complete the survey, receive a learning profile, and enter the prize draw without providing it. However, a student email address will be required to receive feedback and enter the prize draw.

By clicking on the 'next' button and completing the online questionnaire you are deemed to be giving your informed consent to participate. If you do not wish to participate, please do not continue or complete the online questionnaire. If you agree to participate and complete the online questionnaire, please ensure that you have answered all the questions. We confirm that only group data will be used in analysis for publication, and that your responses will not be linked or identified to you as an individual, except to confidentially provide you with your personalised learning information.

Participation in this survey is voluntary and if you do not wish to participate you are not obligated in any form to complete the questionnaire. Should you wish to withdraw your consent after completing the survey, please contact the principle researcher (details below) and every effort will be made to remove your data if sufficient information exists to identify you as the author of the data. Withdrawal of data will not affect your course standing or your enrollment in any way whatsoever. Remember, if at any time you feel like you would benefit from speaking with someone, please contact one of the support services listed below.
All data will be collected and stored in accordance with Swinburne University research guidelines.

**Optional**

Student Number

Student Email

**Demographics**

1. What is your gender?
   - Male
   - Female

2. What is your age in years?

3. Are you in your first semester of study at Swinburne University?
   - Yes
   - No

   ▶ If answer to Q 3 is “No” the following question was presented

3.1 How many years of equivalent full time study have you done?
   - 0.5 - 1
   - 1 - 2
   - 2 - 3
   - 3 - 4
   - 4 - 5
   - More than 5

4. Estimate your household income per annum?
   - $0-$20,000
   - $20,001-$50,000
   - $50,001-$100,000
   - $100,001-$250,000
   - $250,001+

5. What is your personal income per annum?
   - $0-$20,000
   - $20,001-$50,000
   - $50,001-$100,000
   - $100,001-$250,000
   - $250,001+

6. Please select which is more representative of your current employment.
7. What are your current living arrangements?
   - Living at home with parents
   - Living independently (e.g., renting in a share house, living with your partner)
   - Other

8. Which faculty are you currently studying in?
   - Faculty of Business and Enterprise
   - Faculty of Health, Arts and Design
   - Faculty of Science, Engineering, and Industrial Sciences
   - Swinburne Online

9. What is your major?

10. If applicable, what is your minor?

11. How many university contact hours (face to face or online) do you have each week?

12. How many hours do you spend doing non-university related work (e.g., working in a part time or casual job)?

13. Does your current employment relate to your area of study?
   - Yes
   - No

14. Are you a mature age student?
   - Yes
   - No

   ▶ If answer to Q 14 is “Yes” the following question was presented

   14.a. What were you doing before you commenced your current course? (you can choose more than one option)?
   - Working
   - Stay home parent
   - Unemployed
   - Own Business
   - Travel
Educational/Vocational course
Other

► If answer to Q 14 is “No” the following question was presented

14.b. Did you defer before commencing your current course

Yes
No

► If answer to Q 14.b. is “Yes” the following question was presented

14.b.a. If you did defer your studies, what did you spend your time doing (select all applicable answers)?
Travelling
Working
Socialising
Course
TAFE
Volunteering
Personal Development (e.g., short courses)
Other

15. If you can remember, what was your TER (Tertiary Entrance Rank) score?

Nonattachment (Elphinstone, Sahdra, & Ciorrachi, 2013)

25. Below are a number of statements related to your views about yourself, others, and life in general. Select an answer (from Strongly Disagree to Strongly Agree) on the scale provided. Your answer will rate the extent to which you agree with the statement.

Please answer according to what really reflects your experiences at this point in your life rather than what you think your experience should be.

Scale 1 = Strongly Disagree – 7 = Strongly Agree

1. I can let go of regrets and feelings of dissatisfaction about the past.
2. I can enjoy pleasant experiences without needing them to last forever.
3. I view the problems that enter my life as things/issues to work on rather than reasons for becoming disheartened or demoralized.
4. I can enjoy my family and friends without feeling I need to hang on to them.
5. I can take joy in others' achievements without feeling envious.
6. I do not get “hung up” on wanting an "ideal" or "perfect" life.
7. When pleasant experiences end, I am fine moving on to what comes next.

Friedberg Mindfulness Inventory (14 Item; Walach, Bucheld, Buttenmuller, kleinknecht & Schmidt, 2006).
27. The purpose of this inventory is to characterize your experience of mindfulness. Please use the last ___ days as the time-frame to consider each item. Provide an answer the for every statement as best you can. Please answer as honestly and spontaneously as possible. There are neither ‘right’ nor ‘wrong’ answers, nor ‘good’ or ‘bad’ responses. What is important to us is your own personal experience.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rarely</td>
<td>Occasionally</td>
<td>Fairly often</td>
<td>Almost always</td>
</tr>
</tbody>
</table>

1. I am open to the experience of the present moment.
2. I sense my body, whether eating, cooking, cleaning or talking
3. When I notice an absence of mind, I gently return to the experience of the here and now.
4. I am able to appreciate myself.
5. I pay attention to what’s behind my actions.
6. I see my mistakes and difficulties without judging them.
7. I feel connected to my experience in the here-and-now.
8. I accept unpleasant experiences.
9. I am friendly to myself when things go wrong.
10. I watch my feelings without getting lost in them.
11. In difficult situations, I can pause without immediately reacting.
12. I experience moments of inner peace and ease, even when things get hectic and stressful.
13. I am impatient with myself and with others.
14. I am able to smile when I notice how I sometimes make life difficult.

Well-Being Module

**Positive and Negative Affect Scale (Watson, Clark & Tellegen, 1988)**

*Scale of positive and negative emotions. Not intended for feedback to students but important to include in research as antecedents or outcomes to other constructs.*

28. Thinking about yourself and how you normally feel, to what extent do you generally feel...

Scale: 1 = Very Slightly – 5 = Extremely

1. Interested
2. Distressed
3. Excited
4. Upset
5. Strong
6. Guilty
7. Scared
8. Hostile
9. Enthusiastic
10. Proud
11. Irritable
12. Alert
13. Ashamed
14. Inspired
15. Nervous
16. Determined
17. Attentive
18. Jittery
19. Active
20. Afraid

**General Life Satisfaction** *(Diener, Emmons, Larsen, & Griffin, 1985)*.

*General satisfaction scale that is used in many well-being studies. Not intended as something to provide feedback to students about.*

29. Below are a number of statements about your life, with which you may agree or disagree. Please choose the response which most closely represents yourself.

Scale: 0 = Strongly Disagree – 6 = Strongly Agree

1. In most ways, my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with life.
4. So far I have gotten the important things I want in life.
5. If I could have my life over, I would change almost nothing.

**Psychological Wellbeing Scale (30 Item; Ryff, 1989)**

31. Below is a list of statements. Please look at each one in turn, and indicate by putting the appropriate number on the line beside the statement, the extent to which you believe each is true for you.

Scale: 1 = Strongly Disagree – 6 = Strongly Agree

1. In general, I feel I am in charge of the situation in which I live.
2. I am not interested in activities that will expand my horizons.
3. When I look at the story of my life, I am pleased with how things have turned out.
4. I am not afraid to voice my opinions even when they are in opposition to the opinions of most people.
5. I live life one day at a time and don’t really think about the future.
6. I don’t have many people who want to listen when I need to talk.
7. The demands of everyday life often get me down.
8. In general, I feel that I continue to learn more about myself as time goes by.
9. I like most aspects of my personality.
10. My decisions are not usually influenced by what everyone else is doing.
11. I have a sense of direction and purpose in life.
12. I feel like I get a lot out of my friendships.
13. I am quite good at managing the many responsibilities of my daily life.
14. I don't want to try new ways of doing things - my life is fine the way it is.
15. I made some mistakes in the past, but I feel that all in all everything has worked out for the best.
16. I tend to be influenced by people with strong opinions.
17. I don't have a good sense of what it is I'm trying to accomplish in life.
18. It seems to me that most other people have more friends than I do.
19. I often feel overwhelmed by my responsibilities.
20. I think it is important to have new experiences that challenge how you think about yourself and the world.
21. In many ways, I feel disappointed about my achievements in life.
22. It is more important to me to "fit in" with others than to stand alone on my principles.
23. I used to set goals for myself, but that now seems like a waste of time.
24. I have not experienced many warm and trusting relationships with others.
25. I find it stressful that I can't keep up with all the things I have to do each day.
26. In my view, people of every age are able to continue growing and developing.
27. For the most part, I am proud of who I am and the life I lead.
28. I have confidence in my opinions, even if they are contrary to the general consensus.
29. Some people wander aimlessly through life, but I am not one of them.
30. I often feel like I'm on the outside looking in when it comes to friendships.
Appendix H – Questionnaire used for Study 2 in Article 1, and scale validation in Article 4

**Project Title:** The relationship between mindfulness and quality of life: An investigation of the shared and unique roles of mindfulness mechanisms

**Project Supervisor of Principal Investigator:** Professor Greg Murray  
Email: gwmurray@swin.edu.au  
Faculty: School of Health Sciences

**Principal Investigator:** Yan Yang  
Email: yyyang@swin.edu.au  
Faculty: School of Health Sciences

**Project Supervisor of Co-investigator:** Glen Bates  
Email: gbates@swin.edu.au  
Faculty: School of Health Sciences

**Co-Investigator:** Richard Whitehead  
Email: rwhitehead@swin.edu.au  
Faculty: School of Health Sciences

Dear Participants,

Thank you for your interest in this project. This study is a questionnaire measuring a number of psychological constructs aligned with mindfulness and quality of life. The questionnaire will ask for your responses on a range of items that will measure your levels of well-being, mindfulness, nonattachment (how much you try to control your experiences), and mood variability and regulation. The questionnaire will take approximately 30-45 minutes to complete.

Based on the vigorously growing literature over the past three decades, mindfulness has been shown to have great mental health benefits. The goal of the current study is to explore and identify the core mechanisms of mindfulness that improve people’s wellbeing and quality of life. The study is particularly interested in how non-attachment, a newly developed mindfulness construct, is related to other relatively more established mindfulness mechanisms such as self-compassion and emotion regulation and its contributing role in people’s psychological wellbeing. Your participation is anonymous. However, if you wish to participate in the second part of the study, you may leave your email address or phone number to potentially be contacted for a follow up interview.

This study is being conducted as partial fulfilment of the principle investigator’s completion of a Doctor of Philosophy (Psychology). It is also envisaged that the findings of this study will be submitted for publication, however, you will not be identified in publications or otherwise.
Your participation is voluntary. You are free to withdraw from the study or omit answers to any questions whenever you wish to do so. Whilst it is not the intention of the questionnaires, there may be some questions that cause discomfort. In case of any discomfort or mental health concerns, if you are a student of Swinburne Technology of University, you may access the Swinburne Counselling Service (Hawthorn Campus) on 9214 8025. Alternatively, within Australia you may call Lifeline on 13 11 44 or suicide helpline on 1300 651 251 to speak with someone or to seek a referral.

This study has been approved by Swinburne University's Human Research Ethics Committee (SUHREC) in line with Human Research. If you have any questions or concerns about this project, please contact the researcher, Yan Yang via yyyang@swin.edu.au. If you have any complaint about the way this project has been conducted, or a query that researcher is unable to satisfy, please contact the Research Ethics Officer via telephone in Australia (03 9214 5218) or email at resethics@swin.edu.au

### Demographic questions

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>DATE OF BIRTH</strong></td>
<td><em><strong>/</strong></em>/_____ D D M M Y Y Y Y</td>
</tr>
<tr>
<td>2. <strong>COUNTRY OF BIRTH</strong></td>
<td>☐ AUSTRALIA&lt;br&gt;☐ UNITED STATES OF AMERICA&lt;br&gt;☐ CANADA&lt;br&gt;☐ UNITED KINGDOM&lt;br&gt;☐ OTHER (PLEASE SPECIFY) __________________</td>
</tr>
<tr>
<td>3. <strong>NATIVE LANGUAGE (FIRST LANGUAGE SPOKEN)</strong></td>
<td>☐ ENGLISH&lt;br&gt;☐ OTHER (PLEASE SPECIFY) __________________</td>
</tr>
<tr>
<td>4. <strong>WHAT IS YOUR ANCESTRY OR ETHNIC ORIGIN?</strong></td>
<td>__________________ (EXAMPLES: AUSTRALIAN, AFRICAN AMERICAN, CANADIAN, ENGLISH, DUTCH, FRENCH, ETC)</td>
</tr>
<tr>
<td>5. <strong>GENDER</strong></td>
<td>☐ MALE&lt;br&gt;☐ FEMALE</td>
</tr>
<tr>
<td>6. <strong>MARITAL STATUS</strong></td>
<td>☐ SINGLE&lt;br&gt;☐ DIVORCED&lt;br&gt;☐ DE FACTO&lt;br&gt;☐ MARRIED&lt;br&gt;☐ SEPARATED&lt;br&gt;☐ WIDOWED</td>
</tr>
<tr>
<td>7. <strong>MAIN OCCUPATION</strong></td>
<td>☐ EMPLOYED FULL-TIME&lt;br&gt;☐ CASUAL EMPLOYMENT&lt;br&gt;☐ STUDENT FULL-TIME&lt;br&gt;☐ VOLUNTEER&lt;br&gt;☐ UNEMPLOYED&lt;br&gt;☐ STUDENT PART-TIME&lt;br&gt;☐ RETIRED&lt;br&gt;☐ HOME DUTIES</td>
</tr>
<tr>
<td></td>
<td>Pension __________________________ (Type)</td>
</tr>
<tr>
<td>---</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>8.</td>
<td>Highest Educational Qualification. Please select the highest qualification completed.</td>
</tr>
<tr>
<td></td>
<td>- Year 10 or less</td>
</tr>
<tr>
<td></td>
<td>- Year 11 / 12</td>
</tr>
<tr>
<td></td>
<td>- Diploma (Inc Associate Diploma)</td>
</tr>
<tr>
<td></td>
<td>- Bachelor Degree</td>
</tr>
<tr>
<td></td>
<td>- Postgraduate Diploma /Graduate Certificate</td>
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<td></td>
<td>- Masters Degree</td>
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<tr>
<td></td>
<td>- Doctorate</td>
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<tr>
<td></td>
<td>- Other (Please specify)</td>
</tr>
<tr>
<td></td>
<td>________________</td>
</tr>
<tr>
<td>9.</td>
<td>Have you ever been diagnosed by a health practitioner (Doctor, Psychiatrist) with Bipolar Disorder</td>
</tr>
<tr>
<td></td>
<td>- Yes</td>
</tr>
<tr>
<td></td>
<td>- No</td>
</tr>
</tbody>
</table>
Five Facet Mindfulness Questionnaire

Description:

This instrument is based on a factor analytic study of five independently developed mindfulness questionnaires. The analysis yielded five factors that appear to represent elements of mindfulness as it is currently conceptualized. The five facets are observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience. More information is available in:

Please rate each of the following statements using the scale provided. Write the number in the blank that best describes your own opinion of what is generally true for you.

1. When I’m walking, I deliberately notice the sensations of my body moving.
2. I’m good at finding words to describe my feelings.
3. I criticize myself for having irrational or inappropriate emotions.
4. I perceive my feelings and emotions without having to react to them.
5. When I do things, my mind wanders off and I’m easily distracted.
6. When I take a shower or bath, I stay alert to the sensations of water on my body.
7. I can easily put my beliefs, opinions, and expectations into words.
8. I don’t pay attention to what I’m doing because I’m daydreaming, worrying, or otherwise distracted.
9. I watch my feelings without getting lost in them.
10. I tell myself I shouldn’t be feeling the way I’m feeling.
11. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.
12. It’s hard for me to find the words to describe what I’m thinking.
13. I am easily distracted.
14. I believe some of my thoughts are abnormal or bad and I shouldn’t think that way.
15. I pay attention to sensations, such as the wind in my hair or sun on my face.

16. I have trouble thinking of the right words to express how I feel about things.

17. I make judgments about whether my thoughts are good or bad.

18. I find it difficult to stay focused on what’s happening in the present.

19. When I have distressing thoughts or images, I “step back” and am aware of the thought or image without getting taken over by it.

20. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.

21. In difficult situations, I can pause without immediately reacting.

22. When I have a sensation in my body, it’s difficult for me to describe it because I can’t find the right words.

23. It seems I am “running on automatic” without much awareness of what I’m doing.

24. When I have distressing thoughts or images, I feel calm soon after.

25. I tell myself that I shouldn’t be thinking the way I’m thinking.

26. I notice the smells and aromas of things.

27. Even when I’m feeling terribly upset, I can find a way to put it into words.

28. I rush through activities without being really attentive to them.

29. When I have distressing thoughts or images I am able just to notice them without reacting.

30. I think some of my emotions are bad or inappropriate and I shouldn’t feel them.

31. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.

32. My natural tendency is to put my experiences into words.

33. When I have distressing thoughts or images, I just notice them and let them go.

34. I do jobs or tasks automatically without being aware of what I’m doing.

35. When I have distressing thoughts or images, I judge myself as good or bad, depending what the thought/image is about.

36. I pay attention to how my emotions affect my thoughts and behavior.

37. I can usually describe how I feel at the moment in considerable detail.

38. I find myself doing things without paying attention.

39. I disapprove of myself when I have irrational ideas.
**Self-Compassion Scale**

**HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES**

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

<table>
<thead>
<tr>
<th>Level</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Almost never</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Almost always</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. I'm disapproving and judgmental about my own flaws and inadequacies.
2. When I'm feeling down I tend to obsess and fixate on everything that's wrong.
3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.
4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.
5. I try to be loving towards myself when I'm feeling emotional pain.
6. When I fail at something important to me I become consumed by feelings of inadequacy.
7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.
8. When times are really difficult, I tend to be tough on myself.
9. When something upsets me I try to keep my emotions in balance.
10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
11. I'm intolerant and impatient towards those aspects of my personality I don't like.
12. When I'm going through a very hard time, I give myself the caring and tenderness I need.
13. When I'm feeling down, I tend to feel like most other people are probably happier than I am.
14. When something painful happens I try to take a balanced view of the situation.
15. I try to see my failings as part of the human condition.
16. When I see aspects of myself that I don't like, I get down on myself.
17. When I fail at something important to me I try to keep things in perspective.
ERS

This questionnaire asks different questions about how you experience emotions on a regular basis (for example, each day). When you are asked about being “emotional,” this may refer to being angry, sad, excited, or some other emotion. Please rate the following statements.

<table>
<thead>
<tr>
<th></th>
<th>0 Not at all like me</th>
<th>1 A little like me</th>
<th>2 Somewhat like me</th>
<th>3 A lot like me</th>
<th>4 Completely like me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>When something happens that upsets me, it’s all I can think about it for a long time.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>My feelings get hurt easily.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>When I experience emotions, I feel them very strongly/intensely.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>When I’m emotionally upset, my whole body gets physically upset as well.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>I tend to get very emotional very easily.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>I experience emotions very strongly.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>I often feel extremely anxious.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>When I feel emotional, it’s hard for me to imagine feeling any other way.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>Even the littlest things make me emotional.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>If I have a disagreement with someone, it takes a long time for me to get over it.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>When I am angry/upset, it takes me much longer than most people to calm down.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>I get angry at people very easily.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>I am often bothered by things that other people don’t react to.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14</td>
<td>I am easily agitated.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>My emotions go from neutral to extreme in an instant.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16</td>
<td>When something bad happens, my mood changes very quickly. People tell me I have a very short fuse.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17</td>
<td>People tell me that my emotions are often too intense for the situation.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18</td>
<td>I am a very sensitive person.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19</td>
<td>My moods are very strong and powerful</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>20</td>
<td>I often get so upset it’s hard for me to think straight.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>21</td>
<td>Other people tell me I’m overreacting</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Rumination Scale

People think and do many different things when they feel depressed. Please read each of the
items below and indicate whether you almost never, sometimes, often, or almost always think or
do each one when you feel down, sad, or depressed. Please indicate what you generally do, not
what you think you should do.

1 almost never   2 sometimes   3 often    4 almost always

1. Think "What am I doing to deserve this?"
2. Analyze recent events to try to understand why you are depressed
3. Think "Why do I always react this way?"
4. Go away by yourself and think about why you feel this way
5. Write down what you are thinking and analyse it
6. Think about a recent situation, wishing it had gone better
7. Think "Why do I have problems other people don’t have?"
8. Think "Why can’t I handle things better?"
9. Analyze your personality to try to understand why you are depressed
10. Go someplace alone to think about your feelings

Nonattachment scale

<table>
<thead>
<tr>
<th>Item</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I can let go of regrets and feelings of dissatisfaction about the past.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>2. I can enjoy pleasant experiences without needing them to last forever.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>3. I view the problems that enter my life as things/issues to work on rather than reasons for becoming disheartened or demoralized.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>4. I can enjoy my family and friends without feeling I need to hang on to them.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>5. I can take joy in others' achievements without feeling envious.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
</tbody>
</table>
6. I do not get "hung up" on wanting an "ideal" or "perfect" life.

7. When pleasant experiences end, I am fine moving on to what comes next.

**Nonattachment-to-self Scale (Whitehead & Bates, Unpublished Manuscript)**

7. Below are a number of statements related to your experiences and how you view yourself. Please read each item below and rate the extent to which you agree with each statement.

Please answer according to what really reflects your experience rather than what you think your experience should be.

**Subscales**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can let go of unhelpful thoughts about myself</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>I can let go of the need to control my life</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>I don’t get too caught up in the thoughts I have about myself</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>As time goes on I feel less and less of a need to be a certain way</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>I can experience my personal ups and downs without getting caught up in them</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>I can observe the positive and negative thoughts I have about myself without engaging with them</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>As time goes on I feel less and less defined by the thoughts I have about myself</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0  Did not apply to me at all
1  Applied to me to some degree, or some of the time
2  Applied to me to a considerable degree, or a good part of time
3  Applied to me very much, or most of the time

1  I found it hard to wind down
2  I was aware of dryness of my mouth
3  I couldn't seem to experience any positive feeling at all
4  I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)
5  I found it difficult to work up the initiative to do things
6  I tended to over-react to situations
7  I experienced trembling (eg, in the hands)
8  I felt that I was using a lot of nervous energy
9  I was worried about situations in which I might panic and make a fool of myself
10 I felt that I had nothing to look forward to
11 I found myself getting agitated
12 I found it difficult to relax
13 I felt down-hearted and blue
14 I was intolerant of anything that kept me from getting on with what I was doing
15 I felt I was close to panic
16 I was unable to become enthusiastic about anything
17 I felt I wasn't worth much as a person
Psychological Wellbeing Scale (30 Item; Ryff, 1989)

31. Below is a list of statements. Please look at each one in turn, and indicate by putting the appropriate number on the line beside the statement, the extent to which you believe each is true for you.

Scale: 1 = Strongly Disagree – 6 = Strongly Agree

1. In general, I feel I am in charge of the situation in which I live.
2. I am not interested in activities that will expand my horizons.
3. When I look at the story of my life, I am pleased with how things have turned out.
4. I am not afraid to voice my opinions even when they are in opposition to the opinions of most people.
5. I live life one day at a time and don’t really think about the future.
6. I don’t have many people who want to listen when I need to talk.
7. The demands of everyday life often get me down.
8. In general, I feel that I continue to learn more about myself as time goes by.
9. I like most aspects of my personality.
10. My decisions are not usually influenced by what everyone else is doing.
11. I have a sense of direction and purpose in life.
12. I feel like I get a lot out of my friendships.
13. I am quite good at managing the many responsibilities of my daily life.
14. I don’t want to try new ways of doing things - my life is fine the way it is.
15. I made some mistakes in the past, but I feel that all in all everything has worked out for the best.
16. I tend to be influenced by people with strong opinions.
17. I don’t have a good sense of what it is I’m trying to accomplish in life.
18. It seems to me that most other people have more friends than I do.
19. I often feel overwhelmed by my responsibilities.
20. I think it is important to have new experiences that challenge how you think about yourself and the world.
21. In many ways, I feel disappointed about my achievements in life.
22. It is more important to me to "fit in" with others than to stand alone on my principles.
23. I used to set goals for myself, but that now seems like a waste of time.
24. I have not experienced many warm and trusting relationships with others.
25. I find it stressful that I can't keep up with all the things I have to do each day.
26. In my view, people of every age are able to continue growing and developing.
27. For the most part, I am proud of who I am and the life I lead.
28. I have confidence in my opinions, even if they are contrary to the general consensus.
29. Some people wander aimlessly through life, but I am not one of them.
30. I often feel like I'm on the outside looking in when it comes to friendships.
Appendix I – Questionnaire used for Study 1 in Article 4 (Exploratory Factor Analysis)

Dear Swinburne undergraduate student,

Thank you for your participation in the Nonattachment, Mindfulness and Well-being Survey.

This project is being conducted by:

Richard Whitehead, Faculty of Life and Social Sciences – Primary Researcher

Professor Glen Bates, Pro Vice-Chancellor, Student Advancement – Research Supervisor

You are invited to participate in the above research project conducted by Richard Whitehead and Professor Glen Bates from the Faculty of Life and Social Sciences at Swinburne University of Technology. The Swinburne Human Research Ethics Committee has approved this project.

The aim of this study is to collect data relating to peoples’ levels of well-being and to see how these measures relate to constructs associated with the Buddhist construct of mindfulness. Should you agree to participate, we would ask you to complete a questionnaire consisting of some demographic questions followed by a number of scales related to mindfulness and well-being. In addition to the questionnaire, some participants may be contacted for a follow up interview if they have provided their details and consent to do so. We estimate that the time commitment required of you will be approximately 30 minutes. This study is being conducted as part of Mr. Whitehead's PhD thesis and is a course requirement.

Any identifiable information about you which is gathered in the course of, and as the result of you participating in this study will be collected and retained for the purpose of this project only, and will be accessed and analysed by the researchers for the purpose of conducting this study. All collected data will remain completely confidential, securely stored, and accessible only to the researchers at all times. If you choose to provide your contact details, these will be deleted once the interview is completed. From this point all information will be completely anonymous. In addition to the PhD thesis, it is envisaged that the findings of this study will be submitted for publication, however, you will not be identified in publications or otherwise.
Your participation in this study is completely voluntary. If you continue on and complete the attached questionnaire, we will consider that you have consented to participate. By clicking the 'Start' button below you agree to participate in the study and agree to the terms stated directly above. Please answer all questions as honestly as possible. This should take approximately 30 minutes. Note that once you have moved to the next page of the questionnaire, you can return to the previous page by clicking the "back" button.

Data will be securely retained in electronic form in a password-protected disk drive using a program called Qualtrics. Qualtrics’s servers are protected by high-end firewall systems, and vulnerability scans are performed regularly. Complete penetration tests are performed yearly. All services have quick failover points and redundant hardware, and complete backups are performed nightly. Should you wish to find out more about Qualtrics’ security arrangements, information can be found via the following link: http://www.qualtrics.com/security-statement/

Research Supervisor: Professor Glen Bates (gbates@swin.edu.au)

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1. What is your age in years?
2. Do you identify as?
   Male
   Female
   Other

3. Do you identify with a religion/spirituality? If so, please write a brief explanation of this.

4. Do you engage with a meditative or contemplative practice? If so, please write a brief explanation of this.

5. Please provide the approximate number of hours you spend engaged in meditative/contemplative practice per week.

6. Approximately how many years have you been engaging in this practice.

Below are a number of statements about your life, with which you may agree or disagree. Please choose the response which most closely represents yourself.

NOTE: Satisfaction with Life (Diener, Emmons, Larsen, & Griffin, 1985).

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>In most ways, my life is close to my ideal.</td>
<td>1 2 3 4 5</td>
<td></td>
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<tr>
<td>The conditions of my life are excellent.</td>
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<td>1 2 3 4 5</td>
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<tr>
<td>So far I have gotten the important things I want in life.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>If I could have my life over, I would change almost nothing.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

The Spiritual Transcendence Scale (STS; Piedmont, 1999)
<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the quiet of my prayers and/or meditations, I find a sense of wholeness.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I have done things in my life because I believed it would please a parent, relative, or friend that had died.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Although dead, memories and thoughts of some of my relatives continue to influence my current life.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I do not have any strong emotional ties to someone who has died.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I find inner strength and/or peace from my prayers and/or meditations.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>There is no higher plane of consciousness or spirituality that binds all people.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Although individual people may be difficult, I feel an emotional bond with all of humanity.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>My prayers and/or meditations provide me with a sense of emotional support.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I feel that on a higher level all of us share a common bond.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Statement</td>
<td>Disagree</td>
<td>Agree</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td>I do not feel ashamed of any of my emotions'</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>I feel I must do what others expect me to do</td>
<td>1 2 3 4</td>
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<td>I believe that people are essentially good and can be trusted.</td>
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<td>I can like people without having to approve of them'</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>I avoid attempts to analyze and simplify complex domains'</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>It is better to be yourself than to be popular.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>I have no mission in life to which I feel especially dedicated.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>I can express my feelings even when they may result in undesirable</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>consequences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I do not feel responsible to help anybody.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>
Nonattachment 7 Item scale (Elphinstone, Sahdra, & Ciorrachi, 2013)

Below are a number of statements related to your views about yourself, others, and life in general. Select an answer (from Strongly Disagree to Strongly Agree) on the scale provided to rate the extent to which you agree with the statement. Please answer according to what really reflects your experiences at this point in your life rather than what you think your experience should be.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can let go of regrets and feelings of dissatisfaction about the past.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I can enjoy pleasant experiences without needing them to last forever.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I view the problems that enter my life as things/issues to work on rather than reasons for becoming disheartened or demoralized.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I can enjoy my family and friends without feeling I need to hang on to them.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I can take joy in others’ achievements without feeling envious.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I do not get “hung up” on wanting [for] an “ideal” or “perfect” life.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>When pleasant experiences end, I am fine moving on to what comes next.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
</tbody>
</table>
## Five Factor Mindfulness Questionnaire (Baer et al., 2006)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I am easily distracted</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I watch my feelings without getting lost in them</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I believe some of my thoughts are abnormal or bad and I shouldn't think that way</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I pay attention to physical experiences, such as the wind in my hair or sun on my face</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I have trouble thinking of the right words to express how I feel about things</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I find it difficult to stay focused on what's happening in the present moment</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>when I have distressing thoughts or images, I &quot;step back&quot; and am aware of the thought or image without getting taken over by it</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>generally, I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Statement</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>In difficult situations, I can pause without immediately reacting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I have distressing thoughts or images, I feel calm soon after</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I tell myself I shouldn't be thinking the way I'm thinking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I notice the smells and aromas of things</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I think some of my emotions are bad or inappropriate and I shouldn't feel them</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My natural tendency is to put my experiences into words</td>
<td></td>
<td></td>
</tr>
<tr>
<td>when I have distressing thoughts or images, I judge myself as good or bad depending what the thought or image is about.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can usually describe how I feel at the moment in considerable detail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I do things, my mind wanders off and I'm easily distracted</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Nonattachment to Self Scale Items (Whitehead, Bates, Elphinstone, Yang & Murray, Unpublished Manuscript)

Below are a number of statements related to your experiences and how you view yourself. Please read each item below and rate the extent to which you agree with each statement on a scale from 1 (Strongly Disagree) to 7 (Strongly Agree)

Please answer according to what really reflects your experience rather than what you think your experience should be.

**Subscales**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I feel no need to protect or defend who I am.</td>
</tr>
<tr>
<td>2.</td>
<td>I try not to hold on too tightly to my opinions and beliefs.</td>
</tr>
<tr>
<td>3.</td>
<td>As time goes on I have become less self-centred.</td>
</tr>
<tr>
<td>4.</td>
<td>I rarely worry about what other people what people think of me.</td>
</tr>
<tr>
<td>5.</td>
<td>I can let go of unhelpful thoughts about myself.</td>
</tr>
<tr>
<td>6.</td>
<td>I don't get too caught up in the thoughts I have about myself.</td>
</tr>
<tr>
<td>7.</td>
<td>I can observe myself from an external perspective.</td>
</tr>
<tr>
<td>8.</td>
<td>I often think about parts of myself that I would like to change.</td>
</tr>
<tr>
<td>9.</td>
<td>I wish I was a better person.</td>
</tr>
<tr>
<td>10.</td>
<td>I feel uncomfortable when people tell me things about myself I don't agree with.</td>
</tr>
<tr>
<td>11.</td>
<td>I can admit my shortcomings without shame or embarrassment.</td>
</tr>
<tr>
<td>12.</td>
<td>I am very flexible when it comes to defining myself.</td>
</tr>
<tr>
<td>13.</td>
<td>I smile when I realise how I sometimes make life difficult for myself.</td>
</tr>
<tr>
<td>14.</td>
<td>My life story defines me.</td>
</tr>
<tr>
<td>15.</td>
<td>I am aware that my beliefs and opinions can be biased.</td>
</tr>
<tr>
<td>16.</td>
<td>As time goes on I feel less and less defined by the thoughts I have about who I am.</td>
</tr>
<tr>
<td>17.</td>
<td>I am rarely worried by thoughts I have about myself.</td>
</tr>
<tr>
<td>18.</td>
<td>I try not to hold fixed definitions of myself whether they be good or bad.</td>
</tr>
<tr>
<td>19.</td>
<td>Who I am cannot be defined.</td>
</tr>
<tr>
<td>20.</td>
<td>I don't get hung up on wanting to be a perfect person.</td>
</tr>
<tr>
<td>21.</td>
<td>At times, I can see that my 'self' is just a thought.</td>
</tr>
<tr>
<td>22.</td>
<td>I often judge myself harshly.</td>
</tr>
<tr>
<td>23.</td>
<td>I invest a lot in my self-image.</td>
</tr>
<tr>
<td>24.</td>
<td>I often seek praise from others.</td>
</tr>
<tr>
<td>25.</td>
<td>I am very critical of myself.</td>
</tr>
<tr>
<td>26.</td>
<td>I tend to dwell on those aspects of my personality I don't like.</td>
</tr>
<tr>
<td>27.</td>
<td>It is important for me to feel I am right.</td>
</tr>
<tr>
<td>28.</td>
<td>I try to let go of judgmental thoughts I have about myself.</td>
</tr>
<tr>
<td>29.</td>
<td>I rarely engage with negative self-talk.</td>
</tr>
<tr>
<td>30.</td>
<td>As time goes on I feel less and less of a need to be a certain way.</td>
</tr>
<tr>
<td>31.</td>
<td>I can let go of the need to control my life.</td>
</tr>
<tr>
<td>32.</td>
<td>My thoughts and feelings about myself tend to affect me greatly.</td>
</tr>
<tr>
<td>33.</td>
<td>As life goes on, I worry less and less about myself.</td>
</tr>
<tr>
<td>34.</td>
<td>My individuality is very important to me.</td>
</tr>
<tr>
<td>35.</td>
<td>I often rate myself as better or worse than others.</td>
</tr>
<tr>
<td>36.</td>
<td>I consciously try to only focus on the positive aspects of myself.</td>
</tr>
</tbody>
</table>
37. I feel strongly invested in the way my life turns out.
39. I am accepting of myself when things don't work out.
41. I invest a lot of time and energy into how I come across to others.
43. I rarely dwell on thoughts I have about myself.
45. I can let go of feelings of defensiveness.
47. My self is only a collection of thoughts.
49. As time goes on I feel less and less defined by the story of my life.
51. I feel that I am equal to all other people.
53. I try not to take myself too seriously.
55. I rarely feel the need to defend my views.
57. I feel the need to build myself up to others.
59. I try to suppress negative thoughts I have about myself.
61. I feel strongly invested in the way my life turns out.
63. My personality defines who I am.

38. I worry about the negative thoughts I have about myself.
40. I tend to fixate on thoughts I have about myself.
42. I cling to those aspects of my self I like.
44. I need to be a certain way to be happy.
46. As time goes on I have become less identified with my individual concerns.
48. I can experience my personal ups and downs without getting caught up in them.
50. I am accepting of negative thoughts about myself.
52. My sense of personal identity is very important to me.
54. My self-image has become less important to me.
56. I respond to praise and criticism similarly.
58. My reputation is very important to me.
60. As time goes on I have become less identified with my personal failures.
62. As time goes on my individual identity has become less important.
64. I can observe the positive and negative thoughts I have about myself without engaging in them.

Note: Items in bold represent the final 7-item NTS scale

Thank you for completing this survey.

If you agree to be contacted for a voluntary follow up interview relating to your answers of this survey, please give your consent by providing your contact details (phone number or email address). If you participate in an interview, you will be compensated for your time.
Appendix J – Facebook Page linking to Questionnaire for Article Four
Appendix K – Questionnaire Items used in Article 2, and Article 4 (Confirmatory Factor Analysis)

Nonattachment, Mindfulness and Well-being Survey

Dear Swinburne undergraduate student,

Thank you for your participation in the Nonattachment, Mindfulness and Well-being Survey.

This project is being conducted by:

Richard Whitehead, Faculty of Life and Social Sciences – Primary Researcher
Professor Glen Bates, Pro Vice-Chancellor, Student Advancement – Research Supervisor
Yan Yang, Faculty of Life and Social Sciences – Co-Investigator
Dr. Kathryn Fletcher, Faculty of Life and Social Sciences – Co-Investigator

You are invited to participate in the above research project conducted by Richard Whitehead and Professor Glen Bates from the Faculty of Life and Social Sciences at Swinburne University of Technology. The Swinburne Human Research Ethics Committee has approved this project.

The aim of this study is to collect data relating to peoples’ levels of well-being and to see how these measures relate to constructs associated with the Buddhist construct of mindfulness. Should you agree to participate, we would ask you to complete a questionnaire consisting of some demographic questions followed by a number of scales related to mindfulness and well-being. In addition to the questionnaire, some participants may be contacted for a follow up interview if they have provided their details and consent to do so. We estimate that the time commitment required of you will be approximately 30 minutes. This study is being conducted as part of Mr. Whitehead's PhD thesis and is a course requirement.
Any identifiable information about you which is gathered in the course of, and as the result of you participating in this study will be collected and retained for the purpose of this project only, and will be accessed and analysed by the researchers for the purpose of conducting this study. All collected data will remain completely confidential, securely stored, and accessible only to the researchers at all times. If you choose to provide your contact details, these will be deleted once the interview is completed. From this point all information will be completely anonymous. In addition to the PhD thesis, it is envisaged that the findings of this study will be submitted for publication, however, you will not be identified in publications or otherwise.

Your participation in this study is completely voluntary. If you continue on and complete the attached questionnaire, we will consider that you have consented to participate. By clicking the 'Start' button below you agree to participate in the study and agree to the terms stated directly above. Please answer all questions as honestly as possible. This should take approximately 30 minutes. Note that once you have moved to the next page of the questionnaire, you can return to the previous page by clicking the "back" button.

Data will be securely retained in electronic form in a password-protected disk drive using a program called Qualtrics. Qualtrics’s servers are protected by high-end firewall systems, and vulnerability scans are performed regularly. Complete penetration tests are performed yearly. All services have quick failover points and redundant hardware, and complete backups are performed nightly. Should you wish to find out more about Qualtrics’s security arrangements, information can be found via the following link: http://www.qualtrics.com/security-statement/

Research Supervisor: Professor Glen Bates
(gbates@swin.edu.au)

Researcher: Richard Whitehead
(rwhitehead@swin.edu.au) Ph. 0415918719.

This study has been approved by Swinburne University's Human Research Ethics Committee (SUHREC) in line with the National Statement on Ethical Conduct in Human Research. If you have any questions or concerns about this project, please contact the researcher, Richard Whitehead. If you have any complaint about the way this project has been conducted, or a query that the
If in any way you feel affected by participating in this study, and require assistance, within Australia you can call Lifeline on 13 11 44 or suicide helpline on 1300 651 251 to speak with someone or to seek a referral. If you are a Swinburne student, you can contact the Swinburne Counselling Service on 9214 8025 for free on campus counselling.

1. What is your age in years?
2. Do you identify as?
   - Male
   - Female
   - Other
3. What cultural background do you identify with?
4. Do you identify with a religion/spirituality? If so, please write a brief explanation of this
5. Do you engage with a meditative or contemplative practice? If so, please write a brief explanation of this.
6. Please provide the approximate amount of hours you spend engaged in meditative/contemplative practice per week.
7. Approximately how many years have you been engaging in this practice.
Satisfaction with Life (Diener, Emmons, Larsen, & Griffin, 1985).

Below are five statements that you may agree or disagree with. Using the 1 - 5 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>In most ways, my life is close to my ideal.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>The conditions of my life are excellent.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I am satisfied with life.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>So far I have gotten the important things I want in life.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>If I could have my life over, I would change almost nothing.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

Nonattachment to ego scale (Revised) (Whitehead & Bates, unpublished manuscript)

Below are a number of statements related to your experiences and how you view yourself. Please read each item below carefully and rate the extent to which you agree with each statement.

Please answer according to what reflects your experience rather than what you think your experience should be.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can let go of unhelpful thoughts about myself</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I can let go of the need to control my life</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I don’t get too caught up in the thoughts I have about myself</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>
As time goes on I feel less and less of a need to be a certain way

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I can experience my personal ups and downs without getting caught up in them

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I can observe the positive and negative thoughts I have about myself without engaging with them

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

As time goes on I feel less and less defined by the thoughts I have about myself

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Short Index of Self-Actualization (Jones & Crandall, 1986)**

Below are a list of statements. Please rate the extent to which you agree with each statement.

<table>
<thead>
<tr>
<th></th>
<th>Disagree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not feel ashamed of any of my emotions'</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>I feel I must do what others expect me to do</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>I believe that people are essentially good and can be trusted.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>It is always necessary that others approve of what I do'</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>I feel free to be angry at those I love.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I don't accept my own weaknesses.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>I can like people without having to approve of them'</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>
I avoid attempts to analyze and simplify complex domains' 

It is better to be yourself than to be popular. 

I have no mission in life to which I feel especially dedicated. 

I can express my feelings even when they may result in undesirable consequences. 

I do not feel responsible to help anybody. 

I am loved because I can give love. 

I am bothered by fears of being inadequate. 

I fear failure 

**Non-attachment (Elphinstone, Sahdra, & Ciorrachi, 2013)**

To help us understand your general approach to life and your views about yourself, others, and life in general, tell us the extent to which the following statements reflect your experiences at this point in your life.

Please rate the extent to which you agree with each statement.

Please answer according to what really reflects your experience rather than what you think your experience should be.
I can let go of regrets and feelings of dissatisfaction about the past. | 1 | 2 | 3 | 4 | 5 | 6
---|---|---|---|---|---|---
I can enjoy pleasant experiences without needing them to last forever. | 1 | 2 | 3 | 4 | 5 | 6
---|---|---|---|---|---|---
I view the problems that enter my life as things/issues to work on rather than reasons for becoming disheartened or demoralized. | 1 | 2 | 3 | 4 | 5 | 6
---|---|---|---|---|---|---
I can enjoy my family and friends without feeling I need to hang on to them. | 1 | 2 | 3 | 4 | 5 | 6
---|---|---|---|---|---|---
I can enjoy the pleasures of life without feeling sad or frustrated when they end. | 1 | 2 | 3 | 4 | 5 | 6
---|---|---|---|---|---|---
I can take joy in others’ achievements without feeling envious. | 1 | 2 | 3 | 4 | 5 | 6
---|---|---|---|---|---|---
I do not get “hung up” on wanting [for] an “ideal” or “perfect” life. | 1 | 2 | 3 | 4 | 5 | 6
---|---|---|---|---|---|---
When pleasant experiences end, I am fine moving on to what comes next. | 1 | 2 | 3 | 4 | 5 | 6
---|---|---|---|---|---|---

**Five Factor Mindfulness Questionnaire (Baer et al., 2006)**

Please rate each of the following statements with the number that best describes your own opinion of what is generally true for you.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I am easily distracted</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I watch my feelings without getting lost in them</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Statement</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>I believe some of my thoughts are abnormal or bad and I shouldn't think that way</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I pay attention to physical experiences, such as the wind in my hair or sun on my face</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have trouble thinking of the right words to express how I feel about things</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find it difficult to stay focused on what's happening in the present moment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>when I have distressing thoughts or images, I &quot;step back&quot; and am aware of the thought or image without getting taken over by it</td>
<td></td>
<td></td>
</tr>
<tr>
<td>generally, I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In difficult situations, I can pause without immediately reacting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I have distressing thoughts or images, I feel calm soon after</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I tell myself I shouldn't be thinking the way I'm thinking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I notice the smells and aromas of things</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I think some of my emotions are bad or inappropriate and I shouldn't feel them</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>My natural tendency is to put my experiences into words</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>when I have distressing thoughts or images, I judge myself as good or bad depending what the thought or image is about.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I can usually describe how I feel at the moment in considerable detail</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>When I do things, my mind wanders off and I’m easily distracted</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
The Situational Self-awareness Scale (Govern & Marsch, 2001)

Please respond to each statement based on how you feel RIGHT NOW, AT THIS INSTANT—not how you feel in general, or at this point in your life.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right now, I am keenly aware of everything in my environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right now, I am conscious of my inner feelings.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right now, I am concerned about the way I present myself.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right now, I am self-conscious about the way I look.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right now, I am conscious of what is going on around me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right now, I am reflective about my life.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right now, I am concerned what other people think of me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right now, I am aware of my innermost thoughts.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right now, I am conscious of all objects around me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Psychological Well-being Scale (Ryff, 1989)

Please read each statement and tick the box you feel best represents how frequently you experience these items.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>In general, I feel I am in charge of the situation in which I live.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I am not interested in activities that will expand my horizons.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>When I look at the story of my life, I am pleased with how things have turned out.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I am not afraid to voice my opinions even when they are in opposition to the opinions of most people.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I live life one day at a time and don't really think about the future.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I don't have many people who want to listen when I need to talk.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>The demands of everyday life often get me down.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>In general, I feel that I continue to learn more about myself as time goes by.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I like most aspects of my personality.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>My decisions are not usually influenced by what everyone else is doing.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I have a sense of direction and purpose in life.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I feel like I get a lot out of my friendships.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I am quite good at managing the many responsibilities of my daily life.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I don't want to try new ways of doing things - my life is fine the way it is.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I made some mistakes in the past, but I feel that all in all everything has worked out for the best.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I tend to be influenced by people with strong opinions.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I don't have a good sense of what it is I'm trying to accomplish in life.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>It seems to me that most other people have more friends than I do.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I often feel overwhelmed by my responsibilities.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I think it is important to have new experiences that challenge how you think about yourself and the world</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>In many ways, I feel disappointed about my achievements in life.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>It is more important to me to &quot;fit in&quot; with others than to stand alone on my principles.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I used to set goals for myself, but that now seems like a waste of time.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I have not experienced many warm and trusting relationships with others.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I find it stressful that I can't keep up with all the things I have to do each day.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>In my view, people of every age are able to continue growing and developing.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>For the most part, I am proud of who I am and the life I lead.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>I have confidence in my opinions, even if they are contrary to the general consensus.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
</tbody>
</table>
In many ways, I feel disappointed about my life. Some people wander aimlessly through life, but I am not one of them.

I often feel like I’m on the outside looking in when it comes to friendships.

<table>
<thead>
<tr>
<th>Adult Self-Transcendence Inventory (Levenson, Jennings, Aldwin &amp; Shiraishi, 2005)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please rate your level of agreement with each of the following statement when you compare yourself now to approximately 5 years earlier.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>My peace of mind is not so easily upset as it used to be.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I do not become angry as easily.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material things mean less to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My sense of self is less dependent on other people and things.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel much more compassionate, even toward my enemies.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am more likely to engage in quiet contemplation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel that my individual life is a part of a greater whole.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel a greater sense of belonging with both earlier and future generations.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have become less concerned about other people’s opinions of me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find more joy in life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I take myself less seriously.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am more focused on the present.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel more isolated and lonely.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel that my life has less meaning.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am less optimistic about the future of humanity.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My sense of self has decreased as I have gotten older.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am less interested in seeking out social contacts.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have less patience with other people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12-Item Abbreviated Three-Dimensional Wisdom Scale (Thomas et al., 2017)

Please read each statement carefully and rate the extent to which you agree with each statement.

Your answers should reflect how you are, rather than how you think you should be.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th></th>
<th></th>
<th></th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>A problem has little attraction for me if I don’t think it has a solution.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I prefer just to let things happen rather than try to understand why they turned out that way.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am hesitant about making important decisions after thinking about them.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I am confused by a problem, one of the first things I do is survey the situation and consider all the relevant pieces of information</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sometimes I get so charged up emotionally that I am unable to consider many ways of dealing with my problems.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I look back on what has happened to me, I can’t help feeling resentful.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I either get very angry or depressed if things go wrong.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can be comfortable with all kinds of people (reversed).</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sometimes I feel a real compassion for everyone</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I’m easily irritated by people who argue with me.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Curious Experience Survey (Goldberg, 1999)

Here are some experiences that people have in their daily lives. We are interested in *how often* you have these experiences (*when you are not under the influence of alcohol or drugs*). Please provide your response to each statement below using the scale below.

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Occasionally</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Found myself dressed in clothes I didn’t remember putting on.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Found myself in a place and had no idea how I had gotten there</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Had the experience of looking at a mirror and not recognizing myself</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Found new things among my belongings that I didn’t remember buying</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Had the experience of feeling that my body did not belong to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Felt that I could not move my hands or feet</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Was told that I sometimes do not recognize a friend or family member</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Found that I hear voices inside my head that told me to do things or that commented on things that I was doing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Felt as though I was looking at the world through a fog so that people or objects appeared far away or unclear</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Had the experience of feeling that other people, objects and the world were not real.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Felt like I was disconnected from my body.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Found writings, drawings, or notes among my belongings that I must have done but cannot remember doing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Had the experience of feeling of feeling as though I was standing next to myself, or watching myself as if I were looking at a different person.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Felt like I was dreaming when I was awake.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Found that I had no memory of some important memory in my life (for example a wedding or graduation).</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had the experience of being accused of lying when I did not think I had lied.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Found that I became so involved in a fantasy or daydream that it felt like it was really happening to me.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was approached by someone I didn’t know who called me by another name or who insisted that he or she had met me before.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had the experience of being in a familiar place but finding it strange and unfamiliar.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Found that in one situation I act so differently from when I’m in another situation that I feel almost as if I were two different people.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Found evidence that I had done things that I do not remember doing.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drove or rode somewhere without remembering later what happened during all or part of the trip.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had the experience of not being sure whether things I remember happening really did happen or whether I just dreamed them.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Find that I sometimes sit staring into space, thinking of nothing and am not aware of the passage of time.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had the experience of remembering a past event so vividly that it felt like I was reliving that event.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Find that in certain situations I am able to do things with amazing ease and spontaneity that would usually be difficult for me.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Found that I could not remember whether I had done something or had just thought about doing the thing.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Found that when I was watching television or a movie that I became so absorbed in the story that I was unaware of other events happening around me.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Found that I was able to ignore pain</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was listening to someone talk and suddenly realized I did not hear part or all of what was said</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talked out loud to myself</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thank you for completing this survey.

If you agree to be contacted for a voluntary follow up interview relating to your answers of this survey, please give your consent by providing your contact details (phone number or email address). If you participate in an interview, you will be compensated for your time.
Appendix L – Published articles. Article 1 – Nonattachment mediates the relationship between mindfulness and psychological and subjective well-being, depression, anxiety and stress. Article 2 – Growing by letting go: Nonattachment and mindfulness as qualities of advanced psychological development. Article 3 – Stories of Suffering and Growth: An investigation into the lived experience of nonattachment. Article 4 – Letting go of self: The creation of the nonattachment to self scale
Nonattachment Mediates the Relationship Between Mindfulness and Psychological Well-Being, Subjective Well-Being, and Depression, Anxiety and Stress

Richard Whitehead1 · Glen Bates1 · Bradley Elphinstone1 · Yan Yang1 · Greg Murray1

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Abstract
The Buddhist construct of nonattachment is a related, yet distinct construct to mindfulness. Whereas mindfulness refers to an individual’s open, present-centred awareness of what is happening in their field of consciousness, nonattachment denotes an absence of attempts to control what is happening in their field of consciousness. The aim of the present research was to determine whether nonattachment is a mechanism of mindfulness that mediates its relationship to psychological and subjective well-being, depression, anxiety and stress. Two sequential studies were conducted. Study 1 (N = 516) established that nonattachment mediated the relationship of mindfulness to psychological and subjective well-being. Study 2 (N = 416) demonstrated that nonattachment also mediated the relationship of mindfulness to depression, anxiety and stress. In combination, these studies are the first to demonstrate that the relationship of mindfulness to a broad range of psychological outcomes is at least partially determined by nonattachment. These findings provide insight into how mindfulness impacts mental health and have implications for the development and assessment of mindfulness-based interventions.

Keywords Nonattachment · Mindfulness · Psychological well-being · Subjective well-being · Depression · Anxiety · Stress

1 Introduction
The Buddhist construct of nonattachment refers to the “subjective quality of not being stuck or fixated on ideas, images, or sensory objects and not feeling an internal pressure to acquire, hold, avoid, or change” (Desbordes et al. 2014, p. 25). A nonattached person is free from mental fixations (Sahdra et al. 2010; Sahdra and Shaver 2013) and interacts with their experience without trying to cling on to desirable experiences or avoid unpleasant experiences (Sahdra et al. 2015; Sahdra et al. 2016). The overarching aim of the present study was to examine the role of nonattachment as a mechanism of mindfulness in relation
to a range of well-being variables not previously investigated. Nonattachment is related but distinct from mindfulness (Feliu-Soler et al. 2016; Sahdra et al. 2016). Nonattachment has been shown to have a stronger impact on mental health when measured alongside mindfulness (Lamis and Dvorak 2013) and preliminary research suggests nonattachment may be a mechanism that helps to explain the positive impact of mindfulness on well-being (Sahdra et al. 2016). However, no comprehensive investigation into the mediating role of nonattachment has been conducted. A key contribution of the present research is to extend previous analyses by examining whether nonattachment mediates the relationship of mindfulness and nonattachment in relation to well-being, depression, anxiety and stress among Australian adults. This introduction outlines the nature of nonattachment and its relationship to mindfulness and discusses previous work on mindfulness and nonattachment in relation to well-being, depression, anxiety and stress.

1.1 The Nature of Nonattachment

In the Buddhist context, attachment refers to the energy involved in clinging to experiences perceived as positive and the avoidance of experiences perceived as negative (Agarwal 1982; Altobello 2009; Sahdra et al. 2010; Shone 1992). For example, attachment can manifest an aversion to embarrassment. Here, the attachment itself causes anticipatory worry, rumination and suffering, quite separate from any embarrassment suffered. Similarly, attachment may be evident when a person attempts to cling to the identity of their youth. In this case, when that identity is inevitably challenged through aging and progression of life circumstances, the individual may experience pining, worry, or feelings of inadequacy. Theoretically, the more an individual engages with attachments, the more their well-being can be impacted by processes associated with attempts to control experience. These include fear, anxiety, worry or rumination. Further, the certain failure of efforts to control experiences diminishes the ability to interact with the experience in an open and flexible way. Achieving nonattachment, therefore, should afford an individual a greater sense of mastery over their environment and an ability to engage more adaptably with experience.

1.2 Nonattachment and Mindfulness

A quality that is closely related, but distinct from nonattachment, is mindfulness. Mindfulness is at the core of Buddhist teachings (Hanh 1999) and has been investigated both as a trait and in the context of mindfulness-based interventions. Although mindfulness is conceptualised in a number of different ways, two consistently identified aspects of mindfulness are; an open awareness and observing of experience, and a mindful ‘acceptance’ of experience (Bishop et al. 2004; Coffey et al. 2010; Lindsay and Cresswell 2015, 2017). Being more mindful is associated with better mental health in a range of areas such as psychological well-being (e.g., Brown and Ryan 2003), depression and anxiety (e.g., Desrosiers et al. 2014; Tran et al. 2014), cognitive rigidity (Greenberg et al. 2010) and emotional regulation (Teper et al. 2013).

Research shows mindfulness to be consistently related to nonattachment (Feliu-soler et al. 2016; Ju and Lee 2015; Lamis and Dvorak 2013; Sahdra et al. 2010, 2016). However, it is also empirically distinct from each of its components (Sahdra et al. 2016). This distinction is important as nonattachment shares similarities to the mindfulness component of ‘acceptance’. The ‘acceptance’ component of mindfulness involves a non-reactive and non-judging interaction with experience, and is theorized to explain the positive effect of
mindfulness training on reducing negative affective experiences (Lindsay and Cresswell 2017). Measures of acceptance, such as nonjudgment and non-reactivity (from the five factor mindfulness questionnaire; FFMQ; Baer et al. 2006), capture a non-judgment of self-related stimuli (e.g., “I criticize myself for having irrational or inappropriate emotions”—reversed) and an absence of automatic reactions to challenging situations (e.g., “in difficult situations, I can pause without immediately reacting”). In contrast, nonattachment captures a broader quality associated with the process of letting go of unhelpful thoughts and feelings, as well as a general attitude of non-clinging/non-aversion towards experience (e.g., “I can enjoy my family and friends without feeling I need to hang on to them”). Theoretically, an individual’s mindful, nonreactive, present-centred awareness of what is happening in their field of consciousness (Desbordes et al. 2014), can facilitate a letting go of control and a general nonattached attitude towards experience, without the need for specified outcomes.

1.3 Nonattachment, Mindfulness and Well-Being

Although research on the effects of nonattachment on well-being is limited, the relationship between mindfulness and positive and negative well-being outcomes is well documented. Mindfulness has been linked with two prominent models of well-being: subjective well-being (SWB) and psychological well-being (PWB; Ryff 1989; Ryff and Keyes 1995). SWB is aligned with hedonia and relates to feeling good about one’s life and more short-term, pleasure-based happiness (Bauer et al. 2006). PWB is a more pervasive measure of well-being aligned with eudaimonia (Ryan and Deci 2001; Ryff 1989). PWB involves a range of areas of a person’s life such as the quality of their relationships and their sense of meaning and purpose in life (Ryff 1989; Ryff and Keyes 1995). Mindfulness is associated with increased PWB (e.g., Brown and Ryan 2003; Hanley et al. 2015; Hollis-Walker and Colosimo 2011; Howell et al. 2011; Klainin-Yobas et al. 2016) and increased SWB (e.g., Hanley et al. 2015; Wenzel et al. 2015). Being more mindfully present and being willfully open and nonjudging towards what arises in the field of consciousness appears to be associated with better well-being and quality of life, although the precise mechanisms of this relationship need further elucidation.

Unlike mindfulness, there is little research on the association of nonattachment with well-being, although the existing evidence suggests a relationship exists. When developing the nonattachment scale (NAS), Sahdra et al. (2010) found nonattachment was related to three measures of SWB; life satisfaction, positive affect (PA) and negative affect (NA), as well as four dimensions of Ryff’s (1989) PWB scale; personal growth, self-acceptance, positive relationships with others and purpose in life. Wang et al. (2015) also found nonattachment to be related to life-satisfaction, PA and NA. In theory, letting go of the need for experience to be one way or other means that well-being can be experienced independently of external circumstances (Sahdra et al. 2010). This would limit the negative impact of mental fixation involved in trying to control experience and assist in maintaining a more stable sense of well-being, and a generally more positive attitude towards the world (Huxley 1937).

1.4 Nonattachment, Mindfulness and Depression, Anxiety and Stress

As well as increased well-being, mindfulness is also related to lower levels of negative psychological symptoms. Being more mindfully aware of experience without judgment can
assist in limiting the effects of negative psychological symptoms. Higher levels of mindfulness are related to reduced depression (e.g., Coffey and Hartman 2008; Feliu-Soler et al. 2016; Gecht et al. 2014; Kohls et al. 2009) anxiety (e.g., Coffey and Hartman 2008; Feliu-Soler et al. 2016; Kohls et al. 2009) and stress (e.g., Feliu-Soler et al. 2016; Zimmaro et al. 2016). Moreover, mindfulness-based interventions have a beneficial impact on the treatment of many negative psychological symptoms (Keng et al. 2011). Developing greater mindfulness can assist in dealing with negative psychological symptoms, however, the precise mechanisms through which this occurs are unclear.

Recent research suggests nonattachment may be an important factor in the reduction of negative psychological symptoms. Wang et al. (2015) identified a relationship between nonattachment and reduced psychological distress, and Sahdra et al. (2010) and Chao and Chen (2013) showed individuals higher on nonattachment had lower levels of depression and anxiety. The findings correspond with the Buddhist view that letting go of attachments is an important factor in the reduction of suffering (Dalai Lama 1997, 2001; Sahdra et al. 2010; Sumedho 1989). By letting go of the need to control experience, individuals may be able to reduce the negative psychological symptoms associated with trying to be in control (e.g., anxiety, worry, rumination). This may also limit the distress produced when such attempts to control experience are inevitably disrupted (e.g., fear, anxiety, and depression).

The beneficial impact of nonattachment on negative psychological symptoms is also evident when measured alongside mindfulness. Lamis and Dvorak (2013) found that in comparison to mindfulness, nonattachment was a significantly stronger predictor of reduced depressive symptoms and suicidal rumination than mindfulness. Thus, when an individual is experiencing depressive symptoms, including self-focused ruminative thinking, being engaged with an open, present-centred awareness can be helpful. However, reducing fixation on experience, and letting go of attempts to control it, may have a stronger impact on reducing these negative psychological symptoms.

1.5 Nonattachment as a Mediator of the Relationship of Mindfulness to Positive and Negative Well-Being Outcomes

Prior to this study there has been no comprehensive investigation on the mechanistic relationship of nonattachment to the effect of mindfulness on well-being. However, some preliminary evidence supports nonattachment as a mechanism that explains the impact of mindfulness on well-being. Sahdra et al. (2016) found nonattachment significantly mediated the relationship of three facets of the Five Factor Mindfulness Questionnaire (FFMQ; Baer et al. 2006); describing, nonjudgment, and non-reactivity with life satisfaction and life effectiveness. Coffey et al. (2010) also found that nonattachment mediated the relationship between the mindfulness component of ‘acceptance’ and the well-being factor of ‘flourishing’. These preliminary findings suggest the influence of mindfulness on certain aspects of well-being may be at least partially explained by nonattachment. However, it is uncertain whether this mediating role of nonattachment extends to other measures of well-being.

Although mindfulness has shown to be related to increased positive affect and decreased negative affect (e.g., Brown and Ryan 2003), the mediating influence of nonattachment has not been explored. Theoretically, being mindful of the flow of experiences assists in developing nonattachment towards affective experiences. Being more nonattached towards experience could limit the impact of negative affect (e.g., distress, nervousness, irritability) when attempts to control experiences fail. The same may be true for positive affect, although the process is less straightforward. While nonattachment may allow for a greater
flow of positive affective experiences, rather than impeding the flow of positive affective experiences by clinging to them, whether this mediates the impact of mindfulness on positive affect is unclear.

The mediating role of nonattachment has not been studied in relation to mindfulness and PWB among Australian adults. So far, only one study has investigated this relationship. Ju and Lee (2015) used translated Korean versions of the mindful attention and awareness scale (MAAS; Brown and Ryan 2003), NAS, and PWB scales to investigate whether nonattachment mediated the relationship between mindfulness and PWB among Korean adults. Using the Baron and Kenny (1986) method for mediation they found the impact of mindfulness on PWB was partially explained by the relationship of nonattachment to PWB. However, this study was on a Korean sample using variations of the MAAS, NAS and PWB measures, and used a method of mediation considered to be outdated (Hayes 2009). The present study sought to investigate whether these findings are applicable to Australian adults when using the more robust bootstrapping approach to mediation and a measure of mindfulness more closely aligned with its Buddhist origins.

The present study also investigated nonattachment as a mediator of mindfulness in relation to depression, anxiety and stress. There is some previous evidence to suggest that the extent to which individuals engage in attachments can mediate the impact of mindfulness-based interventions (MBIs). When conducting a meta-analysis on the mechanisms of MBIs, Gu et al. (2015) found evidence that worry and rumination significantly mediated the effect MBIs on reducing negative mental symptoms. As worry and rumination both represent attachments and an inability to let go of fixation on experience, the findings indicate that the impact of mindfulness practice on mental health can be mediated by reducing levels of attachment.

Similarly, using the FFMQ to measure mindfulness, Tran et al. (2014) showed the influence of mindfulness on depression was mediated by nonattachment. Nonattachment predicted lower levels of depression, even when the general effects of mindfulness were taken into account. Tran et al. (2014) noted the potential for nonattachment to be an important mechanism in the treatment of depression and in reducing depressive symptoms. Tran et al.’s findings provide some initial insights into the possible mechanisms through which mindfulness impacts depressive symptoms. However, whether this relationship extends to other negative psychological symptoms (e.g., anxiety, stress) needs further investigation.

1.6 The Present Project

The aim of the present study was to investigate the relationship of mindfulness and nonattachment to positive and negative psychological outcomes in two sequential studies. Study 1 investigated the relationship of mindfulness and nonattachment to psychological and subjective well-being. Study 2 was then developed to test whether the relationship of mindfulness and nonattachment extended to high prevalence clinical symptoms of depression, anxiety and stress. Specifically, the first study sought to replicate and extend previous research and ascertain whether nonattachment represents a mechanism through which mindfulness positively impacts PWB and SWB. It was hypothesised that (1) nonattachment and mindfulness would be positively related to higher PWB, life satisfaction and PA, and negatively related to NA, and that (2) nonattachment would mediate the relationship of mindfulness to PWB, life satisfaction, PA and NA. The focus of Study 2 was to replicate and extend previous research to determine whether nonattachment represents a mechanism which mediates the (ameliorating) effect of mindfulness on depression, anxiety and stress. It was
hypothesised that (1) higher levels of nonattachment and mindfulness would be related to decreased depression, anxiety and stress and that (2) nonattachment would mediate the relationship of mindfulness on depression, anxiety and stress.

2 Study 1: The Relationship of Mindfulness and Nonattachment to Psychological and Subjective Well-Being

2.1 Method

2.1.1 Participants and Procedure

Participants were students from a mid-sized Australian university who participated in a university-wide project on student well-being. Students received an email inviting them to complete an online survey which provided the opportunity to receive personalised feedback relating to a number of psychological constructs (e.g., nonattachment, academic motivation, adaptability). The sample comprised 516 students (190 men and 326 women) ranging from 17 to 69 years of age ($M=28.58$, $SD=10.30$). Students varied in years of completed study ranging from ‘6 months or less’—‘more than 5 years’ ($median=1$ year). Students also varied in socioeconomic status, with household income (in $AUD) ranging from ‘$0–$25,000’ to ‘$200,000 +’ ($median=“$50,001–$75,000”).

2.1.2 Measures

Nonattachment Nonattachment was assessed using a 7-item version of the nonattachment scale (NAS-7; Elphinstone et al. 2015; Sahdra et al. 2016) taken from the larger 30-item nonattachment scale (NAS; Sahdra et al. 2010). The NAS-7 was used as it has shown good reliability and validity when compared with the original 30-item scale (Feliu-Soler et al. 2016; Sahdra et al. 2016). Participants rated their agreement with 7 items (e.g., “I can let go of regrets and feelings of dissatisfaction about the past”) using a Likert scale from 1 (Strongly Disagree) to 6 (Strongly Agree). Previous studies using the NAS-7 have shown it to be a valid and reliable measure (e.g., Feliu-Soler et al. 2016; Sahdra et al. 2016).

Mindfulness The Freiburg Mindfulness Inventory (FMI; Walach et al. 2006) was specifically chosen as it is a single factor measure deeply rooted in the Buddhist origins of the mindfulness construct (Bergomi et al. 2013; Buchheld et al. 2001; Walach et al. 2006). The scale consists of 14 items (e.g., “When I notice an absence of mind, I gently return to the experience of the here and now”) rated on a 4-point Likert scale from 1 (Rarely) to 4 (Almost Always). Previous research has shown the FMI measures to be a valid and reliable, single factor measure of mindfulness (e.g., Kohls et al. 2009; Walach et al. 2006).

Life Satisfaction Life satisfaction was measured with the Satisfaction with Life Scale (SWLS; Diener et al. 1985). The SWLS consists of five items (e.g., “In most ways my life is close to ideal”) rated on a 7-point scale from 1 (Strongly Disagree) to 7 (Strongly Agree) for scale totals ranging from 5 to 35. The SWLS is a widely used and well-validated measure of life satisfaction (e.g., Bauer et al. 2005; McMahan and Estes 2010; Sahdra et al. 2010).

Positive and Negative Affect The Positive and Negative Affect Schedule (PANAS; Watson et al. 1988) consists of 10 items measuring positive affect (PA; e.g., ‘Strong’, ‘Interested’) and 10 assessing negative affect (NA; e.g., ‘Nervous’, ‘Ashamed’). Items are rated
on a 5-point Likert scale ranging from 1 (Very Slightly or Not at All) to 5 (Extremely) evaluating the extent to which the item has been experienced over the past 3 months. Total scores range from 10 to 50 on each subscale of positive and negative affect. Factor analysis has consistently confirmed the two-factor structure of the PANAS (e.g., Merz and Roesch 2011; Tuccitto et al. 2010) and research has found positive and negative affect to be two distinct constructs (Busseri et al. 2007; Huelsman et al. 1998). Therefore, the individual components of positive and negative affect were measured separately. The PANAS has been shown to be a valid and reliable measure (Wang et al. 2015; Watson et al. 1988; Whitehead and Bates 2016).

Psychological Well-Being Psychological well-being was measured by a 30-item version of the Psychological Well-being (PWB) Scale (Ryff 1989; Ryff and Keyes 1995). The PWB scale yields a total score by summing the 30 items as well as individual scores for the six dimensions of Autonomy, Purpose in Life, Environmental Mastery, Positive Relationships with Others, Personal Growth, and Self-Acceptance, consisting of 5 items each. All items (e.g., “I like most aspects of my personality”) are rated on a 6-point scale from 1 (Strongly Disagree) to 6 (Strongly Agree). Fifteen negatively worded items are reverse scored to provide a total PWB score from 30 to 180, and a score from 5 to 30 for the individual dimensions. The PWB scale has demonstrated good validity and reliability (e.g., Bauer et al. 2005; Grossbaum and Bates 2002; Whitehead and Bates 2016).

2.2 Results

2.2.1 Nonattachment, Mindfulness and Well-Being

The means, standard deviations, and internal consistency reliabilities for all measures are presented in Table 1. Macdonald’s Omega was used as a test of internal reliability due to Cronbach’s alpha being sensitive to bias in self-report data (Trizano-Hermosilla and Alvarado 2016). Most internal consistency reliabilities were acceptable, however, the internal reliability was lower than acceptable for the measure autonomy. As an overall measure of PWB was used in the analysis, and item analysis revealed the scale would

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Means, standard deviations and internal reliabilities for all measures in study 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Nonattachment</td>
<td>34.64</td>
</tr>
<tr>
<td>FMI</td>
<td>38.01</td>
</tr>
<tr>
<td>SWB</td>
<td></td>
</tr>
<tr>
<td>Positive affect</td>
<td>35.74</td>
</tr>
<tr>
<td>Negative affect</td>
<td>24.67</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>22.06</td>
</tr>
<tr>
<td>PWB</td>
<td>124.81</td>
</tr>
<tr>
<td>Purpose in life</td>
<td>19.42</td>
</tr>
<tr>
<td>Environmental mastery</td>
<td>19.25</td>
</tr>
<tr>
<td>Personal growth</td>
<td>24.98</td>
</tr>
<tr>
<td>Self-acceptance</td>
<td>21.42</td>
</tr>
<tr>
<td>Autonomy</td>
<td>22.00</td>
</tr>
<tr>
<td>Positive relationships</td>
<td>19.42</td>
</tr>
</tbody>
</table>

N = 516, SWB = subjective well-being, PWB = psychological well-being, FMI = Freiburg mindfulness inventory
not have greater internal consistency if any of its items was deleted, the decision was made to proceed with the analysis.

The relationships among the variables were examined with Pearson’s correlation coefficients and are presented in Table 2. All correlations were in line with expectations. As hypothesised, higher scores on mindfulness and nonattachment were associated with greater life satisfaction and PA and less NA. They were also associated with higher levels PWB and the individual facets of purpose in life, environmental mastery, personal growth, self-acceptance, autonomy and positive relationships with others.

Mediation analyses were conducted for each dependent wellbeing variable using a nonparametric bootstrapping method (see Preacher and Hayes 2004) with 5000 samples (Shrout and Bolger 2002) to derive a 95% confidence interval ($p < .05$) for the mediating effect of nonattachment. All variables in the analyses were converted to z values to obtain standardised effect sizes in which relative contributions can be compared. In accordance with the procedure of Sahdra et al. (2016), age was entered as a covariate. This method employed the PROCESS Macro provided by Hayes (2013).

In each mediation analysis greater mindfulness, as assessed by the FMI, was associated with increased nonattachment ($a$ path). The results for the direct relationships between nonattachment and each wellbeing variable (i.e., $b$ path), the initial relationship between mindfulness and each wellbeing variable (i.e., $c$ path), and after the inclusion of nonattachment ($c'$ path) are shown in Fig. 1. Bootstrapping revealed that the confidence intervals for the indirect effect of nonattachment on each of PWB, PA, NA and life satisfaction (see Table 3) did not contain zero, thus the results indicate that nonattachment significantly mediated the relationship between mindfulness and higher levels of PWB, PA, and life satisfaction, and lower levels of NA.

### 2.3 Study 1 Discussion

Study 1 investigated the extent to which nonattachment mediates the relationship between mindfulness and overall well-being. The key findings of Study 1 were that, as hypothesised, individuals higher on nonattachment and mindfulness had higher levels of PWB, PA

### Table 2

<table>
<thead>
<tr>
<th></th>
<th>Nonattachment</th>
<th>Mindfulness</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive affect</td>
<td>.44**</td>
<td>.45**</td>
</tr>
<tr>
<td>Negative affect</td>
<td>−.44**</td>
<td>−.39**</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>.47**</td>
<td>.40**</td>
</tr>
<tr>
<td>PWB</td>
<td>.62**</td>
<td>.54**</td>
</tr>
<tr>
<td>Purpose in life</td>
<td>.27**</td>
<td>.24**</td>
</tr>
<tr>
<td>Environmental mastery</td>
<td>.50**</td>
<td>.46**</td>
</tr>
<tr>
<td>Personal growth</td>
<td>.37**</td>
<td>.29**</td>
</tr>
<tr>
<td>Self-acceptance</td>
<td>.58**</td>
<td>.54**</td>
</tr>
<tr>
<td>Autonomy</td>
<td>.38**</td>
<td>.30**</td>
</tr>
<tr>
<td>Positive relationships</td>
<td>.33**</td>
<td>.32**</td>
</tr>
</tbody>
</table>

$N = 516$, SWB = subjective well-being, PWB = psychological well-being, **$p < .001$
and life satisfaction, and lower levels of NA. Also as hypothesised, nonattachment mediated the relationship of mindfulness to PWB, PA, NA and life satisfaction.

The findings align with previous research showing nonattachment mediates the relationship between mindfulness and life satisfaction (Sahdra et al. 2016) and PWB (Ju and Lee 2015). As an extension of those findings, the mediating role of nonattachment was shown to be evident for a single factor measure of mindfulness, aligned with its Buddhist origins, that has not previously been examined. A unique finding was the mediating effect of nonattachment on the relationship of mindfulness to levels of PA and NA. The relationship of mindfulness to an individual’s positive and negative feelings is partially explained by their levels of nonattachment. Being mindful of one’s experiences may indeed be associated with increased positive and decreased negative affective experiences (e.g., Brown and Ryan 2003) but the ability to do so without suppressing or clinging to experiences may be of greatest benefit.

Interestingly, the results suggest that when individuals mindfully let go of trying to control positive and negative affective experiences, it relates to increased positive
and decreased negative affective experiences. It may be that negative affective experiences, such as being ‘distressed’ or ‘scared’, are compounded when attempts are made to avoid them (Hayes et al. 1996). Similarly, trying to hold on to and control positive experiences does not seem to create more positive experiences. Rather, it may be that the more an individual can let go of attempts to control or hold on to positive experiences, the more they can experience freedom (Sumedho 1989) and greater frequency of positive affective states. Being aware of these attachments through mindfulness permits a certain distance from the experience that can enable nonattachment, thus limiting the impact of negative thought patterns on affective states.

Another important finding in Study 1 was the identification of the mediating role of nonattachment in relation to PWB among Australian adults. The results extend the findings of Ju and Lee (2015) in relation to Korean adults and provide evidence for the mediating role of nonattachment on PWB using the original versions of the NAS and PWB scales and a more robust mediation analysis. PWB is often a long-term goal of meditation and mindfulness practices and is aligned with self-realisation (Waterman 2007; Whitehead and Bates 2016) and what people equate as representing the true ideal of happiness in life (McMahan and Estes 2010). A person’s ability to let go of the need to hold on to or avoid any particular experience is important for an open, mindful awareness of experience to lead to the promotion of longer-term, multi-faceted pervasive well-being.

3 Study 2: The Relationship of Mindfulness and Nonattachment to Depression, Anxiety and Stress

3.1 Method

3.1.1 Participants and Procedure

Participants for study 2 were first-year psychology students from a mid-sized Australian university that received course credit for participation. Participants completed an online survey and responses were collected over a 6-month period. Additional demographic data not available in Study 1 was collected in Study 2. The sample comprised 416 participants consisting of (79 men and 337 women) aged from 18 to 77 (\(M = 35.38, SD = 10.70\)). Eighty-one percent of participants were born in Australia or New Zealand, 5% in the UK, 2% from India and the subcontinent, 1% from South Africa, 1% from Iran, 1% from Malaysia, 1% from China and 8% Other. Most participants were employed (full-time = 41%; part-time = 16%; casual = 8%), with 21% identifying as full-time students. The majority of participants obtained an educational degree equivalent or higher than diploma (38% diploma, 15% bachelor’s degree, 5% postgraduate diploma, 4% master’s degree, 8% other).

3.2 Materials

Nonattachment The NAS-7 (Elphinstone et al. 2015; Sahdra et al. 2016) was again used to assess nonattachment, in addition to measures of mindfulness, depression, stress, and anxiety.
Mindfulness The Five Factor Mindfulness Questionnaire (FFMQ; Baer et al. 2006) was chosen as a measure of mindfulness as using multiple measures across studies can increase the external validity of the findings (Norris et al. 2012). Using the FFMQ in the second study also sought to replicate Sahdra et al.’s (2016) successful model using the FFMQ in a mediation model with nonattachment. The FFMQ was developed from items present in other mindfulness scales and consists of 39 items (e.g., “When I do things, my mind wanders off and I’m easily distracted”) capturing the five factors of Observe, Awareness, Describe, Nonreactivity, and Nonjudgment. Each factor has eight items except for Nonreactivity which has seven items. All items were rated on a Likert scale from 1 (Never or Very Rarely True) to 5 (Very Often or Always True). The FFMQ is a widely used measure of mindfulness that has shown consistent validity and reliability (Baer et al. 2006; Sahdra et al. 2016).

Depression, Anxiety and Stress The 21-item Depression, Anxiety, and Stress Scale (DASS-21; Lovibond and Lovibond 1995) was used to measure depression, anxiety and stress. The DASS–21 comprises three subscales of 7 items each capturing symptoms of depression (e.g., “I felt that life was meaningless”), anxiety (e.g., “I felt scared without any good reason”) and stress (e.g., “I felt I found it difficult to relax”). Respondents rate the extent to which they have experienced symptoms over the previous week on a scale ranging from 0 (“Did not apply to me at all”) to 3 (“Applied to me very much, or most of the time”). The DASS-21 is a widely-used measure with good validity and reliability (e.g., Feliu-Soler et al. 2016; Sahdra et al. 2010).

3.3 Results

The means, standard deviations, and internal consistencies for all measures are presented in Table 4. All measures had good internal consistency and all means fell within expected parameters. All correlations (see Table 5) were in line with expectations; higher levels of mindfulness and nonattachment were significantly related to lower levels of depression, anxiety and stress. Additionally, due the non-normal distribution of depression, anxiety and stress in the sample, Spearman’s rho was used to test the correlations (Bishara and Hittner 2012).

Mediation analyses were conducted in accordance with the approach used in Study 1. To obtain standardised Beta coefficients all variables were converted to Z values, and age was entered as a covariate. Higher levels of mindfulness as assessed by the FFMQ were associated with greater nonattachment and all direct and indirect pathways were significant (see Fig. 2). Bootstrapping revealed the confidence intervals for the indirect effect of nonattachment on each of depression, anxiety and stress (see Table 6) did not

<table>
<thead>
<tr>
<th>Measures</th>
<th>Mean</th>
<th>SD</th>
<th>ω</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonattachment</td>
<td>30.78</td>
<td>6.39</td>
<td>.88</td>
</tr>
<tr>
<td>FFMQ</td>
<td>68.08</td>
<td>9.83</td>
<td>.90</td>
</tr>
<tr>
<td>Depression</td>
<td>3.41</td>
<td>4.31</td>
<td>.92</td>
</tr>
<tr>
<td>Anxiety</td>
<td>3.42</td>
<td>4.42</td>
<td>.95</td>
</tr>
<tr>
<td>Stress</td>
<td>5.27</td>
<td>4.58</td>
<td>.94</td>
</tr>
</tbody>
</table>

N=416, FFMQ = Five Factor Mindfulness Questionnaire
contain zero. Thus, the results indicate that nonattachment significantly mediated the relationship between mindfulness and lower levels of depression, anxiety, and stress.

### 3.4 Study 2 Discussion

As expected, greater mindfulness and nonattachment were related to reduced depression, anxiety and stress. Furthermore, the relationship of mindfulness to depression, anxiety and stress was mediated by nonattachment. Being more mindful appears, therefore, to relate to higher levels of nonattachment which contributes to reduced symptoms of depression, anxiety and stress.

The findings build on earlier research showing nonattachment mediates the relationship of mindfulness to depression (Tran et al. 2014). A novel finding is that the mediating role of nonattachment extends beyond depression to the relationship of mindfulness to stress and anxiety. Higher levels of mindfulness can promote greater nonattachment which can then assist in ‘letting go’ of unhelpful psychological strategies (Lamis and Dvorak 2013) that contribute to a range of negative psychological symptoms (Tran et al. 2014) that includes depression, anxiety and stress.

The positive relationship of mindfulness to reduced stress was partially determined by the ability to let go of the need to control experience through clinging or avoidance. This finding is especially important as mindfulness-based interventions often aim to alter individuals’ responses to stress (Cicchetti 2016). The present data provide insight into the mechanisms of this process. Attachments indicate a tension or conflict with what is occurring. Being mindfully aware of this tension with experience, and the need for it to be different, creates an opportunity to consciously let go of the tension, resulting in an acceptance of experience, greater presence and lower levels of stress.

That the mediating role of nonattachment also extends to the relationship of mindfulness to anxiety suggests being mindfully aware of one’s experience assists the reduction of anxiety but that mindfully removing attachment towards experience may be most beneficial. This supports previous work indicating that certain aspects of mindfulness, such as mindful observing, may not be helpful in reducing anxiety (Baer et al. 2006; Coffey et al. 2010; Desrosiers et al. 2014; Lindsay and Cresswell 2017) unless it is done without reactivity (Desrosiers et al. 2014). Being more mindful provides the conditions for nonattachment which can assist the individual in reducing unhelpful psychological strategies, such as rumination and worry that increase anxiety (Desrosiers et al. 2014; Gu et al. 2015; Lamis and Dvorak 2013).

These combined results support the contention of Lindsay and Cresswell (2017) that to reduce negative affective responses, the most important aspect of mindfulness and mindfulness practice is a non-reactive, nonjudgmental acceptance of experience. However, as the FFMQ contains factors measuring non-reactivity and non-judgment, the present findings indicate that nonattachment also mediates the role of non-reactive acceptance on negative

<table>
<thead>
<tr>
<th>Measures</th>
<th>Nonattachment</th>
<th>Mindfulness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>−.46**</td>
<td>−.48**</td>
</tr>
<tr>
<td>Anxiety</td>
<td>−.48**</td>
<td>−.42**</td>
</tr>
<tr>
<td>Stress</td>
<td>−.50**</td>
<td>−.42**</td>
</tr>
</tbody>
</table>

*N = 416, **p < .001*
psychological symptoms. Theoretically, the results indicate that the most efficacious pathway to reducing negative psychological symptoms is to mindfully engage with experience without attempts to try and control it.

### 4 General Discussion

Overall, the findings from the two studies highlight that nonattachment represents a quality that is influential in relation to PWB, SWB and depression, anxiety and stress. Results suggest that the more an individual can let go of fixating on their experience, the better their quality of life in general. The results extend previous studies and provide more comprehensive evidence that nonattachment represents a mechanism that helps to explain the positive relationship of mindfulness on a range of positive and negative psychological outcomes. Mindfulness appears to be a pathway to building greater nonattachment which can limit the negative impact of attachments involved in trying to control experience. The findings

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**Table 6** Indirect effects of nonattachment on the relationship of mindfulness to depression, anxiety and stress

<table>
<thead>
<tr>
<th>Measure</th>
<th>Indirect effect</th>
<th>SE</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>-.14</td>
<td>-.03</td>
<td>-.21</td>
<td>-.07</td>
</tr>
<tr>
<td>Anxiety</td>
<td>-.14</td>
<td>-.04</td>
<td>-.22</td>
<td>-.07</td>
</tr>
<tr>
<td>Stress</td>
<td>-.16</td>
<td>-.03</td>
<td>-.23</td>
<td>-.10</td>
</tr>
</tbody>
</table>

*N=416, SE= standard error, LLCI=lower level confidence interval, ULCI=upper level confidence interval*
provide novel evidence that letting go of attempts to control experience, through mindfulness, appears to be important in the promotion of greater psychological well-being and positive affect, and the reduction of negative affect, stress and anxiety.

These findings have implications for the development and evaluation of the efficacy of mindfulness interventions. The findings support growing evidence for the benefits of mindfulness-based interventions for psychological health (Keng et al. 2011), and provide insight into the mechanisms underlying these benefits. Because nonattachment acts as a mediator of mindfulness, whether an intervention promotes nonattachment may be an important factor in the formulation and projected outcomes of mindfulness-based interventions. The findings also highlight a distinction between mindfulness practices directed at trying to feel good or ‘at peace’, and those whose goal is to be nonattached to experience. The results indicate that mindfulness practices which facilitate a letting go of the need for experience to be any particular way (even if that way is calm, happy or peaceful) may be most beneficial for overall psychological health. Furthermore, the present findings highlight the potential for interventions designed for the specific purpose of building nonattachment, whether this is via mindfulness or another method. Finding an effective method to assist individuals to let go of attempts to fixate on controlling their experience is an important area for future study (Sahdra et al. 2016), and has implications for improving individuals’ overall well-being and mental health in general.

A limitation of the present research was that both samples were drawn from a university student population and there were significantly more women than men. Although Sahdra et al. (2010) found no gender difference in levels of nonattachment, research is needed to confirm the findings in more diverse and representative samples. Another important consideration is that the study design was cross-sectional and the findings are correlational and cannot determine causality. Although, theoretically, developing greater nonattachment would seem to result in developing greater well-being (Dhiravamsa 1975; Sahdra et al. 2016), it is also possible that greater well-being may assist a person to develop greater nonattachment. A longitudinal study on the effects of interventions designed to promote nonattachment on mental health would provide insight into the causal relationship if one exists. It is also important to acknowledge that different measures of mindfulness were used in study 1 and 2. Although having multiple measures of the construct can increase the external validity of the findings (Norris et al. 2012), it can also be seen as a limitation as the studies are not directly replicating each other. It may be that using the FMI in Study 2 may not have yielded significant findings or vice versa, however, the FMI and the FFMQ have shown to be highly correlated ($r = .70$; Siegling and Petrides 2014) and both discuss measuring mindfulness that includes elements of acceptance and awareness (Kohls et al. 2009; Tran et al. 2013). Thus, utilising two different measures of mindfulness that are strongly related was not seen as a major conceptual issue in this study.

Another consideration is the absence of measures of social desirability. Although social desirability is an important factor to acknowledge for self-report measures, research shows that social desirability may only have a limited impact in relation to well-being (Kozma and Stones 1987; Mancini and McKeel 1986; McCrae 1986), mindfulness (Brown and Ryan 2003) and nonattachment (Sahdra et al. 2010). However, as social desirability was not tested specifically in this study, its effects cannot be known.

In conclusion, the present findings support and extend previous research that has established nonattachment as an important factor in relation to greater PWB, SWB and reduced depression, anxiety and stress. The present research highlights that nonattachment is an important mechanism that partially explains the relationship of mindfulness to positive mental health outcomes. The findings provide insight into how mindfulness
relates to a range of positive and negative psychological outcomes and has implications for how mindfulness interventions may be developed or evaluated. Furthermore, the results indicate the need for further research on nonattachment in relation to well-being and mental health and highlight the potential benefit of interventions designed specifically for the promotion of nonattachment.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

References


Nonattachment Mediates the Relationship Between Mindfulness...


Growing by Letting Go: Nonattachment and Mindfulness as Qualities of Advanced Psychological Development

Richard Whitehead1 · Glen Bates1 · Brad Elphinstone1

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Abstract

Psychological development continues throughout adulthood, with some individuals reaching advanced levels of adult psychological development. A focus of the present study was to investigate the Buddhist construct of nonattachment in relation to three elements of advanced psychological development: wisdom, self-actualisation and self-transcendence. The possibility that nonattachment mediates the relationship of mindfulness to these aspects of optimal psychological development was also investigated. Results from 348 university students supported expectations that nonattachment was positively related to wisdom, self-actualisation and self-transcendence and confirmed similar positive relationships for mindfulness. In addition, nonattachment was found to act as a partial mediator of mindfulness for all three aspects of advanced adult psychological development. Interestingly, an alternate mediational pathway was discovered as mindfulness was shown to mediate the relationship of nonattachment to measures of advanced psychological development. The results have implications for understanding the different pathways towards developing wisdom, self-actualisation and self-transcendence and provide insight into the possible mechanisms of mindfulness and nonattachment that help to explain their positive impact.

A number of theories of adult development propose that people can continue growing and developing across a range of areas of psychological functioning well into adult life (Cook-Greuter 2000; Levenson et al. 2001; Loevinger 1976). The higher stages of adult psychological development are believed to involve “increasing flexibility, conceptual complexity, and tolerance for ambiguity; recognition and acceptance of internal contradictions; a broader and more complex understanding of the self, others, and the self in relation to others” (Hartman and Zimberoff 2008, p. 3). These qualities accord with three well-studied components of advanced psychological development: wisdom (Ardelt 2008; Glück et al. 2005; Thomas et al. 2017), self-actualisation (Maslow 1962; Rogers 1961) and self-transcendence (Levenson et al. 2001, 2005; Loevinger 1976). Recent research suggests certain practices aligned with Buddhist psychology may assist people in reaching such advanced stages of growth and development (Hartman and Zimberoff 2008). The present study investigated two constructs within Buddhist psychology, nonattachment and mindfulness, in terms of their alignment with the higher stages of psychological development. The present study is the first to investigate whether nonattachment relates to wisdom, self-actualisation and self-transcendence. Further, as recent research suggests nonattachment may be a mechanism of mindfulness (Sahdra et al. 2016), the present study also investigated whether nonattachment mediates the impact of mindfulness on these indicators of advanced psychological development.

Nonattachment, Mindfulness and Advanced Psychological Development

To understand the construct of nonattachment, it is important to define ‘attachment’, as the term has different meanings in different disciplines. In psychology, attachment often refers to attachment style, referencing a child’s attachment to the caregiver (see Ainsworth et al. 1978; Bowlby 1969) or the quality and safety of a person’s relationships as an adult (Hazan and Shaver 1987). However, from the Buddhist perspective, attachment refers to the energy involved in clinging to experiences perceived as positive and the avoidance of experiences perceived as negative (Agarwal 1982; Altobello 2009; Sahdra et al. 2010). In Buddhism, all experience is seen as transient and attempts to control these experiences...
through attachments are seen as the root cause of suffering (Dalai Lama 2001; Hanh 1999). Nonattachment, therefore, relates to a cessation of this suffering and refers to an interaction with experience without fixating on it needing to be a certain way, or needing to control it though clinging or avoidance (Whitehead et al. 2018a, b). The quality of nonattachment is at the core of the Buddhist teachings (Gammage 2006; Hanh 1999; Thubten 2009) and is indicative of growth and development on the Buddhist path (Donner 2010). Nonattachment has been identified as an ideal quality to possess (Banth and Talwar 2012; Upadhyay and Vashishtha 2014) and is associated with greater presence and maturity (Sahdra et al. 2010).

In contrast, mindfulness results from an open, nonjudging awareness towards what is unfolding in the field of consciousness as it occurs moment to moment (Kabat-Zinn 2003). Mindfulness represents one of the stages on the noble eightfold path, central to Buddhist teachings on the cessation of suffering (Dalai Lama 1997). In Buddhism, it is through the practice of mindfulness that an individual can become deeply aware of the present moment (Hanh 1999). This awareness allows them to embrace and understand their suffering, leading to transformative growth beyond personal suffering (Hanh 2007). Some preliminary evidence suggests mindfulness is positively associated with the optimal qualities of self-actualisation (Beitel et al. 2014), wisdom (Beaumont 2011) and self-transcendence (Vago and Silbersweig 2012); however, the precise mechanisms of this relationship are unclear. Buddhist theory suggests that greater mindfulness can allow an individual to develop greater insight into the transient nature of reality and the futility of trying to control the ever-changing flow of experience, which in turn builds nonattachment and reduces the negative impact that attachments have on an individual’s quality of life (Dalai Lama 1997, 2001). Accordingly, nonattachment has been shown to mediate the positive impact of mindfulness in relation to life satisfaction, life effectiveness (Sahdra et al. 2016) and ‘flourishing’ (Coffey et al. 2010).

Nonattachment and mindfulness are qualities developed over time that are both likely to create the conditions that foster advanced psychological development. Although empirical evidence exists for mindfulness in relation to advanced psychological development, no such empirical evidence exists for nonattachment. Potentially, the more an individual learns, grows and develops throughout their adult life and encounters major life experiences (e.g. losing a job, the break-up of a relationship), the more they learn the futility of attachments aimed at trying to control experience (Sahdra et al. 2010). Letting go of impeding attachments may facilitate a freedom and thriving in life, allowing individuals develop at advanced levels. This is likely to include the development of wisdom, self-actualisation and self-transcendence.

Wisdom

Wisdom is a multifaceted construct (Ardelt 2003; Clayton and Birren 1980; Le 2008) seen as a sign of optimal development across all cultures and religions, despite its various definitions and conceptualisations (Le 2008, 2011). Within Buddhism, wisdom involves understanding the interdependent nature of reality, and that there is no way to truly hold on to any fixed experience, including the experience of a separate static self (Dalai Lama 2001; Hanh 1999, 2006). Wisdom involves an ontological shift from a rigid view of the self as the ruler of experience towards a view of all experience, including the self, as transitory (Dalai Lama 2009; Shonin et al. 2014). Within Western psychology, Ardelt (2003) conceptualised wisdom as a developmental quality encapsulating three dimensions of affective, cognitive and reflective wisdom. These dimensions capture a selflessness and compassion for others (Ardelt 2008); a comprehension of life with deep meaning and significance, especially intra- and interpersonal matters (Ardelt 2003; Thomas et al. 2017); and an unbiased, decentred view of reality which acknowledges the existence of multiple perspectives (Thomas et al. 2017).

Wisdom develops across the lifespan (Ardelt 2003, 2008; Bluck and Glück 2005; Staudinger 1999) by growing from life experiences (Bluck and Glück 2005; Mansfield et al. 2010). Learning from experience through careful reflexivity and an ability to challenge one’s subjectivity and take on multiple perspectives is believed to produce wisdom and a greater understanding of the ambiguity and paradoxes in life (Ardelt 2011). Wisdom is associated with greater emotional complexity, less emotional reactivity and a greater propensity to see things from the bigger picture (Grossman et al. 2016).

Within Buddhist literature, mindfulness is important in the development of wisdom (Análayo 2010; Buchheld et al. 2001; Purser and Milillo 2014). Mindfulness assists an individual to witness experience without attaching to the apparent independent nature of existence and develop wisdom into the ever-changing nature of things (Hanh 1999). Accordingly, Beaumont (2011) found that people with higher levels of mindfulness also had higher levels of wisdom. Mindfulness was also positively associated with all three dimensions of Ardelt’s (2003) three-dimensional wisdom scale (3D-WS): cognitive, affective and reflective wisdom. Individuals with an open, present-centred awareness tended to understand the complexities and ambiguities of experience (reflective wisdom), understand experience on a deeper level (cognitive wisdom), and were less self-focused and more compassionate towards others (affective wisdom).

Nonattachment may also be strongly related to wisdom and may represent a mechanism through which
mindfulness impacts the development of wisdom. Nonattachment involves an engagement with experience without fixation on specific beliefs and opinions that may limit knowledge and understanding of the complexities and ambiguities in life. This is highlighted in a speech by the Dalai Lama (2011):

I am a Buddhist but I should not develop attachment to Buddhism, because once you develop attachment to your faith, then your mind will become biased; then you can’t see the value of other traditions.

Letting go of attachment to certain views allows an individual to be open to other perspectives and thus promotes greater understanding and wisdom.

The cognitive and reflective factors of wisdom highlight an individual’s ability to engage with multiple perspectives and to understand life more deeply by building greater self-awareness and self-insight (Ardelt 2003, 2008). In contrast, being attached to experience involves narrow fixation on experience being a specific way, and thus limits awareness or insight beyond that which is fixated on. Wisdom arises when an individual can be mindfully aware of the flow of experience without attachment (Hartman and Zimberoff 2008). Nonattachment also appears to be related to the affective aspect of interpersonal wisdom. Being more nonattached is associated with being more present in life and less impacted by the fixation on self-related thoughts and feelings (Sahdra et al. 2010) which may theoretically create a greater space for understanding and empathising with others (Sahdra et al. 2015). Accordingly, nonattachment has been associated with greater empathy, peer-rated kindness, and helpfulness (Sahdra et al. 2015), and greater relational harmony cultivated through compassion (Wang et al. 2015). Theoretically, living without attachment allows a flow of experience in which individuals can develop insight into the ambiguous and complex nature of experience, contributing to a deeper understanding of life and greater understanding and compassion towards others.

Self-Actualisation

Self-actualisation is perhaps one of the most prominent theories of optimal adult development (Bauer et al. 2011). Following the achievement of basic needs, self-actualisation is defined as achievement of a person’s highest potential (Beaumont 2009; Jones and Crandall 1986) and a movement from self-fixation towards selflessness and altruism (D’Souza and Guring 2016). Maslow (1968) described self-actualising individuals as having a strong propensity to deeply understand and experience the self and others as existing interdependently. Self-actualisers also display resistance to enculturation and engage with ethical issues from multiple perspectives (Bauer et al. 2011; Maslow 1970).

Some evidence suggests being more mindful is associated with greater self-actualisation. Brown and Ryan (2003) found higher levels of mindfulness captured by an open, present-centred awareness, related to higher levels of self-actualisation measured by the Measure of Actualization of Potential (MAP; Lefrancois et al. 1997). In a more comprehensive investigation, Beitel et al. (2014) reported that higher mindfulness was associated with greater self-actualisation measured by the Short Index of Self-Actualization (SISA; Jones and Crandall 1986). They also found self-actualisation to be related to three facets of mindfulness: acting with awareness, acting without judgement, and describing, but not observing. These findings highlight that mindfully attending to experience with concentration and acceptance are qualities aligned with self-actualisation (Maslow 1971). The specific mechanisms through which mindfulness impacts self-actualisation may also be explained by the facilitation of nonattachment.

Nonattachment appears conceptually aligned with self-actualisation. Maslow (1954) proposed that self-actualised people are autonomous, have a deep acceptance of reality and are motivated by personal growth. They also demonstrate a potential to live in the moment and to gain their sense of satisfaction from their own self, without being impacted by unnecessary mental patterns such as guilt, shame and regret (see also Beitel et al. 2014). Similarly, being highly nonattached can be characterised as ‘radical acceptance’, with guilt, shame and regrets being clear examples of attachments characterised by wanting experience to be other than it is (Whitehead et al. 2018a). Both self-actualised and non-attached individuals also display an ability to gain satisfaction internally, rather than relying on outside circumstances. The well-being of nonattached individuals is not contingent on the nature of their experiences or how they interact with their environment (Coffey et al. 2010; Sahdra et al. 2010). It is therefore likely that individuals who have attained higher levels of self-actualisation will also be more nonattached.

Self-Transcendence

Self-transcendence is a core component in theories of advanced psychological development (Ardelt 2008; Bauer and Wayment 2008; Cook-Greuter 2000; Frankl 1966; Hartman and Zimberoff 2008; Manners and Durkin 2000) and refers to moving beyond the concerns of the individual self. People high in self-transcendence are less focused on self-interest, have a more flexible self-construct, are less fixed on their own perspectives, and have greater concern for others and life in general (Cook-Greuter 2000; Levenson et al. 2005). Similar to wisdom and self-actualisation,
self-transcendence involves a greater understanding of one’s own, and others’ implicit biases and the ability to act without the influence of conditioned and unconscious tendencies (Le 2011). Although originally measured as a trait, Maslow (1971) saw self-transcendence as the highest stage of development. To Maslow, it represented a quality that separated self-actualisers who focused on fulfilling their own potential, from those who moved beyond the fulfilment of their own self-focused needs and potentials (Koltko-Rivera 2006). Frankl (1966) also argued that, in addition to self-actualising and fulfilling one’s sense of meaning, people also have the potential to transcend the concerns of an individual self.

Mindfulness and meditation have been identified as important factors in the pathway towards self-transcendence (Cook-Greuter 2000). Theoretically, being mindful of the flow of experience assists the witnessing of the self from an objective space, allowing for insight into the biases and egoic nature of the self, which can be a transcendent process (Epstein 1988; Hartman and Zimberoff 2008). In developing the Adult Self-Transcendence Inventory, Levenson et al. (2005) found adult self-transcendence to be positively associated with meditation experience. Individuals who meditated displayed higher levels of self-transcendence than nonmeditators.

There is also neuroscientific evidence that mindfulness and mindfulness meditation can affect levels of self-transcendence. Farb et al. (2007) found mindfulness-based interventions could significantly reduce activity in areas of the brain-associated with self-reference. They discovered that those who had undergone training in mindfulness-based stress reduction (MBSR) showed reduced activity in the brain during a self-referencing exercise relative to those who had not undergone the course. Thus, exhibiting mindfulness towards experience may indeed assist in uncovering the self-biases in unconscious thoughts and actions (Anālayo 2010; Vago and Silbersweig 2012). The practice of mindfulness appears to reduce self-focus and promote meta-awareness which in turn enables disengagement from the self-referential narrative present in daily life (Hölzel et al. 2011; Vago and Silbersweig 2012). Through the reduction of self-referential processing and a more objective view of the self (Hölzel et al. 2011), increased mindfulness may facilitate a movement away from self-focus and towards self-transcendence. It is also important to investigate the mechanisms of this relationship and potentially, whether nonattachment is a mechanism through which mindfulness allows an individual to move away from self-focus.

Although the relationship between nonattachment and self-transcendence has not been investigated, the two show conceptual overlap. In Levenson et al.’s (2001) model of adult development, the self is discussed as existing relative to attachments that can be transcended through nonattachment and a greater understanding of the self (Ardelt 2008; Levenson et al. 2001). For self-transcenders, there is a movement away from a self-focus towards an other- or universal-focus (Cook-Greuter 2000; Hartman and Zimberoff 2008; Vago and Silbersweig 2012). The transcendence of self-focus through understanding the self and the unconscious biases that impact experience (Le 2011), allude to the importance of nonattachment in this process of becoming aware of one’s own states and the workings of the ego. As the self is at the centre of attachments (Chan 2008; Levenson et al. 2001), letting go of attachments to one’s self-serving biases allows transcendence by engendering a life not governed by self-interest or self-focus. Nonattachment, therefore, represents a process of letting go of attachment to the separate static self (Hanh 2006). Reducing the need for experience to be one way or other also lessens the need to fixate on the self as being of utmost importance, or being any way in particular. Without the self-fixation associated with attachment, an individual can be more present and other-focused (Sahdra et al. 2015).

The present study

The present study investigated the relationships among mindfulness, nonattachment, and the constructs of wisdom, self-actualisation and self-transcendence. As nonattachment has been shown to mediate the positive impact of mindfulness on a range of variables (e.g. Sahdra et al. 2016; Whitehead et al. 2018a), mediational analyses were also conducted. It was hypothesised that nonattachment and mindfulness would be positively correlated to wisdom, self-actualisation and self-transcendence (Hypothesis 1) and that nonattachment would at least partially mediate the relationships of mindfulness with each of wisdom, self-actualisation and self-transcendence (Hypothesis 2).

Method

Participants and Procedure

The sample comprised 348 respondents (270 women and 78 men) ranging from 18 to 64 years ($M = 34.29; SD = 11.33$). The respondents predominantly identified as Anglo-European (83.1%), followed by Asian (6.8%), Indian and subcontinent (2.5%), Middle Eastern (2%), African (1.7%), New Zealander or Pacific Islander (1.7%) or other (2.2%). Most respondents did not state any religious or spiritual affiliation (50.8%) or identified as Christian (24.6%); 13.3% identified with a general, nonreligious spirituality, while 5.1% identified with a contemplative tradition (i.e. Buddhism, Vedanta), 1.7% identified as Muslim, 1% identified as Hindu and 3.1% other.
Participants were undergraduate psychology students at a mid-sized metropolitan university in Australia who completed the study in exchange for course credit. It is also important to note that the majority of participants were mature age, studying psychology online, which increased the mean age in the sample. Students accessed an online questionnaire and could complete the questionnaire in their own time. Data were collected over a 6-month period. All research conducted adhered to ethical guidelines and received ethics clearance through the appropriate ethics committee.

**Measures**

**Nonattachment**

The 7-item Nonattachment Scale (NAS-7; Elphinstone et al. 2015; Sahdra et al. 2016) was taken from the larger 30-item nonattachment scale (NAS; Sahdra et al. 2010). The seven items (e.g. “I can let go of regrets and feelings of dissatisfaction about the past”) are rated on a 7-point Likert scale from 1 (Strongly Disagree) to 7 (Strongly Agree). The NAS-7 shows good reliability and validity when compared with the original 30-item scale (Sahdra et al. 2016).

**Mindfulness**

The 20-item Five Factor Mindfulness Questionnaire (FFMQ; Baer et al. 2006; Tran et al. 2013) was used as it is considered to be the most comprehensive measure of mindfulness (Sahdra et al. 2016). The five factors present in the FFMQ are *Observe, Awareness, Describe, Nonreactivity and Nonjudgment*. Items (e.g. “When I do things, my mind wanders off and I’m easily distracted”) are rated on a Likert scale from 1 (Never or Very Rarely True) to 5 (Very Often or Always True).

**Self-Actualisation**

The Short Index of Self-actualisation (SISA; Jones and Crandall 1986) is a 15-item widely used self-report measure derived from Shostrom’s (1964) Personal Orientation Inventory. Items (e.g. “I believe that people are essentially good and can be trusted”) are rated on a 4-point Likert Scale from 1 (Agree) to 4 (Disagree).

**Wisdom**

The 12-Item Three-Dimensional Wisdom Scale (3D-WS-12; Thomas et al. 2017) is a recently developed abbreviated version of the larger three-dimensional wisdom scale (3D-WS; Ardelt 2003). The 3D-WS-12 has 12 items (e.g. “I can be comfortable with all kinds of people”) rated on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree). The 3D-WS-12 and has shown good reliability and validity when measuring a higher order single factor of wisdom (Thomas et al. 2017).

**Self-Transcendence**

The self-transcendence subscale from the Adult Self-Transcendence Inventory (ASTI; Levenson et al. 2005) is a 9-item measure of self-transcendence. Items (e.g. “I do not become angry as easily”) are rated on a Likert scale from 1 (Disagree Strongly) to 4 (Agree Strongly). The ASTI is a well-established reliable and valid measure of self-transcendence when assessing the construct as a process of adult development (Le 2011; Levenson et al. 2005).

**Results**

The means, standard deviations and internal consistency coefficients for all measures are presented in Table 1. All means were within expected parameters and were normally distributed. Although Cronbach’s Alpha was lower than ideal (< .80) for some measures, Alphas were all .70 or above and determined to be good given the short length of the scales.

Relationships among the variables are shown in Table 2. As hypothesised (Hypothesis 1), nonattachment and mindfulness were positively correlated with all measures of optimal psychological development: wisdom, self-actualisation and self-transcendence. These correlations were all moderate-to-strong, with nonattachment and mindfulness also showing a moderate positive correlation.

Mediation analyses were conducted using the ‘Process’ SPSS macro developed by Preacher and Hayes (2013). All variables in the analyses were converted to z values to

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>α</th>
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</thead>
<tbody>
<tr>
<td>Nonattachment</td>
<td>32.30</td>
<td>6.27</td>
<td>.87</td>
</tr>
<tr>
<td>FFMQ</td>
<td>62.02</td>
<td>10.82</td>
<td>.83</td>
</tr>
<tr>
<td>Observe</td>
<td>14.38</td>
<td>3.24</td>
<td>.77</td>
</tr>
<tr>
<td>Awareness</td>
<td>10.60</td>
<td>3.00</td>
<td>.70</td>
</tr>
<tr>
<td>Describe</td>
<td>12.14</td>
<td>3.36</td>
<td>.72</td>
</tr>
<tr>
<td>Nonreactivity</td>
<td>12.73</td>
<td>2.98</td>
<td>.73</td>
</tr>
<tr>
<td>Nonjudgment</td>
<td>12.17</td>
<td>4.17</td>
<td>.80</td>
</tr>
<tr>
<td>Wisdom</td>
<td>42.48</td>
<td>7.31</td>
<td>.76</td>
</tr>
<tr>
<td>Self-actualisation</td>
<td>43.90</td>
<td>6.00</td>
<td>.71</td>
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<tr>
<td>Self-transcendence</td>
<td>37.32</td>
<td>6.47</td>
<td>.87</td>
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*N = 348. FFMQ Five Factor Mindfulness Questionnaire*
obtain standardised effect sizes in which relative contributions can be compared. In each mediation analysis, greater mindfulness was associated with increased nonattachment (a path). The results for the direct relationships between nonattachment and each advanced psychological development variable (i.e. b path), the initial relationship between mindfulness and each advanced psychological development (i.e. c path), and after the inclusion of nonattachment (c' path) are shown in Fig. 1. To test the significance of the mediation, a nonparametric bootstrapping method (see Preacher and Hayes 2004) with 5000 resamples (Shrout and Bolger 2002) was used to derive a 95% confidence interval for the impact of nonattachment. The indirect effect is significant (p < .05) if the upper and lower bounds of the 95% Confidence Interval (CI) do not include zero.

Three separate analyses were conducted, with wisdom, self-actualisation and self-transcendence entered in each separate analysis as the dependent variable. Mindfulness was entered as the independent variable and nonattachment as the mediator in each analysis. As age is known to play a role in the development of nonattachment (Sahdra et al. 2010), age was entered as a covariate to limit the effect of age on the dependent variables (see Sahdra et al. 2016). When entered as a covariate, in each mediation analysis, age ceased to be a significant predictor.

Bootstrapping estimated the indirect effect of nonattachment on wisdom was estimated to lie between .10 and .24. The indirect effect of nonattachment on self-actualisation was estimated to lie between .16 and .30, while the indirect effect of nonattachment on self-transcendence was estimated to lie between .18 and .33, indicating that the mediating effect of nonattachment in each analysis was significant. Therefore, as the c' paths were also significant in each case, greater nonattachment was found to partially mediate the relationships between increased mindfulness and higher levels of wisdom, self-actualisation and self-transcendence.

**Table 2** Intercorrelation among nonattachment, mindfulness, wisdom, self-actualisation and self-transcendence and age

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
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<tbody>
<tr>
<td>1. Nonattachment</td>
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<td>2. FFMQ</td>
<td>.58</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>3. Observe</td>
<td>.28</td>
<td>.56</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4. Aware</td>
<td>.33</td>
<td>.63</td>
<td>.07a</td>
<td></td>
<td></td>
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<tr>
<td>5. Describe</td>
<td>.28</td>
<td>.67</td>
<td>.29</td>
<td>.35</td>
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<td>6. NonReact</td>
<td>.61</td>
<td>.67</td>
<td>.41</td>
<td>.20</td>
<td>.26</td>
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<td>7. NonJudge</td>
<td>.41</td>
<td>.72</td>
<td>.12a</td>
<td>.45</td>
<td>.30</td>
<td>.35</td>
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<tr>
<td>8. Wisdom</td>
<td>.56</td>
<td>.63</td>
<td>.31</td>
<td>.39</td>
<td>.41</td>
<td>.47</td>
<td>.48</td>
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<tr>
<td>9. Self-Actual</td>
<td>.64</td>
<td>.65</td>
<td>.30</td>
<td>.40</td>
<td>.39</td>
<td>.54</td>
<td>.48</td>
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<tr>
<td>10. Self-Transcend</td>
<td>.60</td>
<td>.54</td>
<td>.36</td>
<td>.29</td>
<td>.27</td>
<td>.49</td>
<td>.35</td>
<td>.46</td>
<td>.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Age</td>
<td>.23</td>
<td>.33</td>
<td>.16</td>
<td>.24</td>
<td>.23</td>
<td>.21</td>
<td>.25</td>
<td>.30</td>
<td>.30</td>
<td>.19</td>
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</tbody>
</table>

N=348, all relationships are significant at the p < .001 except a significant at p < .05 and b nonsignificant
FFMQ Five Factor Mindfulness Questionnaire

*Fig. 1* Path diagram depicting nonattachment as the mediator of mindfulness on the outcome variables of wisdom, self-actualisation and self-transcendence. Note: the coefficients in parenthesis represent the c path where the mediator was excluded from the analysis. **p < .001; FFMQ Five Factor Mindfulness Questionnaire
Alternate Mediational Model

Although the results for mediation support the hypotheses, when testing for mediation, in addition to having a strong theoretical basis, it is also important that nonequivalent mediation models are not found to be statistically equivalent (Little et al. 2007). There is a strong theoretical and empirical basis for nonattachment as a proposed mediator of mindfulness (Dhiravamsa 1975; Montero-Marín et al. 2016; Sahdra et al. 2016; Shapiro et al. 2006). However, it has previously been discussed that nonattachment is not only cultivated through mindfulness, and other experiences that foster self-reflection may also facilitate the development of nonattachment (Sahdra et al. 2010). Therefore, it is possible that building greater nonattachment, through self-reflection, may foster greater mindfulness, and thus greater wisdom, self-actualisation and self-transcendence.

To test this, and rule out alternative mediation models, further bootstrapping analyses were conducted to test whether mindfulness mediates the relationship of nonattachment to wisdom, self-actualisation and self-transcendence. All variables were converted to z values and age was entered as a covariate. Results showed the 95% confidence interval for the indirect effect of mindfulness on wisdom was estimated to lie between .18 and .32, between .16 and .29 for self-actualisation, and between .10 and .23 for self-transcendence. As none of the estimations contained zero, the mediating effect of nonattachment in each analysis was significant. The results indicate that even though Hypothesis 2 was supported, multiple pathways may exist to building nonattachment and mindfulness which can in turn lead to greater wisdom, self-actualisation and self-transcendence.

Discussion

The current study examined mindfulness and nonattachment in relation to three measures indicative of advanced psychological development. Findings were as hypothesised, with greater levels of nonattachment and mindfulness being positively correlated with higher levels of wisdom, self-actualisation and self-transcendence. This establishes the proposed positive relationship of nonattachment to advanced psychological development and replicates previous findings for the relationship of mindfulness and wisdom (Beaumont 2011), self-actualisation (Beitel et al. 2014) and self-transcendence (e.g. Farb et al. 2007; Vago and Sibersweig 2012). Also as hypothesised, nonattachment partially mediated the relationship of mindfulness with each of wisdom, self-actualisation and self-transcendence. This extends previous research on well-being and ill-being and demonstrates that the role of nonattachment as a mediator of mindfulness extends to the three indicators of advanced psychological development.

However, further analyses revealed an alternate mediation pathway indicating mindfulness mediates the relationship of nonattachment to advanced psychological development. This suggests that nonattachment and mindfulness can both facilitate each other, and that there may be multiple pathways to building nonattachment.

The findings for nonattachment emphasise the importance of letting go of control of experience in creating the conditions for advanced psychological development. Consistent with theoretical propositions, this indicates that as individuals develop greater wisdom and grow towards actualisation of the self, they lessen attempts to control experience and become less fixated on it unfolding any particular way.

The data also support the contention that some of the most highly developed people in society display nonattachment (Huxley 1937) and an equanimous engagement with experience (Astin and Keen 2006). Being nonattached reduces the impact of implicit self-serving biases through building insight into them, rather than engaging in them. This promotes reflexivity and greater understanding of the self, and creates a flexibility and openness to life without expectation that allows an individual to freely take opportunities as they arise, propelling them towards achieving their potential.

In addition to wisdom and self-actualisation, the more an individual can let go of the need to control their experience, the more likely they are to transcend their own self-focus. Being nonattached provides a space for individuals to witness the egoic nature of the self (Epstein 1988; Hartman and Zimberoff 2008). Letting go of attachment appears to be a letting go of the fixation on self (Sahdra et al. 2015). Living a life in which attachments are prominent would appear to limit development beyond a self-focus. Letting go of attachment may provide the optimal conditions for a developmental growth process from self-focus to a more selfless, and self-transcendent focus.

Another unique finding of the present study was the identification of nonattachment as a partial mediator of the relationship of mindfulness with the measures of advanced psychological development. This provides further evidence that nonattachment is an important mechanism of mindfulness and helps to explain the positive impact mindfulness can have. While taking a mindful stance towards experience can assist in developing wisdom (Ardelt 2003; Bluck and Glück 2004), the optimal conditions for the development of wisdom and a deeper understanding of life appears also to involve a letting go of attachment to what is occurring in one’s field of consciousness. Similarly, while self-actualisation is related to open, mindful engagement in ideas and other people (Maslow 1968), the present findings highlight that freedom from attachment to these ideas and thoughts helps to explain this relationship.

Interestingly, the mediating role of nonattachment was strongest for mindfulness and self-transcendence.
Theoretically, this can be attributed to the egoic self being intertwined with attachments (Chan 2008) and the intrinsic self-transcendent nature of nonattachment (Epstein 1988). The results indicate that when mindfully engaging with experience as it occurs moment to moment (Kabat-Zinn 2003), it is the individual’s ability to let go of controlling that experience that has the greatest impact on transcending self-focus and self-fixation. This suggests that it is through the engagement of mindfulness that one can let go of the heavy attachment to self which partly contributes to a more inclusive engagement with experience that stretches beyond the individual self-focus.

The present findings have a number of implications for future research. In addition to being an important factor for increased well-being (Sahdra et al. 2010), nonattachment represents an important quality aligned with the later stages of the psychological developmental process. Through increased self-awareness and insight into experience (Sahdra et al. 2015), nonattachment appears to provide the ideal conditions for optimal psychological development, and the presence (or not) of nonattachment may help explain why some individuals reach these developmental levels and others do not. This indicates the importance of studying nonattachment, both as a standalone quality and as a mechanism that helps to explain the positive impact of mindfulness.

It is also noteworthy that nonattachment is not solely cultivated through mindfulness and meditation (Sahdra et al. 2010). In addition to being mindful, nonattachment may be developed through self-reflection and developing understanding into the subjective nature of experience and that all experience is transient (Hanh 1999; Sahdra et al. 2010). This is highlighted by the findings suggesting mindfulness also mediates the relationship of nonattachment to each of wisdom, self-actualisation and self-transcendence. This result indicates the multiple pathways to building nonattachment. Perhaps, nonattachment that is cultivated through pathways other than mindfulness (e.g. psychotherapy, post-traumatic growth) may also promote mindfulness which can assist in the psychological development process. This has implications for the development and delivery of psychological interventions. Although mindfulness and nonattachment are similarly beneficial (Sahdra et al. 2016), there has been a major focus on interventions designed to promote mindfulness rather than interventions designed to promote nonattachment. For individuals who may not find the experiential nature of mindfulness-based practices beneficial (e.g. Chambers et al. 2016), interventions designed to build insight into the subjective and transient nature of experience and, thus, greater nonattachment may be of great benefit. For individuals wishing to facilitate their own, or others’ psychological development process, understanding the specific pathways to nonattachment may provide insight into the development of greater wisdom, self-actualisation and transcendence of self-focus.

There are a number of methodological considerations in the present study. One limitation was that the participants were all university students and may not have captured a sample representative of the general population. Also, there were more women than men in the sample which raises the possibility of gender bias; however, Sahdra et al. (2010) observed no significant gender difference in scores on nonattachment. Additionally, all respondents were residing in Australia which further limits the generalisability of the findings. Future studies are needed with a more diverse and representative sample to determine the generalisability of the findings. Further, the results are cross-sectional and causality cannot be determined. Although the results support previous theory that nonattachment is believed to emanate from mindfulness (Sahdra et al. 2016), the results of the current cross-sectional study suggest that the causal pathways may be more complex. It is likely that nonattachment may assists individuals to be more mindful, and that qualities such as wisdom and self-transcendence could also facilitate greater instances of mindfulness and nonattachment. Future longitudinal research comparing the mechanisms and outcomes of mindfulness and nonattachment-based interventions may help elucidate the specific causal pathways to wisdom, self-actualisation and self-transcendence. A longitudinal study would also be valuable to investigate changes in psychological development over time.

In conclusion, the present findings are the first to show nonattachment is related to advanced psychological development and is a significant partial mediator of the relationship between mindfulness and wisdom, self-actualisation and self-transcendence. However, the results also indicate there may be multiple pathways to building nonattachment and mindfulness that are beneficial for psychological development. These findings support the need for further research on nonattachment, support the benefits of mindfulness, and have implications for interventions designed specifically to promote nonattachment.

Compliance with Ethical Standards

Conflict of interest The authors declare they have no conflict of interest.

References

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Stories of Suffering and Growth: An Investigation of the Lived Experience of Nonattachment

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Stories of Suffering and Growth: An Investigation of the Lived Experience of Nonattachment

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ABSTRACT

The Buddhist concept of nonattachment refers to a flexible engagement with experience without fixation on achieving specified outcomes. The primary focus of this study was to qualitatively examine how nonattachment and attachment are experienced in individuals identified as having very high and low levels of nonattachment. Specifically, we examined individuals’ descriptions of how their levels of nonattachment and attachment developed, and how nonattachment and attachment affect their lives, their relationships, and their understanding of personal development. Twenty-four in-depth interviews were conducted with participants (18 women, six men) aged 19 to 61 (mean = 36.20, standard deviation = 11.00), drawn from a larger sample of 1191, who scored very high or very low on nonattachment. Thematic analysis revealed highly nonattached individuals were psychologically mature, and flexibly engaged with their experiences, allowing their life to flow with minimal self-obstruction. In contrast, highly attached individuals were quite fixed in their thinking and often placed unachievable expectations on themselves and others. Interestingly, transformative suffering was crucial in the development of nonattachment, whereas unresolved experiences of suffering contributed to the development of attachment.

Nonattachment is a core construct in Buddhism and many other spiritual traditions (Burley 2014). It refers to ‘the subjective quality of not being stuck or fixated on ideas, images, or sensory objects and not feeling an internal pressure to acquire, hold, avoid, or change’ (Sahdra, Shaver, and Brown 2010, 118). Theoretically, a nonattached individual can flexibly interact with experience without the need to control it through attempts to cling to desirable experiences or to avoid unpleasant experiences (Sahdra, Ciarrochi, and Parker 2016; Sahdra et al. 2015). Recent research shows nonattachment to be related to a range of positive psychological outcomes (e.g. Ju and Lee 2015; Sahdra, Shaver, and Brown 2010; Whitehead et al. 2018). However, it remains unclear exactly how nonattachment is experienced and how it develops. The aim of the present study was to gain insight.
into the lived experience of individuals who identify as highly nonattached or highly attached. Interviews were conducted to explore individuals’ accounts of how nonattachment and attachment affect their life, their relationships, and their notions of personal development. A further focus was on individuals’ perceptions of how their high levels of nonattachment or attachment had developed. These areas of focus were chosen on the basis of existing theory and current findings in the growing body of research on nonattachment.

The nonattachment construct

Nonattachment has its origins in the Eastern contemplative traditions dating back more than 2500 years in Buddhism and 3500 years in Hinduism. In Buddhism, nonattachment is associated with inner freedom (Sumedho 2012) and indicates a letting go of attempts to control experience, and a willingness to engage with experience regardless of content. It does not indicate a detachment from experience (Sahdra, Shaver, and Brown 2010; Sahdra et al. 2015; Sahdra, Ciarrochi, and Parker 2016) but reflects a deep presence and engagement with experience without the need for it to unfold in any specific way. Within the contemplative traditions, nonattachment is a sought-after quality (Banth and Talwar 2012) and is indicative of growth and development (Donner 2010). In contrast, attachments indicate a way of interacting with experience whereby an individual fixates on their experiences and attempts to control what is occurring by holding on to experiences perceived as desirable and avoiding experiences perceived as undesirable (Altobello 2009; Dalai Lama 2001). For example, attachments may manifest as an aversion towards uncomfortable feelings. In this situation, such feelings are suppressed, but the suppression itself takes energy and causes suffering in the forms of anxiety or stress. When the feelings can no longer be suppressed there can be experiences of dread, panic or being overwhelmed. In Buddhism, attachments are seen as the underlying cause of suffering, and it is how an individual relates to their experience, rather than experience itself, that causes suffering (Dalai Lama 1997, 2001; Hanh 2006).

Buddhist psychological constructs such as nonattachment are receiving growing attention in Western psychology, with constructs such as self-compassion and mindfulness being widely studied. More recently, a growing volume of literature has indicated that nonattachment is an extremely beneficial quality in relation to a range of positive psychological outcomes. These findings support the Buddhist theory that attachments relate to individual suffering. Correlational research shows nonattachment is associated with less suicidal rumination (Tran et al. 2014), lower psychological distress (Coffey, Hartman, and Fredrickson 2010; Wang, Wong, and Yeh 2016), fewer symptoms of depression, anxiety and stress (Sahdra, Shaver,
and Brown 2010; Whitehead et al. 2018), and improved emotion regulation (Cebolla et al. 2018). Fixating on attempts to control experience appears to be an unhelpful psychological strategy (Lamis and Dvorak 2013) that negatively impacts mental health. Due to the ever-changing nature of experience (Hanh 1998), attempts to control it are often futile and result in feelings such as disappointment, resentment, depression or other negative affective responses.

Correlational research also shows nonattachment relates positively to well-being (Chao and Chen 2013; Feliu-Soler et al. 2016; Sahdra, Shaver, and Brown 2010; Whitehead et al. 2018). Nonattachment has been associated with greater short-term, subjective well-being as well as more pervasive psychological well-being (Ju and Lee 2015; Sahdra, Shaver, and Brown 2010) that has been identified as representing true happiness in life (McMahan and Estes 2010). Furthermore, nonattachment is related to positive psychological development outcomes such as wisdom, self-actualisation and self-transcendence (Whitehead, Bates, and Elphinstone 2019). Theoretically, removing the fixation on needing experience to be one way or other limits the self-inflicted rumination and worry associated with constant attempts to control the flow of experience (Whitehead et al. 2018). This then allows an individual to experience well-being independently of external circumstances (Sahdra, Shaver, and Brown 2010). The research to date provides promising evidence for the benefits of nonattachment in everyday life and as a strategy to potentially increase well-being and protect against negative psychological symptoms. The present study seeks to gain further insight into how these potential benefits may be reflected in lived experience.

**Interpersonal relationships**

Some preliminary empirical evidence suggests being more nonattached can improve the quality of relationships. Nonattachment has been shown to correlate with positive interpersonal relationships (Sahdra, Shaver, and Brown 2010) as well as greater relationship harmony (Wang, Wong, and Yeh 2016). Further, Sahdra et al. (2015) found that, in addition to being related to students’ self-reported levels of empathy, nonattachment was positively related to how kind and helpful their peers perceived them to be. Theoretically, without the self-fixation associated with attachment, individuals can be more present and other-focused.

The benefits of nonattachment for interpersonal relationships may also be due to a greater flexibility, and an absence of fixed beliefs that may adversely impact relationships (Whitehead, Bates, and Elphinstone, 2019). Being more nonattached and less fixated on personal beliefs or expectations assists individuals in seeing situations from others’ perspectives (Adyashanti 2017;
Hanh 1998). This can help the development and maintenance of relationships, as they do not have to fit in with preconceived notions of what a relationship is, and can be more flexible and open to growth and change. For example, trying to cling to the euphoric and elevated feelings associated with a new romantic relationship (Tennov 1979) can produce anxiety, stress and disappointment when the relationship experience inevitably shifts over time. In this case, the transition towards more stable feelings in the relationship may not be smooth, with expectations and pining for the way it was limiting the opportunities for the relationship to flexibly grow and change over time.

**The development of nonattachment**

A further focus of this study is to gain an understanding of how nonattachment and attachment developed. Theoretical writings on nonattachment suggest possible pathways for the development of nonattachment. It has been proposed that any experiences that promote self-reflection can assist in the development of nonattachment (Sahdra, Shaver, and Brown 2010; Thubten 2009). However, exactly how these experiences build nonattachment remains unclear, especially in relation to individuals with no meditative practice or affiliation with the contemplative traditions. Within Buddhism, nonattachment is believed to develop through meditation and engagement with the Buddhist path towards self-realisation (Hanh 2006). This is captured in a quote from the *Abhidhammatthasangaha*: ‘The wise, disciplining themselves long, understand the impermanence (of life), realize the deathless state, and completely cutting off the fetters of attachment, attain peace’ (Bodhi 1993, 229). Thus, it is via the Buddhist path towards understanding impermanence that one may develop nonattachment (Dalai Lama 2001; Hanh 1998).

The Buddhist pathway to nonattachment is supported by empirical evidence that nonattachment is cultivated through meditation. Sahdra, Shaver, and Brown (2010) found nonattachment to be higher in those who meditated for more than three hours per week, compared to those who did not meditate or meditated at lower levels. Feliu-Soler et al. (2016) and Cebolla et al. (2018) also found nonattachment was higher in meditators than non-meditators, while Montero-Marin et al. (2016) found that nonattachment increased after participation in a one-month meditation retreat. The silence and stillness developed in meditation is believed to foster greater objectivity and nonattachment (Adyashanti 2012).

Nonattachment has also been linked with being mindful (Sahdra, Ciarrochi, and Parker 2016; Tran et al. 2014). Adopting a mindful present awareness towards what occurs within the field of consciousness, whether perceived as positive or negative, can facilitate a letting go of grasping onto, or pushing away, experience (Sahdra, Shaver, and Brown 2010). Recent
research also suggests nonattachment may at least partially mediate the relationship between mindfulness and a range of positive psychological outcomes (Coffey, Hartman, and Fredrickson 2010; Lamis and Dvorak 2013; Sahdra, Ciarrochi, and Parker 2016).

Meditation and the practice of mindfulness are documented methods for building nonattachment; however, there are varying levels of nonattachment within the population, independent of meditation experience, and the relationship between meditation practice hours and nonattachment is weak (e.g. Sahdra, Shaver, and Brown 2010). This indicates nonattachment may be developed in other ways. Interestingly, nonattachment is consistently positively related to age (Sahdra, Shaver, and Brown 2010; Sahdra, Ciarrochi, and Parker 2016). This suggests that nonattachment develops over the lifespan. In theory, the many ups and downs in life provide opportunities to be self-reflective and to develop insight into the ever-changing nature of experience and the futility of trying to control it (Sahdra, Ciarrochi, and Parker 2016).

In addition to exploring the possible pathways to building nonattachment, a final area in need of exploration is the role nonattachment plays in individuals’ notions of personal development and their personal development goals. Recent research shows nonattached people score higher on longer term, optimal psychological developmental outcomes of wisdom, self-actualisation and self-transcendence (Whitehead et al. 2018b). This indicates nonattachment is associated with the higher stages of psychological development (Cook-Greuter 2000; Levenson et al. 2005) and may be associated with the psychological growth process.

The present study

The present study explored how nonattachment is experienced and how individuals perceive their nonattachment or attachment has developed. Although correlational research suggests associations between nonattachment and positive psychological outcomes, it is unclear how nonattachment and attachment are experienced in people’s lives, and how nonattachment and attachment develop over time. To address these questions, a qualitative investigation was conducted targeting the lived experience of individuals identified as either highly nonattached or highly attached. Theory, and the limited empirical work, provided the basis for four research questions: (a) how does nonattachment/attachment impact general life, (b) how does nonattachment/attachment impact individuals’ relationships, (c) how do individuals feel nonattachment/attachment has developed in their life and what has led them to interact with experience is this way, and (d) what role does nonattachment/attachment play in individuals’ notions of personal development and their personal developmental goals?
Method

Participants

There were 24 participants (six men and 18 women) aged from 19 to 61 (mean = 36.20, standard deviation = 11.00). The participants had a range of spiritual/religious affiliations and a range of levels of contemplative practice. Seventeen participants did not identify with a spiritual or religious tradition, two identified as Christian, two identified with a contemplative tradition, two identified with a general, nonreligious spirituality, and one identified as Muslim. Nine participants engaged with a contemplative practice, while 15 did not.

Measures

Nonattachment

The seven-item nonattachment scale (NAS-7; Elphinstone, Sahdra, and Ciarrochi 2015; Sahdra, Ciarrochi, and Parker 2016) was used as a measure of nonattachment that determined which participants were contacted for the highly nonattached/highly attached groups. The NAS-7 is a short form of the larger 30-item nonattachment scale (NAS; Sahdra, Shaver, and Brown 2010). The NAS-7 was chosen because it has shown good reliability and validity when compared with the original 30-item scale (Feliu-Soler et al. 2016; Sahdra, Ciarrochi, and Parker 2016). Participants rated their agreement with seven items (e.g. ‘I can let go of regrets and feelings of dissatisfaction about the past’) using a six-point Likert scale from 1 (strongly disagree) to 6 (strongly agree). Previous studies using the NAS-7 have shown it to be a valid and internally reliable measure (e.g. α = .85, Feliu-Soler et al. 2016; α = .82, Sahdra et al. 2015; α = .85, Whitehead et al. 2018).

Semi-structured interview

A number of interview questions were created for the study (see Table 1). Those questions were composed based on previous theory and research into nonattachment, and then confirmed after a pilot interview. A pilot interview was conducted on an individual scoring very high on nonattachment and lasted for 65 minutes. This pilot was used to trial the questions and gain any feedback from the interviewee. No major changes in question wording or sequence resulted from the original interview questions.

Procedure

Interviewees were drawn from participants in three studies (N = 1191), each of which included the NAS-7. Participants in the three studies were sourced in two ways. One group of participants comprised undergraduate psychology students
from a mid-sized metropolitan university in Melbourne, Australia, who received course credit for completing the survey \((n = 1109)\). The second group of participants responded to a page on a social media website detailing the study and linking to the questionnaire \((n = 82)\). Participants from the three studies were given the opportunity to provide their contact details for a follow-up interview. Of those who provided their contact details, based on their scores on the NAS-7, a list was formulated based on the extent to which their scores represented the very highest levels and very lowest levels of nonattachment. This method was chosen to ensure those interviewed had diverse experiences of nonattachment and attachment. Scores on the NAS-7 of the total sample ranged from 10 to 42 \((M = 32.09, SD = 6.16)\). Participants from the high nonattachment group had scores ranging from 39 to 42 \((M = 41.42, SD = 1.00)\), while participants from the low nonattachment group had scores ranging from 10 to 25 \((M = 19.33, SD = 4.30)\). For the high nonattachment group, the range of scores represented the top 87th percentile, with the mean score being the top 96th percentile. For the low nonattachment group, the score ranges fell below the 15th percentile, with the mean score falling in the 3rd percentile. A total of 12 interviews were conducted for each of the high and low nonattachment groups. This was based on the recommendations set out by Guest, Bunce, and Johnson (2006), that data saturation occurs within the first 12 in-depth interviews.

Participants were contacted by phone or email to request an interview. Approximately 50% of those contacted for interviews did not respond to the request or stated they did not wish to participate. The interviews were conducted in person or via video chat (i.e. Skype) and took between 52 and 90 minutes to complete. All interviews were recorded with a digital voice recorder. Interviewees were given a $30 voucher for their participation in the interviews.

At the beginning of each of the 24 interviews, participants were given a basic description of nonattachment and attachment, describing the ways in

<table>
<thead>
<tr>
<th>Table 1. Interview questions for high- and low-nonattachment groups.</th>
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<tr>
<td><strong>Interview questions</strong></td>
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<tr>
<td>Q1</td>
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<td>Q2</td>
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<td>Q3</td>
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<td>Q4</td>
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| Q5  | Participants were given three hypothetical scenarios: 
|     | – A conflict at work that could not be solved that day 
|     | – An experience of having a booked vacation cancelled at the last minute by the travel agent 
|     | – An experience of losing a job they had been told in the interview that they were successful in getting |
|     | Participants were then asked: How would you feel in this situation? How would you deal with the situation?

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which people can interact with their experience, either through trying to control what is occurring by clinging onto the positive or avoiding the negative (attachment), or through letting go of control and being open to experience as it changes (nonattachment). Participants were then asked if they identified with either of the descriptions. Twenty-one of the 24 participants clearly identified their pre-assigned high or low nonattachment group. Three participants from the low nonattachment group were less clear about their level of attachment and were asked to complete the NAS-7 again to assist them in identifying their level of attachment or nonattachment.

After each of the 24 interviews were completed, the principal researcher recorded his own reflections about the person interviewed. Once all the interviews and reflections had been recorded, they were transcribed by the principal researcher as this is an effective way for the researcher to become familiar with the data for thematic analysis (Riessman 1993).

**Thematic analysis**

After transcriptions, the text from the transcripts was divided according to the first four interview questions. The four content areas thematically analysed were: (a) how nonattachment/attachment played out in the subject’s life in general, (b) the role nonattachment or attachment played in interpersonal relationships, (c) how individuals felt their attachments or nonattachment had developed, and (d) individuals’ notions of personal development and how they viewed their personal developmental goals. Responses to the fifth question, relating to hypothetical scenarios, were analysed separately and relevant themes were integrated into one of the first four categories. Thematic analysis was conducted according to the stages set out by Braun and Clark (2006; see Table 2). In the present study, a theme was defined as something deemed to be important to the data in relation to the research questions, and that represented a recurring, patterned response or meaning within the transcripts (Braun and Clark 2006).

**Personal reflection**

Before detailing the analysis, it is important in undertaking applied thematic analysis of text or voice to take into consideration that the researcher responsible for the process has an effect on the analysis (Guest, MacQueen, and Namey 2014). To add in interpreting the findings, we therefore acknowledge the background of the senior author as interviewer and data analyst, and provide context into why the research was undertaken. RW is an experienced psychotherapist who has a personal experience with nonattachment associated with the teaching of the Eastern contemplative
traditions of Buddhism and Vedanta. This personal experience with nonattachment was developed initially through Mahayana Buddhism while studying in a monastery in Nepal, and then later through the teachings of Advaita/Vedanta. These experiences, in collaboration with a number of personal ‘peak’ experiences, provided him with insight into the interdependent and transient nature of experience, and the benefits of letting go of control. This initial understanding combined with having read countless books and articles on the subject have informed his understanding about the nature of nonattachment. Furthermore, his experience as a psychotherapist over the previous 10 years provided an avenue to witness the impacts of attachment and nonattachment and provided personal insight into the synthesis between the Eastern contemplative notion of nonattachment and Western psychological theory.

The background and subjectivity of RW were related to some implicit assumptions about the study. Aside from the general assumption that nonattachment would have a positive impact in individuals’ lives, RW assumed originally that there would be a spiritual component to the development of nonattachment that may have involved an understanding about the transient, interdependent nature of experience. He expected that those high on nonattachment may have engaged with spiritual texts and/or teachers or may have had spiritual-type experiences that played a role in cultivating nonattachment. This assumption was only supported in some cases, with the impact of suffering in major life experiences being a primary factor. This was perhaps one of the most interesting findings as it provided a

Table 2. Six phases of thematic analysis based on Braun and Clark (2006).

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description of the process</th>
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<tbody>
<tr>
<td>1. Becoming familiarised with the data</td>
<td>This phase involved conducting the interviews, reflecting upon them and noting any points of interest. This further involved transcription of the 24 interviews comprising more than 110,000 words. During the transcription process, further ideas were noted down.</td>
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<tr>
<td>2. Generating preliminary codes</td>
<td>Transcripts was re-read multiple times and data identified as relevant to the research questions was colour-coded and converted to a thematic table.</td>
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<tr>
<td>3. Searching for themes</td>
<td>The thematic table was analysed according to themes present within the specific questions given to participants. However, if certain themes arose in answers to other questions that were determined to fit more appropriately with another research question, they were included under that area (e.g. an answer from the question on ‘personal development’ may have contained a theme more relevant to the ‘development of nonattachment’ section).</td>
</tr>
<tr>
<td>4. Reviewing themes</td>
<td>Themes identified in phase 3 were checked against the data in the thematic table, and then again with original data.</td>
</tr>
<tr>
<td>5. Defining and naming themes</td>
<td>This phase involved further refining the themes, defining the meaning of each theme, and developing succinct names for each theme.</td>
</tr>
<tr>
<td>6. Producing a thematic report</td>
<td>This phase involved selecting the extracts that best captured the themes present. Final examination of themes and extracts was conducted.</td>
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unique insight into the cultivation of nonattachment and highlighted an avenue for future research. Similarly, when it came to the notion of personal development, RW's assumption was that most highly nonattached people would discuss personal development in terms of self-transcendence or moving beyond self, or enlightenment. This assumption was not supported, with individuals displaying varying notions of personal development and an absence of fixed goals. Although the subjectivity and assumptions of RW may have played a role in biasing the study, they also brought a useful insight to the interviews. RW's previous experience assisted him in walking alongside the interviewees in their experience, and asking questions that were directed at some of the core theoretical underpinnings of nonattachment and attachment.

Results and Discussion

Results of the thematic analysis are presented in four areas of focus. The first two areas relate to nonattachment and attachment in general life and interpersonal relationships. The third and fourth areas look at the development of nonattachment and attachment, and how nonattachment and attachment affected people's views of personal development. The themes present in the interviewees' accounts are outlined for the high and low groups separately, and a combined summary and discussion of the themes is presented at the end of each section. Interviewees' names have been changed to preserve anonymity.

Nonattachment and attachment in general life

High Nonattachment Group

Individuals from the high nonattachment group were explicit and insightful about the way in which nonattachment presented in their lives. Three key themes arose: (a) a mindful engagement with experience, (b) an acceptance of experience, and (c) a sense of ease and flow in life.

Mindful engagement with experience

Individuals reported that one of the first stages of their process of nonattachment was a mindful engagement with experience. This mindful engagement reflected a capacity to observe thoughts and feelings associated with an experience with meta-awareness, and a distancing from the experience so that it could be objectively evaluated. During this process, individuals assessed their experience and associated feelings as helpful or not, or controllable or not. The length of time required for this process differed depending on the intensity of the experience, occurring almost
instantly for some experiences, or taking up to a few days if the emotional reaction was very strong.

The interviewees reported that the process assisted them to move on from difficult situations. For example, Jane (34) explained how she deals with difficult issues:

Obviously, some things frustrate me . . . I might feel certain feelings and then observe them and question ‘What do I choose to do with this? Do I need to action something to make this go away?’ Or, if something happens and I think, ‘Well, that’s just how I’m feeling at the moment’ . . . it’s like a process I have to do, to be aware of what is real and what I can control and what I can’t.

This mindful, objective engagement with experience emerged as the first step in a process whereby individuals engaged with an acceptance of experience and a letting go of unhelpful thoughts and feelings.

**Acceptance of experience**

The interviewees demonstrated a capacity to deeply accept experience. This theme of acceptance involved acknowledgement of the inevitability of experience and a letting go of control. This theme emerged in descriptions of specific experiences but was also evident as a general attitude towards all experience. The acceptance is captured in comments such as ‘whatever happens, happens’, or a ‘trust in the universe’, or that experience unfolds in a way that is ‘meant to be’. For example, Gale (31) explained: ‘I have learned not to hold onto the situation and the story but instead trusting that if it’s happened, it’s happened, and I needed to go through that situation’.

This quote highlights an acceptance of experience as part of life and a trust that it has occurred this way for a reason. This was a common theme and, although individuals conceptualised this trust or acceptance differently (e.g. trust in God, or accepting the interdependence of experience), the general theme of a deep acceptance was prominent.

As part of their acceptance of experience, interviewees also saw challenging experiences as opportunities for learning and growth. Once individuals had accepted the inevitability of the experience, they discussed the potential to learn from the experience or to see it as an opportunity for growth. In response to challenging situations, the interviewees outlined a process whereby they questioned why the experience arose in the first place, how their perspective may be biased, and how they might best manage the situation in the future. For example: ‘I try to not get too hung up on things going a certain way, and that regardless of what’s happening in the situation, it’s still something to learn from or go through; it’s an experience’ (Serena, 34).
Ease and flow
The ease and flow theme captured an ability to navigate life without getting unduly stuck or fixated on experiences, thoughts and feelings. Whereas in the past they may have worried or ruminated a lot, interviewees explained that they could now let go of a lot of these behaviours and experience a sense of ease in situations that allowed them to flow. This is highlighted in a quote by Paul (61):

It makes life easy, it makes it flow ... you can live in the moment without worry or without those ego patterns from the past coming to affect the way you do things or the way you are in the world.

Paul’s quote highlights the positive impact he feels being nonattached has on his life. This sentiment was common for most of this group and, despite challenges, there was an overall ease and balance that they brought to their experience.

Low Nonattachment Group
People from the low nonattachment group came from varying backgrounds, ages, vocations and life experiences. However, the interviews yielded key themes related to the impact of attachment in their lives. These themes were (a) a sense of suffering, (b) control, and (c) concealment.

Suffering
Suffering was the most prominent theme and referred to the regular occurrences of negative thoughts and feelings. The negative thoughts and feelings were directly connected to how the individuals related to their experience, rather than the experience itself. Examples included negative self-evaluations and experiences of rumination, anxiety and worry. Jeff (48) highlights a common pattern of thoughts and feelings:

I doubt myself a lot, and I come to quite a low and think of myself as a bit of an imposter that is going to be found out ... I’m affected really strongly by those thoughts whether they are positive which can get me really up, or negative, which can get me really down.

The suffering experienced by individuals in the low nonattachment group was impacted by an inability to accept themselves or challenging situations. They often experienced immediate negative responses when situations did not go well. However, as many reported mental health diagnoses (e.g. depression and anxiety), these mental health conditions may have contributed to their negative affective responses and inability to let things go.
**Control**

The need for control refers to attempts to control experience and to avoid situations triggering feelings of discomfort or dis-ease. This is captured in a quote from Bella (26): ‘I do try and avoid situations that I am unable to control. If I know that I’m not able to control that situation, I will almost always not do it’.

Other controlling behaviours included creating structured plans for social interactions or an unwillingness to leave the home environment unnecessarily, due to feeling that fewer things could go wrong at home.

A need for control was also evident in perfectionism and extremely high personal standards. Interviewees described themselves as perfectionists or as having personal standards higher than they would ever place on anyone else. These standards were often beyond reach. For example, Bianca (38) stated:

> I’m a perfectionist so I tend to do things to death and I never know when to stop. I’m my own worst critic and I am really horrible to myself. It is very exhausting ... my expectations are so unrealistic that I almost always end up in a position where I feel really, really down on myself.

This quote highlights individuals’ attempts to control their environment, with constant attempts to do better or be better. However, frequently, expectations and high standards were never met due to constantly shifting goal posts, or experiences being outside the person’s control, which resulted in feelings of disappointment or failure.

Interestingly, some individuals from the low nonattachment group described that striving to attain such high standards had assisted them in their success at work, and to reach high levels of academic achievement. Interviewees spoke of never being happy with what they had achieved and were always left wanting the next thing. These individuals explained that this had propelled them in their career, or had made them more successful in their life, but also acknowledged the related feeling of inner discontent.

**Concealment of attachments**

Initially, in some interviews, attachments were not discussed openly or were only lightly touched on. However, as the interviews continued, interviewees became more forthcoming and open in relation to their behaviours. When questioned about this, two individuals described keeping their controlling behaviours hidden:

> I feel, as a front, I can remain unbelievably relaxed now. I guess it’s a little bit like a duck when people talk about a duck on the water, I’ll be working vigorously in my mind to keep that front and I need to make sure things are planned. (Ben, 44)
Similarly: ‘I always had a reputation of being extremely spontaneous but that was more of a front, where it was a controlled spontaneity’ (Jeff, 48).

These examples highlight the reluctance of some of the highly attached interviewees to express behaviours that may be perceived as negative and indicate attachments may be less observable in some people.

**Summary and discussion**

The thematic analysis provides insight into the pervasive impact of non-attachment and attachment in people’s lives. Consistent with theory, non-attachment emerged as a conscious process aligned with greater presence (Sahdra, Ciarrochi, and Parker 2016; Sahdra, Shaver, and Brown 2010). Interviewees described a process of nonattachment whereby they mindfully engaged with their reactions to experiences, and were able to accept the inevitability of the experience and let go of any fixation on unhelpful thoughts and feelings. This permitted people to be more present and allowed experiences to flow with minimal obstruction, even if the experiences were initially challenging or emotionally provoking. In contrast, attachments restricted individuals’ ability to flexibility engage with experiences, exacerbating rumination, worry and self-judgment that negatively impacted their mental health. This highlights the negative impact of attachment on rumination (Lamis and Dvorak 2013) and negative psychological symptoms (Bhambhani and Cabral 2016; Chao and Chen 2013; Sahdra, Shaver, and Brown 2010; Tran et al. 2014). Whereas attachments produce maladaptive psychological strategies (Lamis and Dvorak 2013) aimed at being in control, nonattachment assists people to be more objective and less controlling towards experience, permitting them to learn and grow from difficult life experiences, rather than engaging in self-inflicted worry and rumination involved with attachments (Whitehead et al. 2018).

**Interpersonal relationships**

**High Nonattachment Group**

The main interpersonal themes evident within the high nonattachment group’s approach to relationships were (a) perspective taking, (b) empathy and compassion, and (c) removal of expectations on others.

**Perspective taking.** The perspective-taking theme captured references to a person’s ability to move beyond their own perspective and to actively try and see things from others’ perspectives. Perspective taking was most apparent in descriptions of challenging situations but was also evident in everyday interpersonal relationships. All those in the highly nonattached group indicated that when dealing with interpersonal conflict situations,
they would investigate their own emotional responses but also consider the situation from others’ perspectives. Serena (34) described her response to a hypothetical situation in which she had been insulted by someone at work: ‘I’d be feeling quite annoyed and frustrated but I would be consciously trying to think, what’s going on for them that’s making them feel like that’.

**Removing expectations**

Removing expectations involved a process of letting go of expectations of others to fit with preconceived notions of what was right. Interviewees reported their relationships benefitted from removing expectations, whereas having expectations could lead to feelings of being let down or could inhibit authentic communication. Serena (34) reflected on letting go of an expectation that her relationships needed to make her feel good:

I’m not relying on somebody else’s mood to make me feel good and if somebody doesn’t want to be in a good mood then that’s fine, they can be how they want to be and they’re not necessarily impacting me and I’m not looking to change that.

Anna (30) also noted, ‘In regard to relationships, there is a letting go of expectations. For me, it’s been really positive to understand that everybody’s on their own path’.

**Empathy and compassion**

The theme of empathy and compassion for others manifested as an ability to be understanding and accepting of people, regardless of circumstance. The interviewees acknowledged and empathised with the difficulties and challenges that others may be having, even when presented as challenges to their relationships. For example, Grace (31) described:

I’ve developed a bigger level of compassion towards other people and accept that they are human, and they are going to make mistakes, so it kind of took the pressure off always expecting people to be a certain way, or expecting situations to be a certain way.

The theme of compassion arose often in descriptions of people’s reactions in a conflict situation. Paul (61) explained how he would react, given time to reflect, to an individual verbally insulting him at work:

Firstly, I would have compassion for them because I would realise that it is coming from their egoic places. I might have a look at whether there was something that I did . . . that they have a reaction to, then I would have compassion for them.
Low nonattachment group

People from the low nonattachment group described positive and negative interpersonal relationships but focused most on difficulties in their relationships. The key themes that emerged were (a) expectations on others and (b) fear of losing/disrupting the relationship.

Expectations of others

Unlike the high nonattachment group, people in the low nonattachment group often had inflexible expectations of the people around them. In relationships, this involved a set of standards they felt people should meet, including courtesy, loyalty or a general ‘right’ way of being. Participants reported that they had standards for their friendships and that once someone broke their trust, they could end the relationship as they found it difficult to let go of past actions. This is highlighted by Sophie (27) in specifying her moral standards for people in her life:

I believe that you make a choice and you have agency in your life, and you can either follow morals or you can knowingly be amoral or immoral. So, I don’t particularly have time for people that I find are amoral or immoral if they do things that hurt others … It’s very black and white to me, either you are kind across the board or you aren’t.

Here, Sophie describes an inflexible set of black-and-white moral standards that are expected of anyone with whom she would want to have a positive relationship.

When others contravened the standards and expectations of the interviewees, this could trigger an emotional reaction and feelings of distrust or being unsafe:

If I can’t connect with them on a level that I’m comfortable with, then it’s pretty much done. I can’t trust them, I don’t want to talk to them. I feel very nervous if I have to work with them. (Bianca, 38)

When individuals’ expectations were not met, they displayed a capacity to end relationships or judge them as unworthy. However, they also displayed a fear of losing positive relationships.

Fear of losing or disrupting the relationship

This theme was encapsulated by fears of confrontation or of doing something that might jeopardise relationships. The fear involved a sense of clinging to the relationship and engaging in actions to ensure the relationship was not disrupted. Attempts to maintain a stable relationship manifested as behaviours that often were personally detrimental, such as avoiding confrontation:

I’m quite clingy and I don’t like confrontations. I like to be, even if I haven’t done anything wrong. I’d be the one to say sorry because I just like to avoid
any sort of issues with people. It might negatively impact myself but not the relationship. (Emma, 22)

Summary and discussion

The present data align with the emphasis in Buddhism that compassionate relationships involve freedom from rigid views about others (Sahdra and Shaver 2013). The results also support previous quantitative findings, that nonattachment is associated with greater harmony in relationships (Wang, Wong, and Yeh 2016), empathy and kindness (Sahdra et al. 2015). Nonattachment appears to be an important factor in mature healthy relationships that allows greater interpersonal flexibility and understanding, and assists individuals to be present for others rather than being fixated on the self-perspective (Sahdra et al. 2015). In contrast, attachments hinder healthy relationships through attempts to control them with rigid expectations and aversion to challenging, but potentially beneficial, interpersonal interactions. Furthermore, whereas nonattachment assisted individuals in dealing with conflict situations, attachments limited people’s capacity to deal with conflict, as they tended to be more reactive and could become stuck in the emotion associated with the experience, finding it difficult to accept and move on.

The development of nonattachment

High Nonattachment Group

Two themes emerged in this group’s accounts of developing nonattachment: (a) suffering (as a catalyst for growth), and (b) active engagement with self-reflection/contemplation. In almost all cases, it was a combination of suffering and self-reflection or contemplation that assisted in the development of nonattachment.

Suffering (as a catalyst for growth)

All but one of those in the high nonattachment group described a very low moment, or moments in their lives where they experienced a great deal of psychological pain. The pain and turmoil associated with the experience acted as a catalyst for change in their lives and propelled them towards interacting with their experience in a different, more nonattached, and psychologically healthy way. These moments were not necessarily epiphanies. In most cases, they were described as beginning a trajectory from attachment to nonattachment. This is captured by Jane (34) describing the lowest point in her life, when she had been very ill for about a year and needed a serious operation:
He [the doctor] said if you don’t have this operation, you will die. And, I think that was the moment where I thought, I actually have to be in control of what I want and how I think. When I was sick, I didn’t care what happened, whereas in that moment when the doctor said that to me, it was more like okay, this is real. I need to be honest with myself, and I think that was the big shift.

Jane went on to observe that this experience triggered a lot of self-reflection and a subsequent engagement with Buddhist teachings.

Another example of pain and suffering being a catalyst for a movement towards nonattachment came from Grace (31), who had experienced an intense psychological and emotional low point in her life:

I think that pain and that angry energy gave me the motivation to want to do better and to change my life and not to be the person I was being before … It was like the pain was a catalyst for me to get out of the hole because before I wasn’t depressed, but I wasn’t happy … I didn’t feel alive. After that, it was almost like the pain I felt made me want to get out of it.

Self-reflective and contemplative practice

Almost all the interviewees referred to an engagement with self-reflection or contemplation. This took one of three forms: engaging in teachings and books, psychotherapy/counselling, and meditation/contemplative practice. For example, one individual spent time in a monastery and engaged in ongoing Buddhist practice, while others had read books relating to the philosophy of impermanence or had engaged in psychotherapy or counselling. Self-reflective practice was described as a guide to assist along the path towards letting go, rather than necessarily being a direct catalyst. Grace (31) explained that although the pain associated with her low point (see above) was the trigger for change, her psychotherapy after this shift assisted her in developing further and letting go more. She mentioned that psychotherapy helped her to

let go of the story of my childhood and embrace what all those situations gave me … and have bad experiences come up and let myself feel the pain but let myself move forward and know and trust that it happens for a reason, and to take the weight off me.

Other individuals identified the benefits of more formal meditation practices. Two discussed attending an intensive Vispassana (insight meditation) retreat, and learning the importance of letting things go through meditation:

The Vipassana helped out too because it is all about sitting with uncomfortable situations, so through that practice you then learn that you will survive those difficult sensations, and this gives you some clarity and peace of mind. (Charlotte, 38)
Similarly, an ex-truck driver and concreter who had left his possessions, house and job and spent a lot of time at a monastery reported that a Vipassana retreat had helped him build nonattachment:

After I came out of Vipassana I just felt blissful and I knew what to do with the rest of my life, in every second of it, it’s just ‘being’ … Vipassana was definitely a huge accelerator of that stopping and letting go, it was huge … I guess it is really just the practice of being present, being in the present moment, and I suppose that’s what I learnt. (Damian, 53)

**Low nonattachment group**

Individuals from the low nonattachment group displayed varying levels of insight into the development of their attachments. Some reported they felt attachment had always been there, while others identified specific contributors. The two major themes that arose were (a) early childhood experience, and (b) traumatic experiences in later life.

**Early childhood experience**

Although some interviewees recalled specific childhood experiences related to attachments, many identified attachments from a very young age, and felt as though they had always exhibited signs of anxiety, worry or controlling-type behaviours. This is exemplified by Claire (19), who explained her attachment to others:

Ever since I was a baby I was told that I could never sleep in a room alone … my aunts would usually come in and comfort me and if I felt their presence leave, or if I felt like I was alone, I would immediately wake up and start crying. Since I was a child, it’s always been like that. I don’t like to be left on my own and I would prefer the comforts of someone that would comfort me as it’s soothing, happy and nice.

Others recounted their coping strategies as young children and described feeling like some of these early behaviours were the origins of a lot of their attachment behaviours as adults. Bianca (38) developed a need to be perfect to gain approval from her father and others:

This is something I’ve experienced from a very long time ago. I always used to joke that my brother was the chosen one. I kind of felt like he got everything handed to him on a silver platter, and I really had to work for it. I always was the one blamed even when he did something wrong. So, it was tough, I became a bit of a perfectionist out of that, to try and get approval and attention. (Bianca, 38)
Traumatic experiences in adulthood

Several interviewees discussed the impact of traumatic experiences that resulted in them trying harder to control their experiences. They felt that even though they may have had early traits of attachment, these major life experiences exacerbated them in their later life.

Amy (41) described the intensely traumatic experience of having her 5-year-old son die in her arms 10 years prior, and that subsequently she was not given the support she needed to get through the experience. The follow-on effect from this experience was that she became more withdrawn and felt less comfortable around others:

I’m not the same person, I’m very withdrawn …. Now I don’t even like going out to dinner with my Mum and Dad, I can stand about an hour but after that I have to come back here, here is my safety zone …. It’s probably made me seek out my safety zone more.

Although Amy recalled elements of engaging with attachments before this experience, she believed the experience had cemented those attachments and caused them to get stronger and stronger.

Another example of the impact of major life experiences on attachments came from Kath’s (43) account of being in a violent domestic relationship for 17 years. Kath associated her present high levels of attachment with having her life controlled by her ex-husband. Even though the relationship had ended, she was still living with its effects and she described that controlling her environment was the way she coped in her life.

Summary and discussion

The data highlight the impact life experiences have in developing nonattachment and attachment. The findings suggest nonattachment is a quality that develops over time (Sahdra, Shaver, and Brown 2010, 2016), and that the suffering associated with individuals’ most challenging life experiences, combined with their engagement in contemplative or self-reflective practice, provides the ideal conditions for a shift from attachment towards nonattachment. These findings support the notion that nonattachment can be developed through contemplative practice (Feliu-Soler et al. 2016; Montero-Marin et al. 2016; Sahdra, Shaver, and Brown 2010, 2016), but uniquely indicate it can also be developed through other self-reflective practice such as psychotherapy or contemplative teachings. The combination of the transformational growth gained from their most difficult life experience (e.g. Weststrate and Gluck 2017; Whitehead and Bates 2016), with the meta-awareness and self-understanding gained from engagement in self-reflective or contemplative practice, appeared to assist people to
develop insight into the transience of experience and the unhelpful nature of their attachment behaviours.

In contrast, the low nonattachment group believed traumatic experiences contributed to their attachments. The major difference between the two groups was that the most challenging experiences of the low nonattachment group remained unresolved and had not been positively transformative. These individuals were still strongly affected by their challenging life experiences and engaged in attachments as coping strategies formed in response to the lasting impact of these experiences. This suggests the lowest moments in a person’s life that are unresolved can hinder positive self-transformation (Pals 2006).

Furthermore, the results show attachments can be linked with early childhood relationships (Sahdra and Shaver 2013; Sahdra, Shaver, and Brown 2010). Attachments emerged as protective strategies developed in response to traumatic experiences in adulthood and challenges to emotional, psychological or physical safety that occurred early on in life.

**Personal development**

**High nonattachment group**

In general, highly nonattached people saw personal development as a fluid process that was always changing. The two major themes that arose were (a) inner peace or contentment, and (b) letting go of goals.

**Inner peace or contentment**

Most individuals saw personal development as an inner journey towards emotional and psychological development, aimed at building a sense of inner contentment and/or removing unhelpful behaviours. Serena (34) viewed personal development as

Not needing external validation, getting to the point where I am totally one hundred percent comfortable with myself and my role in what I’m doing, not needing validation from anywhere else and being able to accept things really calmly and gracefully.

Similarly, Kate (35) stated:

I view personal development as something that you do to work on yourself, to better yourself and to be a better human in your interactions with people and your environment. And, allowing yourself to be vulnerable enough to work on that.

**Letting go of rigid goals**

A majority of the highly nonattached group regarded the setting of personal development goals, especially fixed goals, as unhelpful, as these are things you can fixate on or fail at. They mentioned that having more general goals,
such as being more present or letting going of worry, were more helpful because they allowed them to be open to life as it unfolded, rather than fixating on specific outcomes. For example, Paul (61), who had been engaging with a spiritual growth and development process for 16 years, noted:

The longer I do spiritual work ... the more I feel like there is no goal, really. The goal is just being in the moment and enjoying what you have and being a human being in this place in time and space.

This sentiment was echoed by Adam (27):

For me, it just feels like there’s isn’t a goal, it doesn’t feel like I have to force it. It is just something I want to do and so I don’t really have an attached idea of the outcome ... I don’t really have a plan to reach a certain outcome, things are happening but they’re happening step by step and day by day. I feel like there is an absence of forcing the journey. There is effort but no forcing of anything.

Low nonattachment group

Unlike the high nonattachment group, the low nonattachment group identified more rigid goals and notions of personal development that encompassed both personal change and personal achievement. The two major themes that arose were (a) external achievement, and (b) personal growth.

External achievement

External achievement was the most prevalent theme and, in this context, referred to a perception of personal development equated to succeeding in education and vocation, being financially stable, and other examples of achievement. For example, Emma (22) described her developmental goals as ‘Finishing university, getting a job, moving out of home, having a long career, starting a family, getting married’.

Similarly, Amy (41) saw her personal development as moving towards:

Being able to get the house, and a better car and set-up, and get some horses so I can go back to where I was when I was younger ... My goal is to get to the point where I can become a psychologist or counsellor.

Personal growth

This theme captures notions of personal development that involve a letting go of behaviours perceived to be unhelpful, and a journey towards feelings of contentment and personal growth. For example, Claire (19) explained her view of personal developmental as ‘Moving towards stability. Everything would have a balance, so it doesn’t tip and everything doesn’t go sideways. It is a mental and emotional stability’.
Irene (30) also discussed her personal development goal:

I think I would be more sure of myself, I think I’d be more comfortable socially ... Just being easier in the world, I guess. A lot less tension and anxiety in situations that I feel that in now. More confident.

Interestingly, even though some described quite elaborate notions of personal growth-focused development, some found it difficult to apply these same notions to themselves. For example: ‘I think because of who I am it would be a bit more difficult to feel contentment and inner peace but for other people it might be a bit easier’ (Nadine, 23).

**Summary and discussion**

Nonattachment and attachment had implications for the way interviewees viewed personal development and their personal goals for the future. The high nonattachment group viewed personal development as movement towards contentment; however, they also displayed a lack of fixed goals and a greater focus on letting go or being present. Nonattachment appeared to be linked with a greater sense of presence and acceptance of experience, and a comfort with letting it unfold (Whitehead et al. 2018b). Not having fixed (or any) overarching goals removed a constant yardstick with which to measure the self, and thus facilitated greater flexibility, allowing for deviations from the path and an acceptance of where an individual is at any given time. In contrast, the low nonattachment group had more clearly set goals. Having clearly definable, achievable goals was perceived as providing greater control when looking towards the future. However, some of the goals of the low nonattachment group remained slightly out of reach and contributed to an ongoing pattern of attachment. Interestingly, the high and low nonattachment groups shared themes aligned with inner growth and development and being more content. However, the goals of the low nonattachment group captured a more rigid view of how they wanted their life to be, whereas the high nonattachment group had more general notions of personal development leading towards a sense of inner peace.

**General discussion**

The present study is the first qualitative investigation of the lived experience of high and low levels of nonattachment. The findings are generally consistent with the theory behind nonattachment, and underscore the positive impact nonattachment has on a range of areas in a person’s life. Highly nonattached individuals interacted flexibly with their experience, showed a strong capacity for self-reflection and could view things from multiple
perspectives. In contrast, the individuals with low levels of nonattachment described more rigidity in their thinking, had difficulties seeing things from others’ perspectives, could struggle with their mental health, and often engaged in unhelpful cognitive strategies such as rumination and worry. Interestingly, suffering was seen as a major contributor to the development of nonattachment and attachment, with highly nonattached individuals using these experiences as a catalyst for the development of growth and nonattachment, while people with low nonattachment remained stuck in the negative effects of the suffering. Furthermore, individuals with high levels of nonattachment viewed personal development in terms of an inner journey towards contentment and did not have fixed goals for their development. In contrast, individuals with low levels of nonattachment had more specific goals focused on external achievement and personal growth.

**Implications and methodological considerations**

The present findings provide insight into the lived experience of nonattachment and attachment and have implications for understanding how individuals’ interaction with their experience impacts them in areas such as relationships and mental health. For example, the thematic analysis suggests that fixed beliefs about what a relationship entails may underlie people’s interpersonal challenges, and that removing fixed expectations on others appears to underlie healthy relationships, allowing them to flexibly grow and change. Similarly, letting go of fixation on specific outcomes appears to allow life to flow with fewer experiences of distress and a greater sense of ease and balance. The data also contribute to understanding the possible pathways to building nonattachment. In addition to supporting the theoretical links between contemplative practice and nonattachment (Montero-Marin et al. 2016; Sahdra, Shaver, and Brown 2010), the findings highlight the role that taking a self-reflective and open approach to processing difficult life experiences can have on building nonattachment.

The findings also highlight the negative impact that attachments can have on mental health. This has implications for the way in which negative mental health symptoms, such as anxiety and worry, may be conceptualised. Understanding mental health symptoms in terms of attachment, or fixation on specified outcomes, may provide insight into how best to assist individuals suffering from these symptoms. Future research on interventions designed specifically to build nonattachment and reduce fixation on experience being a specific way may present an effective avenue to assist in ameliorating the impact of the negative psychological symptoms. The data also suggest that nonattachment is best developed through cognitive and experiential pathways. Cognitive pathways, which focus on the acceptance and resolution of difficult life experiences, combined with experiential
pathways, such as practices aimed at building wisdom into the transient nature of experience, may prove most efficacious for building nonattachment and letting go of fixation on experience.

There were a number of methodological considerations in the present study. The samples used were predominantly from a university student population; thus, the generalisability of the findings is limited, and future research may benefit from investigating other cohorts. Another potential limitation is that participants were informed whether they were in the high or low nonattachment group. This may have played a role in causing participants to answer in line with the group they had been assigned, rather than answering more freely. However, as a focus of the present study was to investigate how nonattachment/attachment behaviours were experienced, it was necessary to alert interviewees to the focus of this study. Furthermore, for three cases, attachment behaviours might not have been as openly discussed if their scores on the nonattachment scale had not been mentioned. Another consideration is that the high and low groups were assigned using a self-report scale which may or may not have accurately captured individuals’ levels of nonattachment. However, the interviewees identified with the descriptions of nonattachment and attachment and appeared to display behaviours exemplifying high and low levels of nonattachment.

In conclusion, the present study provides the first exploratory investigation of the lived experience of nonattachment and attachment. The exploration of individuals’ descriptions of how their attachment or nonattachment impacted their life, and how they felt it had developed, provided qualitative support for the previous quantitative evidence highlighting the importance of nonattachment in individuals’ quality of life. This study provides an understanding that how individuals interact with experience, either through fixation and control or by letting go of fixation and control, can have profound impacts in a range of areas of life. Furthermore, the present study provides unique insight into the possible pathways to developing nonattachment and attachment that go beyond findings of previous research. These qualitative findings are hopefully the first of many on how this important quality is experienced and how it may be developed and utilised to facilitate individuals’ well-being and mental health.

**Disclosure statement**

No potential conflict of interest was reported by the authors.
Notes on contributors

Richard Whitehead is a psychotherapist and doctoral candidate at Swinburne University of Technology, studying in the field of Buddhist psychology, investigating the construct of nonattachment. Richard has published articles in the field of nonattachment and life narratives.

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References


Letting Go of Self: The Creation of the Nonattachment to Self Scale

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The Buddhist notion of nonattachment relates to an engagement with experience with flexibility and without fixation on achieving specified outcomes. The present study sought to define, create and validate a new measure of nonattachment as it applies to notions of the self. A new construct of “nonattachment to self” (NTS) was developed, defined the absence of fixation on self-related concepts, thoughts and feelings, and a capacity to flexibly interact with these concepts, thoughts and feelings without trying to control them. Two studies were conducted in the development of the new scale. With expert consultation, study 1 (n = 445) established a single factor, internally consistent 7-item scale via exploratory factor analysis. Study 2 (n = 388, n = 338) confirmed the factor structure of the new 7-item scale using confirmatory factor analyses. Study 2 also found the new scale to be internally consistent, with evidence supporting its test-retest reliability, criterion, and construct validity. Nonattachment to self-emerged as a unique way of relating to the self, distinct from general nonattachment, that aligned with higher levels of well-being and adaptive functioning.

Keywords: nonattachment, nonattachment to self, scale development, self-concept, Buddhist psychology

INTRODUCTION

A person’s notion of self has become an important element in research on individual suffering. The sense of self, and fixations on self-focused thoughts and feelings are associated with a range of negative psychological symptoms such as depression and anxiety (Lemogne et al., 2009; Kyrios, 2016). Recently, concepts from Buddhist psychology (i.e., understanding the Buddhist study of the human condition though current psychological knowledge; Olendzki, 2003) have been investigated in relation to a negative relationship with self. Interventions based on self-compassion and mindfulness that positively address how individuals relate to their self, have been associated with a range of positive psychological outcomes (Shonin et al., 2014; Wayment et al., 2014; Woodruff et al., 2014). Nonattachment is another Buddhist construct that has recently been shown to have major psychological benefits (Tran et al., 2014; Ju and Lee, 2015; Sahdra et al., 2016) but is yet to be investigated in relation to the self.

Nonattachment directly captures an individual’s relationship with their experience and highlights a capacity to suspend attempts to control experience through clinging to experiences perceived as desirable or avoiding experiences perceived as undesirable (Sahdra et al., 2010; Sahdra et al., 2016). An important dimension of nonattachment that is central to the Eastern contemplative traditions, is nonattachment to an independent, static self (Rāhula, 1959; Hanh, 1998; Hanson, 2009; Thubten, 2009). Although a measure has been developed to assess nonattachment in terms of how it relates to one’s life in general (Sahdra et al, 2010), currently there is no measure that directly assesses nonattachment in relation to the self. The present study aimed
therefore, to develop a measure of “nonattachment to self,” conceptualized as the extent to which individuals can interact with their self-related concepts, thoughts and feelings without fixation, and without a need for the self to be different than it is.

The Role of the Self in Suffering

The way we perceive and interact with “self” is an important determinant of our behavior and quality of life. While there is no agreed framework in psychology for researching the important folk idea of “self,” there is a resurgence of interest in self-related constructs, especially in clinical psychology (Kyrios et al., 2016). One theme in the current literature posits that many facets of well-being are negatively impacted by an intrapersonal stance which elevates the self-concept as a fixed thing through which experience is filtered and weighed. Perceptions of this fixed self-concept which are overly negative have shown to relate to negative mental health symptoms such as anxiety and depression (Beck et al., 1989; Mor and Winquist, 2002; Lemogne et al., 2009), whereas fixating on positive self-concepts can be associated with narcissism, excessive defensiveness (Rhodewalt and Eddings, 2002) or feelings of superiority over others (Egan, 1997).

In Buddhism, a self that exists independent of experience is seen as illusory, and it is considered a delusion to believe that happiness arises out of fulfilling the desires of such a permanent self (Scarborough, 2009). Ignorance is also defined by the grasping at the separate self, in which power is given to the perceived existence of a self that is the ruler of experience (Dalai Lama, 2009). This mistaken perception drives people's attempts to protect the self-delusion causing anxiety and suffering (Chang et al., 2014). In the Buddhist psychological literature, it is this identification of the self as fixed, and the fixation on either positive or negative aspects of self, that can be defined as attachments toward the self. Theoretically, it is attachment to the self that creates egocentric functioning (Ardelt, 2008; Van Gordon et al., 2016) and thus lies at the core of individual suffering (Hanh, 1998; Dalai Lama, 2001). The Buddhist path involves a drive toward letting go of this attachment to the static self (Donner, 2010) and thus a transcendence of personal suffering.

Attachments to the self can emerge in many forms. The construct of inner defenses, or defense mechanisms highlight attachments to the self. In theory, such defenses aim to preserve the self-concept by keeping away anything perceived to be incongruent with the self-structure, even if this is detrimental to the self (Rogers, 1965; Kernis and Heppner, 2008). For example, if an individual receives criticism they perceive as a threat to self-esteem, they can engage in defenses such as dismissing the experience or the person communicating it, as a means to protect their self-esteem and view of self. Similarly, experiences that underlie a vulnerability to depression such as excessive shame or guilt (Kim et al., 2011) can also be viewed as attachments toward a static, unchanging self (Whitehead et al. submitted) and arise when the self is harshly judged or is judged to be fundamentally flawed (Kyrios et al., 2016).

Many psychological interventions address factors associated with the self-concept that exacerbate negative psychological symptoms (Kyrios et al., 2016). For example, schema therapy aims to draw attention to maladaptive schemas about the self and seeks to heal unhelpful schemas and build healthier responses to experience (Rafaeli et al., 2016). Similarly, cognitive behavioral therapy aims to produce therapeutic change by modifying individuals' biased and unhelpful self-representations (Clark, 2016). More recently, mindful self-compassion interventions have been shown to reduce the impact of depressive symptoms (Pauley and McPherson, 2010; Krieger et al., 2013; Friis et al., 2016) through building a kinder, accepting and more compassionate relationship to self (Neff, 2008).

Self-compassion is a further construct rooted in Buddhist psychology, and research indicates that taking a more self-compassionate, balanced stance toward the self can be beneficial for mental health (e.g., Neff, 2003). Self-compassion involves a non-attached position toward negative self-focus and “requires taking a balanced approach to one’s negative emotions so that feelings are neither suppressed nor exaggerated” (Neff, 2008, p. 98). Like nonattachment to self, self-compassion incorporates the benefits of taking a less rigid approach to self. One difference between self-compassion and nonattachment to self is that self-compassion emphasizes overcoming negative self-focus, whereas nonattachment to self involves removal of an over-focus on the self, regardless of valence. In theory, any attachment or fixation on the self-concept, whether good or bad, can be problematic due to the ever-changing nature of experience. For example, if an individual clings to positive notions of self, such as being a “good student,” if this positive view is challenged by receiving a bad mark on an exam, this can elicit feelings of defensiveness, putting others down, or further attempts to compensate for the incongruence between that ideal self-concept and the reality of the situation which is ever-changing (Epstein, 2007). Being non-attached toward the self, therefore, limits incongruence between experience and the self-concept, allowing an individual to move through their life with greater flexibility, an understanding of the ever-changing nature of the self and a view of self that is free from expectation and fixation.

In addition to Buddhist conceptualizations, the notion of being non-attached toward the self also appears to be a key theme in the optimal stages of psychological health (Ardelt, 2008). Moving beyond self-fixation and the concerns of the individual self is a core component of a range of theories of optimal psychological functioning. Rogers (1961) and Maslow (1954) both proposed that individuals operating at the higher stages of psychological development demonstrate a reduced fixation on the self and a propensity to move beyond self-interest toward a more other- and universal-focus. Similarly, theories of adult development such as Levenson et al.’s (2001) liberative model of adult development or Loewinger’s (1976) stages of ego development propose the higher stages of adult development involve a reduction of attachment toward the ego and a transcendence of self-focus and self-fixation.

Although the benefits of nonattachment to the self have been outlined in theory, no research has been conducted on the construct of nonattachment to self. In the absence of any established measure of nonattachment to self, research on the more general construct of nonattachment shows that letting go of attachments and attempts to control experience in
general, is beneficial for well-being. Research using Sahdra et al’s (2010) nonattachment scale (NAS) shows that higher levels of nonattachment are associated with greater short-term, subjective well-being (Sahdra et al, 2010), more longer-term, pervasive psychological well-being, (Ju and Lee, 2015; Whitehead et al., 2018), and reduced amounts of negative psychological symptoms such as rumination (Coffey and Hartman, 2008), depression, anxiety, and stress (Sahdra et al, 2010). These findings suggest the energy spent trying to cling to or avoid experience can inhibit a greater sense of presence and well-being across a range of different areas in a person’s life (Sahdra et al, 2010), and that letting go of attachments can ameliorate the impact of negative mental health symptoms.

The Present Research

The present research involved two sequential studies directed at creating a psychometrically valid measure of nonattachment to self. As general nonattachment appears to have psychological benefits, nonattachment specific to the self may be equally, or more beneficial. Study 1 details the development of a scale to measure nonattachment to self in the general population. This involved an initial consultation with primary and secondary texts as well as consultations with experts in the field to develop an item pool. These items were then subjected to exploratory factor analysis (EFA), and internal consistency of items in identified factors was established. Study 2 examined the validity of the factors identified in Study 1 via two confirmatory factor analyses (CFAs). The new scale was also tested for internal consistency and test-retest reliability, as well as criterion, convergent and discriminant validity. Furthermore, establishing a nonattachment to self measure that is distinct from general nonattachment was crucial to the validity of the new measure. Therefore, a discriminant analysis using nested models in CFA was conducted to test the distinctiveness of the new scale.

STUDY 1: SCALE DEVELOPMENT AND CONTENT VALIDATION

Preliminary Item Construction

The first stage of scale development involved creation of an initial item pool. Numerous primary texts were consulted (two of the major text consulted were the Abidhamma, 1993, third century BCE and the Upanishads, 2000, 8–5th BCE) as well as numerous contemporary texts from Eastern contemplative traditions that address notions of no-self and nonattachment to self (some of the major texts consulted were: Hanh, 1998, 2006; Thubten, 2009; Adyashanti, 2012). A total of 30 items was developed from this research. The second stage involved a two-step consultation process with seven experienced teachers and practitioners from relevant disciplines (i.e., Theravadin Buddhism, Mahayana Buddhism, Advaita/Vedanta). These experts were experienced in theory and practice relating to ego-attachment and letting go of attachment to the egoic self. This consultation helped define the construct and the item pool was increased based on this definition. As the existing measure of nonattachment is a reliable and well-validated measure (e.g., Arch et al., 2016; Sahdra et al., 2016; Van Gordon et al., 2016); Sahdra et al’s (2010) definition of nonattachment was used in consulting with experts. Nonattachment was defined as the “subjective quality of not being stuck or fixated on ideas, images, or sensory objects and not feeling an internal pressure to acquire, hold, avoid, or change” (Sahdra et al, 2010, p. 118).

The first step of the consultation process produced a definition of nonattachment to individuals’ self-related thoughts, feelings, and concepts. Nonattachment to self was defined as the absence of fixation on self-related concepts, thoughts, and feelings and a capacity to flexibly interact with these concepts, thoughts, and feelings without trying to control them. On the basis of suggestions given by the experts and insights gained during discussion, 86 new items were created, resulting in a total item pool of 116 for further investigation. The number of items in the item pool are in line with previous research into similar scales measuring nonattachment (Sahdra et al, 2010) and mindfulness (Brown and Ryan, 2003).

In the second step of the consultation process, experts rated the 116 items on clarity and the extent to which each item captured the construct. A number of items were found to lack clarity or failed to capture the agreed upon nature of the construct. Other items were identified as lacking appropriateness for non-meditators, or for inadvertently assessing related but distinct constructs (e.g., mindfulness, self-transcendence). The process of consulting relevant texts and experts highlighted that in Buddhism, nonattachment to self is discussed in terms of developing an understanding of the illusory nature of the self. However, as the construct of nonattachment to self-needed to be applicable to the general population, with or without meditation experience, most items referring to the non-existence of a separate self, or illusory nature of the self were removed. On completion of the review stage of the consultation process, 64 items remained for exploratory factor analysis (EFA).

Method

Participants

The sample of 445 comprised 124 men and 321 women who aged from 18 to 77 years (M = 35.77, SD = 11.84). Most respondents did not report any religious or spiritual affiliation (51.2%), others identified as Christian (22.2%); 10.8% identified with a general, non-religious spirituality, 8.3% identified with a contemplative tradition (i.e., Buddhism, Vedanta), 2.7% identified as Muslim, 1% identified as Hindu and 3.8% other. The majority of participants (51.7%) engaged with a contemplative practice (e.g., meditation, mindfulness) for an average of 3.4 hours per week.

Procedure

Participants were recruited in two ways. First, psychology students from a mid-sized university in Australia were given course credit for completing the questionnaire (n = 363). Second, participants were sourced by a snowball method via a social media website where a brief description of the study was posted with a link to the online questionnaire (n = 82). This method has been used in similar scale development papers on self-compassion (Raes et al., 2011) and follows previous studies (Brown and Ryan, 2003; Sahdra et al, 2010) which have
utilized community samples when developing measures to assess Buddhist psychological constructs.

All participants completed an online questionnaire containing the 64 items in their own time. Before being presented with the items, participants were prompted with the statement “Below are a number of statements related to your experiences and how you view yourself. Please read each item carefully and rate the extent to which you agree with each statement. Please answer according to what reflects your experience rather than what you think your experience should be.” All items were rated on a scale from 1 (Strongly Disagree) to 7 (Strongly Agree). All participants were presented with a consent information statement and provided their consent to participate by completing the questionnaire. Ethical approval for the study was granted by the Swinburne University Human Research Ethics Committee.

Results
An exploratory factor analysis (EFA) was conducted on the 64 items (see Supplementary file) to determine the underlying factor structure of the items. The Keiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.93 and Bartlett’s test for sphericity was significant ($p < 0.001$) indicating the data were appropriate for analysis (Tabachnick and Fidell, 1996). Factors were extracted with the principal-axis method of estimation, to provide the best chance of detecting factors if they exist (DeWinter and Dodou, 2012), and an oblique rotation was used as any factors were expected to be correlated. Based on the sample size, a factor loading cut-off of 0.30 was selected in accordance with the recommendation of Hair et al. (1998).

Using Kaiser’s criterion (i.e., Eigenvalues above 1), one clear factor was identified explaining considerably more than each of the other factors (24.9%). The next closest factor identified explained 7.2% of the variance in the items. However, 20 items did not load on the first factor or cross-loaded on multiple factors. These items were removed from further analyses. Another 32 items (mostly negatively worded) were removed as they cross-loaded on multiple factors.

A second EFA was conducted to examine the new 16-item scale. Again, one factor explained considerably more variance than the others, however, seven items did not fall cleanly on the single factor. It was noted that items that displayed a specific emotional valence (e.g., “I worry about the negative thoughts I have about myself,” “I consciously try to only focus on the positive aspects of myself.”) tended not to load on a single factor. The decision was made to remove cross-loading items and two further items that had factor loadings < 0.30.

A final EFA was conducted using only the seven items. EFA revealed a single factor that accounted for 44.63% of variance in the items. Factor loadings for these items are shown in Table 1. Furthermore, the items were internally consistent ($\alpha = 0.84$). Alpha-if-item deleted results also indicated that the overall Cronbach’s alpha coefficient would not increase if any items were removed. From this point on the seven items were referred to as the nonattachment to self (NTS) scale.

**STUDY 2: CONFIRMATORY FACTOR ANALYSIS AND VALIDITY ASSESSMENT**

The purpose of Study 2 was to replicate the 7-item factor structure and internal reliability of the NTS scale through two separate confirmatory factor analyses (CFAs) on two new samples. Study 2 also sought to establish the test-retest reliability of the new scale and examine criterion, convergent and discriminant validity of the NTS scale. As NTS is expected to be a relatively stable quality, scores on the scale were expected to be consistent over time. Further, as a dissolution of self-focus often occurs within the meditation process (Berman and Stevens, 2015), criterion validity was tested by comparing levels of NTS for those who engaged in contemplative practice relative to those who do not. It was expected that those who engaged with a contemplative practice would have higher levels of NTS than those who did not. The number of hours spent in contemplative practice was also expected to be positively related to NTS.

To establish convergent validity, the new scale was expected to correlate with the conceptually similar constructs of; nonattachment, mindfulness, and self-compassion. NTS was also expected to correlate with measures of psychological functioning; emotional stability, reduced rumination, self-transcendence, wisdom, and self-actualization. Further, as an over self-focus has been shown to be related to negative psychological outcomes (Mor and Winquist, 2002; Kyrios et al., 2016), negative correlations were expected between NTS scores and symptoms of depression, anxiety and stress, and positive correlations were expected with life satisfaction and psychological well-being. As nonattachment does not represent a detached state and requires presence and self-reflectiveness (Sahdra et al., 2015), to determine discriminant validity, weak-to-non-significant correlations were expected with measures of detachment; dissociation, depersonalization, absorption, amnesia, and lack of self-awareness. In addition, to ensure its distinctiveness from conceptually similar constructs; nonattachment and self-compassion, discriminant validity was tested with CFA, using nested models (Bagozzi et al., 1991), and when comparing unique variance explained in well-being variables.

Participants and Procedure
Two separate samples were used for the two confirmatory factor analyses (CFAs). Participants in Sample 1 and Sample 2 were first-year psychology students from a mid-sized Australian university that received course credit for participation. All respondents completed an online survey at a time and place of their choosing. All respondents were presented with a consent information statement and provided their consent to participate by completing the questionnaire. Ethical approval for the study was granted by the Swinburne University Human Research Ethics Committee. As these two samples were obtained after Study 1, further demographic data was collected not previously collected in Study 1.

Sample 1 comprised 388 respondents (71 men & 317 women) aged from 18 to 77 ($M = 35.33, SD = 10.80$). Eighty percent of participants were born in Australia or New Zealand, 4.4% in the UK, 1.3% from India, 1.3% South Africa 1% from Iran,
TABLE 1 | Means, standard deviations, alpha-if-items-deleted and factor loadings of items for the nonattachment to self scale.

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
<th>FL</th>
<th>AID</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I can let go of unhelpful thoughts about myself.</td>
<td>4.63</td>
<td>1.54</td>
<td>0.72</td>
<td>0.81</td>
</tr>
<tr>
<td>2. I can let go of the need to control my life.</td>
<td>3.91</td>
<td>1.67</td>
<td>0.72</td>
<td>0.83</td>
</tr>
<tr>
<td>3. I don’t get too caught up in the thoughts I have about myself.</td>
<td>4.11</td>
<td>1.51</td>
<td>0.71</td>
<td>0.81</td>
</tr>
<tr>
<td>4. As time goes on I feel less and less defined by the thoughts I have about who I am.</td>
<td>4.23</td>
<td>1.43</td>
<td>0.54</td>
<td>0.83</td>
</tr>
<tr>
<td>5. As time goes on I feel less and less of a need to be a certain way.</td>
<td>4.85</td>
<td>1.51</td>
<td>0.52</td>
<td>0.83</td>
</tr>
<tr>
<td>6. I can experience my personal ups and downs without getting caught up in them.</td>
<td>4.46</td>
<td>1.63</td>
<td>0.79</td>
<td>0.80</td>
</tr>
<tr>
<td>7. I can observe the positive and negative thoughts I have about myself without engaging in them.</td>
<td>4.32</td>
<td>1.50</td>
<td>0.80</td>
<td>0.80</td>
</tr>
</tbody>
</table>

N = 445, M, mean; SD, standard deviation; FL, factor loading; AID, alpha if item deleted.

1% from Malaysia, and 11% Other. Most respondents did not state any religious or spiritual affiliation (64.2%) or identified as Christian (21.9%); 5.4% identified with a general, non-religious spirituality, while 2.6% identified with a contemplative tradition (i.e., Buddhism, Vedanta), 2.3% identified as Muslim, 1% identified as Hindu, and 2.8% other.

Sample 2 comprised 338 respondents (76 men & 262 women) ranging from 18 to 75 years (M = 34.43 SD = 11.60). The respondents predominantly identified as Anglo-European (82.6%), followed by Asian (7%), Indian and sub-continent (2.6%), Middle Eastern (2%), African (1.7%), New Zealander or Pacific Islander (1.7%), or other (2.2%). Most respondents did not state any religious or spiritual affiliation (51.2%) or identified as Christian (24.4%); 13.1% identified with a general, non-religious spirituality, while 5.2% identified with a contemplative tradition (i.e., Buddhism, Vedanta), 1.7% identified as Muslim, 1.2% identified as Hindu, and 3.1% other.

Measures

In addition to the new 7-item NTS scale developed in Study 1, a range of other measures were included to establish validity of the new scale. The measures included for this purpose are established measures of the constructs with strong reliability and validity statistics.

Criterion Validity

Meditation experience

Participants from sample 1 and sample 2 were asked: “Do you engage with a meditative or contemplative practice?” Participants were also asked to: “Please provide the approximate amount of hours you spend engaged in meditative/contemplative practice per week.”

Convergent Validity

Nonattachment

Nonattachment was assessed using a 7-item version of the original nonattachment scale (NAS-7; Elphinstone et al., 2015; Sahdra et al., 2016). The NAS-7 was drawn from the larger 30-item nonattachment scale (NAS; Sahdra et al, 2010) and has shown to have good reliability and validity when compared to the original NAS. Participants rated their agreement with 7 items (e.g., “I can let go of regrets and feelings of dissatisfaction about the past”) using a 7-point Likert scale from 1 (Strongly Disagree) to 7 (Strongly Agree).

Mindfulness

A 20-item short form of the Five Factor Mindfulness Questionnaire FFMQ (Tran et al., 2014) was used. The FFMQ consists of 20 items (e.g., “I am easily distracted,” “In difficult situations, I can pause without immediately reacting”). Capturing five factors of mindfulness, observing, describing, awareness, non-judgment, and non-reactivity, which are summed to provide an overall score of mindfulness. Items are rated on a 5-item Likert scale from 1 (Never, or very rarely true) to 5 (very often, or always true).

Self-compassion

The Self-Compassion Scale- Short Form (SCS-SF; Raes et al., 2011) is a 12-item measure drawn from the original 26 item self-compassion scale (SCS; Neff, 2003) designed to “measure self-compassion from the perspective of Buddhist Psychology” (Neff, 2003, p. 226). The 12-item scale has shown near perfect correlation (r = 0.97) with the larger SCS when measuring the single factor of self-compassion All items (e.g., “When something upsets me I try to keep my emotions in balance”) are rated on a Likert scale capturing the frequency of experiences from 1 (almost never) to 5 (almost always).

Emotional stability

The Emotional Reactivity Scale (ERS; Nock et al., 2008) assesses emotional sensitivity, emotional intensity, and emotional persistence across 21 items (e.g., “I get angry at people very easily”) rated on a 5-point Likert scale ranging from 0 (not at all like me) to 4 (completely like me). Scores were reversed and summed to give a total out of 84 with higher scores indicating higher levels of emotional stability.

Rumination

The rumination scale (Treynor et al., 2003) consists of 10 items, designed to measure repetitive thoughts about negative feelings, and their associated meanings. The scale is an adapted short form of the original Ruminative Response Scale (RRS; Nolen-Hoeksema and Morrow, 1991) to improve its construct validity. The frequency of items (e.g., “analyse recent events to try to understand why you are depressed”) are rated on a 4-point scale from 1 (almost never) to 4 (almost always).
**Self-transcendence**
The self-transcendence subscale from adult self-transcendence inventory (ATSI; Levenson et al., 2005) is an 9-item measure of self-transcendence with items (e.g., “I do not become angry as easily”) rated on a Likert scale from 1 (Disagree Strongly) to 4 (Agree Strongly). The ATSI is a well-established measure of self-transcendence when assessing the construct as a process of adult development.

**Wisdom**
The 12-Item Three-Dimensional Wisdom Scale (3D-WS-12; Thomas et al., 2017) was used to capture the dimension of wisdom. The 3D-WS-12 is a recently developed abbreviated version of the larger three-dimensional wisdom scale (3D-WS; Ardelt, 2003) and shows good reliability and validity when measuring a higher order single factor of wisdom (Thomas et al., 2017). Items (“When I am confused by a problem, one of the first things I do is survey the situation and consider all the relevant pieces of information”) are rated on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree).

**Self-actualization**
The Short Index of Self-actualization (SISA; Jones and Crandall, 1986) measured self-actualization characterized as a process of maximizing full potential. The scale consisted of 15 items (e.g., “I do not feel ashamed of any of my emotions”) rated on a four-point scale from 1 (Disagree) to 4 (Agree), with higher scores representing greater amount of self-actualization.

**Depression, anxiety, and stress**
The 21-item Depression, Anxiety, and Stress Scale (DASS-21; Lovibond and Lovibond, 1995) was used to measure depression, anxiety and stress. The DASS-21 comprises three subscales of 7 items each capturing symptoms of depression (e.g., “I felt that life was meaningless”), anxiety (e.g., “I felt scared without any good reason”), and stress (e.g., “I felt I found it difficult to relax”). Respondents rate the extent to which they have experienced symptoms over the previous week on a scale ranging from 1 (“Did not apply to me at all”) to 4 (“Applied to me very much, or most of the time”).

**Psychological well-being**
Psychological well-being was measured by a 30-item version of the Psychological Well-being (PWB) Scale (Ryff, 1989; Ryff and Keyes, 1995). The PWB scale yielded a total score by summing the 30 items as well as individual scores for the six dimensions of Autonomy, Purpose in Life, Environmental Mastery, Positive Relationships with Others, Personal Growth, and Self-Acceptance, consisting of 5 items each. All items (e.g., “I like most aspects of my personality”) are rated on a 6-point scale from 1 (Strongly Disagree) to 6 (Strongly Agree).

**Life satisfaction**
Life satisfaction was measured with the Satisfaction with Life Scale (SWLS; Diener et al., 1985). The SWLS consists of five items (e.g., “in most ways my life is close to ideal”) rated on a 7-point scale from 1 (Strongly Disagree) to 7 (Strongly Agree) for scale totals ranging from 5 to 35.

**Discriminant Validity**

**Dissociation**
The Curious Experiences Survey (CES; Goldberg, 1999) is a 31-item measure amended from the Dissociative Experiences Scale (Bernstein and Putnam, 1986) to be more concise and easily understood. The CES assesses three factors of dissociation: de-personalization (e.g., “Had the experience of feeling that my body did not belong to me.”), amnesia (e.g., “Found evidence that I had done things that I do not remember doing.”), and absorption (e.g., “Found that I became so involved in a fantasy or daydream that it felt like it was really happening to me.”). Items are rated on a 5-point scale from 1 (This never happens to me) to 5 (This almost always happens to me).

**Self-awareness**
The Situational Self-Awareness Scale (SSAS; Govern and Marsch, 2001) is a 9-item measure of self-awareness. The SSAS measures 3 subscales capturing private self-awareness or internal state awareness (e.g., “Right now, I am aware of my innermost thoughts.”), public self-awareness (e.g., “I am concerned what other people think of me.”), and awareness of immediate surroundings (e.g., “Right now, I am keenly aware of everything in my environment”). Item are measured on 7-point scale from 1 (Totally Disagree) to 7 (Totally Agree).

**Results**

**Confirmatory Factor Analysis**
An initial CFA using a structural equation model (SEM) was conducted to test the model fit for Sample 1. The initial model fit fell outside accepted criteria (CFI = 0.92, TLI = 0.88, RMSEA = 0.14, and SRMR = 0.06). Examination of the modification indices in the model revealed covariances between items 4 and 5, and items 6 and 7. Examination of the content of these items (See Table 1) revealed they were semantically similar but addressing subtly different aspects of self. Items 4 and 7 appear to directly capture how individuals interact with their thoughts about self, while items 5 and 6 capture aspects of the self in experience. As these items were determined to be semantically similar but importantly distinct constructs, a CFA with covariance parameters was conducted on Sample 1 (See Figure 1). This analysis revealed a good fit with the data in Sample 1 ($\chi^2(11) = 22.94$, $p = 0.02$, CFI = 0.99, TLI = 0.98, RMSEA = 0.05, SRMR = 0.02). The one factor solution was confirmed with seven items falling on a single factor explaining 54.37% of the variance in the items. The internal consistency of these items was excellent with a Cronbach’s coefficient alpha of 0.88.

To confirm and replicate the factor structure of the CFA for sample 1, a second CFA with covariance parameters was conducted on Sample 2 (see Figure 2). This analysis revealed an adequate model fit with the data ($\chi^2(11) = 23.90$, $p = 0.01$, CFI = 0.98, TLI = 0.97, RMSEA = 0.08, SRMR = 0.02). Further confirming the factor structure, the single factor solution explained 60.3% of the variance in the items and Cronbach’s coefficient alpha was again excellent at 0.91.

Potential gender differences were also explored with t-tests in both samples. Results showed no significant difference in NTS
between men (Sample 1 \( M = 31.68, SD = 8.74, n = 74 \); Sample 2 \( M = 31.96, SD = 7.02, n = 76 \)) and women (Sample 1 \( M = 31.25, SD = 8.88, n = 262 \); Sample 2 \( M = 31.55, SD = 8.52, n = 317 \)) in Sample 1 \( t(386) = 0.374, p = 0.709 \) or Sample 2 \( t(334) = 0.364, p = 0.716 \).

Test-Retest Reliability

Test-re-test reliability was obtained from a sub-sample of 29 participants who originally completed the scale in Study 1, who consented to complete the NTS scale at a later date. The modal time between compleions of the NTS scale was 36 days. Respondents’ scores at both timepoints were highly correlated \( r = 0.80, p < 0.001 \) indicating that scores on the NTS scale are consistent over time.

Criterion Validity

To test the criterion validity, levels of NTS were compared between participants who did and did not engage in contemplative practice. Independent samples t-tests in both samples revealed NTS scores for respondents engaging in contemplative practice (Sample 1, \( M = 33.34, SD = 8.04, n = 163 \); Sample 2, \( M = 32.93, SD = 8.81, n = 173 \)) were higher than respondents who did not (Sample 1, \( M = 30.39, SD = 8.21, n = 225 \); Sample 2, \( M = 29.72, SD = 8.60, n = 166 \)). This difference was significant in both samples \( t(386) = 3.53, p < 0.001; Cohen's d = 0.35, t(337) = 3.42, p = 0.001; Cohen's d = 0.48 \). NTS scores also showed a weak positive correlation with hours spent in contemplative practice per week: Sample 1, \( r = 0.10, p = 0.04 \); Sample 2, \( r = 0.23, p < 0.001 \).

Convergent and Discriminant Validity

Convergent Validity

Correlations for the convergent validity measures (See Table 2) indicate the NTS scale showed weak-to-moderate to moderate-to-strong correlations with each of the convergent measures \( r = -0.34 \) to \( r = 0.72 \). Results showed a moderate-to-strong positive relationship between NTS and the theoretically aligned constructs of nonattachment and self-compassion, and moderate positive relationship between NTS and mindfulness. NTS also showed weak-to-moderate negative correlations to emotional stability and rumination, and moderate positive correlations with self-transcendence, self-actualization and wisdom.

Correlations for the well-being variables (See Table 2) were all in the expected direction with the NTS scale showing weak to moderate \( r = 0.25 \) to \( r = 0.67 \) relationships to all the well-being measures. Specifically, the NTS scale displayed weak-to-moderate positive correlations with all facets of PWB and life satisfaction, and displayed moderate negative correlations with symptoms of depression, anxiety, stress. However, the internal reliability of the subscale “life purpose” was below acceptable. As the scale was short and represented a subscale of the PWB scale, the decision was made to proceed with the analysis.

Discriminant Validity

Correlations for discriminant validity (See Table 3) were either non-significant or weak and fell within expected parameters \( r \) ranged from 0.06 to −0.39. Specifically, the NTS scale was not significantly related to measures of amnesia, absorption or total situational self-awareness, and only showed a weak negative relationship to dissociation, depersonalization, private self-awareness, public self-awareness, and environmental self-awareness.

Distinctiveness From Nonattachment and Self-Compassion

Due the strength of the correlation between NTS and self-compassion, the decision made to test the distinctiveness of NTS from general nonattachment and self-compassion. To test the distinctiveness of NTS from general nonattachment and self-compassion, two separate CFAs were conducted using nested models (see Bagozzi et al., 1991). Using nested models to test discriminant validity involves comparing the fit of two models, an unconstrained model and a constrained model. The original (unconstrained) model, where the relationship between two conceptually similar latent variables are allowed to covary,
In the present study, two separate nested models were conducted on sample 1, to test discriminant validity. The first test compared NTS to nonattachment, using latent variables, with the constrained model setting the relationship between the NTS and nonattachment to 1 (indicating they are the same construct). Results showed the constrained model to be a worse fit than the unconstrained model (see Table 4). The second test compared NTS with self-compassion, using latent variables, with the constrained model setting the relationship between NTS and self-compassion at 1. Results showed the constrained model was a worse fit than the unconstrained model (see Table 4). Based on accepted criteria (ΔCFI ≥ 0.01, Cheung and Rensvold, 2002; ΔRMSEA ≥ 0.015, Chen, 2007), the results show a difference between the models, suggesting the distinctiveness of NTS from nonattachment and self-compassion.

To further investigate how NTS it distinguished from nonattachment and self-compassion, four multiple regression analyses were conducted to determine whether NTS distinctly predicted well-being variables when measured alongside nonattachment, and a further four multiple regression analyses were conducted to determine whether NTS distinctly predicted well-being variables when measured alongside self-compassion. Table 5 reports the unstandardized and standardized regression coefficients, and standard errors for each multiple regression analysis. Results showed that when NTS was measured alongside nonattachment, NTS distinctly predicted of PWB, depression, anxiety, and stress. Analyses further revealed that, when NTS was measured alongside self-compassion, NTS distinctly predicted PWB, depression, anxiety, and stress.

### GENERAL DISCUSSION

The aim of the research was to develop and validate a reliable measure of nonattachment to self (NTS). This resulted in the creation of a new 7-item measure of NTS loading on a single factor that was confirmed using two separate CFAs. The new scale shows good internal consistency, test-retest reliability, and criterion validity. The scale was also shown to have good convergent and discriminant validity and importantly, results indicate NTS is an empirically distinct construct from nonattachment and self-compassion. As expected, NTS related to measures of positive psychological functioning and well-being and did not represent a detached or dissociated state. The results suggest the NTS scale is valid, reliable over time, and distinct to nonattachment in general. Accepting any self-related feelings, thoughts or concepts, regardless of valence, and not forcibly try to change these to fit with an ideal, appears to be a way of relating the self that is related to positive psychological outcomes.

The validity process provided empirical support for the distinctiveness of NTS from general nonattachment. This was important as it supports the continued study of NTS as a separate construct. Distinguishing NTS from nonattachment indicates there are differences between how individuals attach to external experience and how they attach to their self-related feelings, thoughts or concepts, regardless of valence, and not forcibly try to change these to fit with an ideal, appears to be a way of relating the self that is related to positive psychological outcomes.
TABLE 4 | Fit indices comparing nested models to determine discriminant validity between nonattachment to self, and nonattachment and self-compassion.

<table>
<thead>
<tr>
<th></th>
<th>( \chi^2 )</th>
<th>df</th>
<th>CFI</th>
<th>RMSEA</th>
<th>( \Delta \chi^2 )</th>
<th>( \Delta \text{CFI} )</th>
<th>( \Delta \text{RMSEA} )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NTS AND NONATTACHMENT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unconstrained</td>
<td>261.29</td>
<td>76</td>
<td>0.93</td>
<td>0.08</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constrained</td>
<td>438.45</td>
<td>77</td>
<td>0.87</td>
<td>0.11</td>
<td>177.16**</td>
<td>0.07</td>
<td>0.03</td>
</tr>
<tr>
<td><strong>NTS AND SELF-COMPASSION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unconstrained model</td>
<td>888.32</td>
<td>151</td>
<td>0.81</td>
<td>0.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constrained model</td>
<td>1151.21</td>
<td>152</td>
<td>0.74</td>
<td>0.13</td>
<td>262.90**</td>
<td>0.05</td>
<td>0.02</td>
</tr>
</tbody>
</table>

Sample 1, \( N = 388 \), \( *p < 0.001 \).

TABLE 5 | Regression coefficients and standard errors from multiple regression models comparing unique relationships of nonattachment to self, nonattachment and self-compassion, with psychological well-being, depression, anxiety, and stress.

<table>
<thead>
<tr>
<th></th>
<th>PWB</th>
<th>Depression</th>
<th>Anxiety</th>
<th>Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( B )</td>
<td>SE</td>
<td>( \beta )</td>
<td>( B )</td>
</tr>
<tr>
<td><strong>DISCRIMINANT ANALYSIS 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonattachment</td>
<td>1.64</td>
<td>0.16</td>
<td>0.34**</td>
<td>–0.12</td>
</tr>
<tr>
<td>NTS</td>
<td>0.89</td>
<td>0.12</td>
<td>0.26**</td>
<td>–0.18</td>
</tr>
<tr>
<td><strong>DISCRIMINANT ANALYSIS 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-compassion</td>
<td>1.03</td>
<td>0.14</td>
<td>0.39**</td>
<td>–0.16</td>
</tr>
<tr>
<td>NTS</td>
<td>1.01</td>
<td>0.14</td>
<td>0.38**</td>
<td>–0.13</td>
</tr>
</tbody>
</table>

Sample 1, \( N = 388 \), \( **p < 0.001 , *p < 0.01 \), PWB, Psychological Wellbeing.

experience. As the construct of the self is central to the many roles individuals play (Bhar and Kyrios, 2016; Shiah, 2016), taking a non-attached stance toward the self can affect many aspects of individuals’ lives. In contrast, an individual may have attachments to external experience that may be specific (e.g., physical injury, interpersonal confrontation) but that may not necessarily affect other aspects of their life. Interestingly, results indicated one area NTS may be more beneficial than general nonattachment, is for ameliorating the impact of negative psychological symptoms; depression, anxiety, and stress. This may be due to the self-playing a central role is psychopathology (Kyrios et al., 2016) and an over self-focus being linked with negative mental health symptoms (Levenson et al., 2001; Mor and Winquist, 2002).

In addition to nonattachment, NTS was also shown to be distinct from self-compassion. This means that taking a non-attached stance toward the self differs from taking a balanced and compassionate stance toward negative emotions (Neff, 2008). This distinction points to the notion that reducing any self-fixation, regardless of valence, is different from reducing the impact of negative self-related experience. The findings also highlight that, in addition to the effects of being more self-compassionate, reducing fixation on the self, whether positive or negative, can positively impact an individual’s well-being and reduce negative psychological symptoms.

The results for convergent validity also indicated that NTS was related to measures of positive psychological functioning. NTS was related to greater emotional stability and less ruminative thinking. Emotional stability refers to an individuals’ capacity to be able to be balanced when responding to emotionally provoking stimuli (Hills and Argyle, 2001). The findings suggest that emotional reactivity to self-referent stimuli, such as negative self-evaluations or criticism from others, may be ameliorated by taking a more flexible approach to the self-concept and reducing the incongruence between stimuli and self-concept. Similarly, whereas rumination involves unintentional recurring thoughts with a positive or negative self-focus, that can perpetuate symptoms of depression (Krieger et al., 2013), NTS indicates a reduction in the positive or negative self-focus and a more flexible self-concept. This would assist in reducing obtrusive thoughts or letting them pass without having them reoccur. These findings support the theorized benefits of taking a more flexible stance toward the self-concept on the way individuals manage their emotions and cognitions.

In addition to adaptive functioning, NTS related to wisdom, self-actualization and self-transcendence. Wisdom, self-actualization and self-transcendence are taken as measures of advanced psychological development that indicate the higher stages of psychological growth (Whitehead et al. submitted). The present findings indicate that being flexible and non-attached in relation to the self may facilitate a transcendence of self-focus that is implicit in the later stages of psychological development (Cook-Greuter, 2000; Hartman and Zimberoff, 2008). Potentially, by removing fixation on the self and the need for self-related experience to be one way or other, individuals may be able to reduce the self-bias that can limit development of wisdom and self-transcendence (Whitehead et al. submitted). The present findings indicate that NTS can be associated with...
the growth process and supports the Buddhist notion that nonattachment to the self develops over time and is a goal that is worked toward (Donner, 2010). This is also supported by the observed relationship between contemplative practice and NTS and indicates NTS can develop over time, in conjunction with contemplative practice. Practices like meditation can assist in a dissolution of self-focus (Emavardhana and Tori, 1997; Berman and Stevens, 2015) and can create distancing from the immediacy of experience (Bishop et al., 2004; Neff, 2008), which can facilitate the letting go of attachment to thoughts, feelings and concepts about the self.

There are a number of implications of the current research. The development and validation of the NTS scale provides empirical support for a construct of NTS distinct from nonattachment and self-compassion. NTS appears to be a distinct quality that can make a positive unique contribution to individuals’ mental health and psychological growth, beyond the more widely studied constructs of nonattachment and self-compassion. This research also provides insight into the possible benefits of understanding the self as a fluid rather than a static entity and invites research on the Buddhist notion of the self as a dynamic process. As individuals’ notions of self play a central role in their well-being (Kyrios et al., 2016), understanding the self as a more dynamic process and taking a more non-attached stance toward the self-concept, rather than taking a positive stance toward the self, may be a fruitful area of study in relation to individuals’ well-being and quality of life in general.

The findings also have implications for individuals whose self-related feelings make it difficult to have any positive self-interactions. Individuals whose negative psychological symptoms impact their ability to benefit from strategies such as self-compassion (Pauley and McPherson, 2010; Gilbert et al., 2011), may still be able to gain benefit from taking a more non-attached stance toward their self. As NTS does not require a positive interaction with self, it is not in opposition to feelings of low self-worth or hopelessness. It could therefore be met with less resistance than strategies that require a positive self-focus. Future research comparing NTS with constructs like self-compassion, investigating whether NTS acts as a protective factor against negative psychological symptoms, and whether specific interventions can target NTS could further elucidate the construct.

A number of methodological considerations are relevant to the present studies. As the samples were predominantly of university students and with considerably more women than men, the generalizability of the findings is limited. Nevertheless, the gender bias may not detract markedly from the findings as no gender differences in NTS were found. However, further research is needed on larger samples drawn from across the community to establish generalizability. Future research using stratified sampling may also assist in detecting variance in NTS in different areas such as culture and religion. Additionally, as this study did not use a clinical sample, the findings in relation to depression, anxiety and stress may not apply to individuals experiencing clinical levels of these symptoms and future work is needed to establish whether the relationships found also hold in a clinical population. Longitudinal studies on NTS are also needed to examine how NTS develops over time. Despite these limitations, the present study provides a robust development and validation process for the new measure of NTS that appears relevant to a range of areas associated with mental health and quality of life in general.

In conclusion, the present studies established the reliability and preliminary evidence of validity on a new measure of NTS. NTS emerged as a quality related, but distinct from other Buddhist psychological constructs, and that taking a more flexible, non-attached stance toward self-related thoughts, feelings and concepts can be beneficial for individuals’ well-being and psychological functioning. The findings also indicate that NTS may provide unique benefit to individuals’ well-being over and above the effects of other similar measures and may provide an avenue for healthy interaction with the self-concept for individuals that struggle with a positive self-focus.

**AUTHOR CONTRIBUTIONS**

RW responsible for original conception, data collection, data analysis, major contribution to writing manuscript. GB played a role in early conceptualization, study design, much drafting and re-drafting. BE assisted in data analysis and study design, assisted in drafting process. YY assisted at early conceptual stage, assisted in data collection. GM assisted in conceptual issues for publication, assisted in drafting process.

**SUPPLEMENTARY MATERIAL**

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2018.02544/full#supplementary-material

**REFERENCES**


Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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