

DIMENSIONS OF COPING IN ENTREPRENEURS: FUNCTIONAL AND  
TEMPORAL PERSPECTIVES AND IMPLICATIONS FOR BURNOUT

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## ABSTRACT

Stress is a widely-recognised accompaniment to entrepreneurial endeavours. Exposure to chronic stressors associated with entrepreneurial activity may lead to stress and strain (burnout: exhaustion, cynicism, and lack of professional efficacy), and in turn disengagement from one's venture, placing employees' jobs at risk and reducing the venture's economic contributions to society.

Past research has investigated coping in entrepreneurs as a reactionary process (e.g., coping in response to venture failure). However, coping may also be enacted as an anticipatory process in response to a perceived stressor. Anticipatory traits (e.g., future time perspective and proactivity) – which have been associated with entrepreneurs – are found to be predictive of anticipatory coping behaviours, which in turn have implications for strain outcomes. The current research aimed to enhance understanding of the role of coping in the stress-burnout relationship in entrepreneurs.

Qualitative methods were first used to explore dimensions of coping in entrepreneurs to identify functional (e.g., planning, acceptance, using instrumental support) and temporal (proactive, preventative, reactive) dimensions. Subsequently, quantitative methods to assess stress, coping, burnout, and trait time perspective were used to investigate the dimensionality of coping in entrepreneurs, and the role of coping and trait time perspective in the stress-burnout process. It was hypothesised that anticipatory coping would negatively relate to burnout, and weaken the effect of stress on burnout. Additionally, trait present time perspective was hypothesised to positively relate to burnout, and trait future time perspective to negatively relate to burnout.

Results of an exploratory factor analysis indicated a three-factor solution of coping in entrepreneurs: external coping (e.g., planning and positive reframing), internal coping (e.g., self-blame, and denial), and relational coping (e.g., using instrumental support and religion). Internally focused coping was associated with higher stress and higher burnout. In contrast, externally focused coping and relational coping were associated with lower stress and burnout. In support of a moderated effects model, externally focused coping was found to diminish the effect of stress on burnout. An entrepreneur's trait time perspective was found to have implications for both coping strategy selection

and burnout. Specifically, higher trait present hedonism predicted both higher internal coping and preventative coping, which respectively predicted higher cynicism and professional efficacy. Higher trait present fatalism predicted higher internal coping which in turn predicted higher cynicism. Trait present fatalism had a negative indirect effect on professional efficacy, such that higher present fatalism predicted lower preventative and proactive coping which in turn predicted higher professional efficacy. Higher trait future time perspective predicted lower internal coping which in turn predicted both lower exhaustion and cynicism.

Limitations specific to the current research program include, firstly, a greater number of male participants, which may have resulted in findings representing a masculine view of coping with entrepreneurship stressors. Secondly, the current research did not measure coping contextually (e.g., sources of stress), which may have implications for strain outcomes. Thirdly, sampling methods limit findings to an Australian context.

The current research advances understanding of the stress-coping-strain relationship in entrepreneurs by establishing that temporal-dimensions of coping, and entrepreneurial traits have implications for burnout. Specifically, entrepreneurs may benefit from reducing internal-focused coping in favour of external-focused coping, and from relinquishing negative views of the present, and focusing on achieving future goals. Opportunity exists for future studies to use field research to investigate time perspective and coping interventions in stress-management programs for entrepreneurs.

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## DECLARATION

This thesis:

- Contains no material which has been accepted for the award to the candidate of any other degree or diploma, except where due reference is made in the text of the examinable outcome;
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Signature:

A handwritten signature in black ink, appearing to read 'Eager', written in a cursive style.

Bronwyn Elizabeth Eager

2017

## PUBLICATIONS FROM THE CURRENT RESEARCH

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## TABLE OF CONTENTS

CHAPTER 1:	INTRODUCTION TO THE CURRENT RESEARCH.....	2
1.1	Chapter Introduction.....	2
1.2	Context of the Current Research.....	2
1.3	‘Who is an Entrepreneur?’ in the Context of the Current Research.....	5
1.4	Real World Problems.....	6
1.4.1	The potential cost of stress to an entrepreneur’s venture(s) and to society.....	6
1.4.2	Stress management: acknowledging and prioritising.....	8
1.5	Theoretical Problems.....	10
1.5.1	Entrepreneurs as a unique occupational group.....	10
1.5.2	Stress levels in entrepreneurs.....	11
1.6	Trait Time Perspective: An Individual Difference Variable of Interest for Entrepreneurship Stress and Coping Research.....	13
1.6.1	Considering trait time perspective as an influential individual difference variable in entrepreneurs.....	14
1.6.2	Operationalising trait time perspective in the current research using the Zimbardo Time Perspective Inventory.....	15
1.6.3	Other measures of temporal perspective.....	18
1.7	Overview of Potential Benefits of the Current Research.....	19
1.8	Structure of the Thesis.....	19
1.9	Chapter Summary.....	21
CHAPTER 2:	THEORETICAL FRAMEWORK AND KEY TERMS.....	22
2.1	Chapter Introduction.....	22
2.2	Stress as a Stimulus-Response Process.....	22
2.2.1	Defining ‘stress’, ‘stressor’, and ‘strain’.....	22
2.2.2	‘Stress’, ‘stressors’ and ‘strain’ – defined in an occupational context.....	26
2.3	Operationalising Strain: Burnout.....	27
2.3.1	A brief history of burnout.....	28
2.3.2	Three dimensions of burnout: exhaustion, cynicism and professional efficacy.....	30
2.3.3	Burnout and its three dimensions in an entrepreneurship context.....	31
2.3.4	Measure of burnout used for the current research.....	33
2.4	The Transactional Model of Stress and Coping.....	34
2.4.1	Stage One - Primary appraisal.....	35
2.4.2	Stage Two - Secondary appraisal.....	36
2.4.3	Stage Three - Coping and reappraisal.....	36
2.5	Function-Oriented Coping Typologies Evaluated in the Current Research.....	40
2.5.1	Problem-focused versus emotion-focused coping typology.....	40
2.5.2	Approach versus avoidance coping typology.....	42
2.5.3	Form by direction typology.....	44
2.6	Coping as a Time-Oriented Process.....	47
2.6.1	Future-oriented coping typology.....	47

2.7	Considering Coping Typologies in Entrepreneurship Stress and Coping Research.....	49
2.7.1	Considering function-oriented coping typologies in entrepreneurship research.....	50
2.7.2	Considering time-oriented coping typologies in entrepreneurship research.....	52
2.8	Research Aims for Phase One of the Current Research.....	55
2.9	Chapter Summary.....	56
CHAPTER 3: PHASE ONE RESEARCH METHODOLOGY .....		58
3.1	Chapter Introduction.....	58
3.2	Mixed Methods Framework for the Current Research.....	58
3.3	Background to Phase One.....	61
3.4	Research Philosophy .....	62
3.4.1	Philosophical assumptions .....	62
3.4.2	Data collection: semi-structured interviews.....	63
3.4.3	Sample size .....	64
3.4.4	Qualitative method: thematic analysis.....	64
3.4.5	Transcription decisions.....	67
3.5	Ethical Considerations .....	68
3.6	Method.....	69
3.6.1	Participants.....	69
3.6.2	Sampling techniques.....	69
3.6.3	Semi-structured interviews .....	73
3.6.4	Transcription procedure.....	75
3.6.5	Thematic analysis and coding procedure.....	76
3.6.6	Reporting and presentation of findings .....	79
3.7	Chapter Summary.....	79
CHAPTER 4: PHASE ONE RESULTS.....		80
4.1	Chapter Introduction.....	80
4.2	Overview of the Aims and Method of Analysis Used in Phase One .....	80
4.3	Coping Strategies Used by Entrepreneurs .....	82
4.3.1	Functional coping strategies cited as being used by participants.....	83
4.3.2	Using Instrumental Support .....	83
4.3.3	Active Coping .....	87
4.3.4	Positive Reframing .....	90
4.3.5	Planning .....	92
4.3.6	Self-Distracted .....	95
4.3.7	Using Emotional Support.....	98
4.3.8	Acceptance .....	102
4.3.9	Lesser cited strategies.....	103
4.3.10	Coping strategies not cited in the data.....	105
4.3.11	Summary of the temporal dimension(s) of functional coping strategies as used by entrepreneurs.....	106
4.4	How do Entrepreneurs Appraise Stressors?.....	107
4.4.1	Negative appraisal .....	108



4.4.2	Positive appraisal.....	109
4.4.3	Appraisal – considered as a skill to be mastered.....	111
4.4.4	Summary of findings related to appraisal .....	112
4.5	Considering the Relevance of Recognised Coping Typologies in an Entrepreneurship Context .....	112
4.6	Chapter Summary.....	116
 CHAPTER 5: DISCUSSION OF PHASE ONE FINDINGS & AIMS AND HYPOTHESES FOR PHASE TWO .....		118
5.1	Chapter Introduction.....	118
5.2	Recap of Aims of Phase One .....	118
5.3	Discussion of Phase One Findings – Dimensions of Coping in Entrepreneurs .....	120
5.4	Modelling the Role of Coping and Personality Traits in the Stressor- Strain Relationship .....	122
5.5	Aims and Hypotheses for Phase Two Related to Functional and Time- Oriented Coping .....	124
5.5.1	Role of functional coping in the stressor-strain relationship .....	125
5.5.2	Role of time-oriented coping in the stressor-strain relationship .....	125
5.6	Aims and Hypotheses for Phase Two Related to Trait Time Perspective as an Influencing Variable in the Stress-Strain Process .....	127
5.7	Potential Benefits of Phase One .....	131
5.8	Limitations of Phase One.....	131
5.9	Chapter Summary.....	132
 CHAPTER 6: PHASE TWO RESEARCH METHODOLOGY .....		134
6.1	Chapter Introduction.....	134
6.2	Background to Phase Two .....	134
6.3	Ethical Considerations .....	136
6.4	Survey Methodology .....	136
6.4.1	Advantages of using a questionnaire for data collection in the current study.....	137
6.4.2	Limitations of using a questionnaire in the current study.....	138
6.4.3	Strengths and limitations of correlational analysis .....	140
6.5	Sampling Framework .....	141
6.5.1	Participant selection criteria.....	141
6.5.2	Sampling methods .....	141
6.5.3	Sample size .....	142
6.5.4	Sample characteristics – personal and venture .....	143
6.6	Measures .....	145
6.6.1	Perceived Stress Scale (PSS) .....	146
6.6.2	Brief COPE .....	147
6.6.3	Proactive Coping Inventory (PCI).....	148
6.6.4	Zimbardo Time Perspective Inventory (ZTPI) .....	150
6.6.5	Maslach Burnout Inventory – General Survey (MBI-GS) .....	151
6.7	Overview of Procedure for Phase Two.....	152
6.8	Chapter Summary.....	155

CHAPTER 7:	PHASE TWO ANALYSIS AND RESULTS.....	156
7.1	Chapter Introduction.....	156
7.2	Overview of Data Analyses .....	157
7.2.1	Exploratory Factor Analysis .....	157
7.2.2	Regression analyses.....	157
7.3	Data Screening .....	158
7.4	Comparison of Demographic Variables: Contracted and Non-Contracted Data.....	159
7.5	Missing Value Analysis .....	161
7.6	Distribution of Data.....	163
7.6.1	Univariate outliers .....	163
7.6.2	Normality of the data.....	164
7.7	Reliability of Scale Measures for the Current Study.....	167
7.8	Main Analyses: Addressing the Research Aims and Hypotheses for Phase Two.....	169
7.8.1	Addressing Research Aim 1: Exploring the factor structure of function-oriented coping typologies in a sample of entrepreneurs .....	169
7.8.2	Addressing Research Aim 2: Exploring which functional aspects of coping buffer the effect of stress on burnout .....	176
7.8.3	Addressing Research Aim 3: Investigating the size and direction of the relationship between future-oriented coping and burnout .....	186
7.8.4	Addressing Research Aim 4: Determine the buffering effect of time-oriented coping on the stressor-strain relationship.....	188
7.8.5	Addressing Research Aim 5: Investigate the relationship between time orientation and an entrepreneur’s propensity for burnout .....	192
7.8.6	Addressing Research Aim 6: Investigating whether time orientation affects strain outcomes via coping responses .....	194
7.8.7	Investigating predictors of burnout .....	202
7.9	Chapter Summary.....	205
CHAPTER 8:	OVERALL DISCUSSION AND CONCLUSION.....	208
8.1	Chapter Introduction.....	208
8.2	Recap of the Current Research Program .....	209
8.3	Research Summary - Discussion of Phase Two Findings .....	210
8.3.1	Dimensions of functional coping in entrepreneurs .....	211
8.3.2	Time-oriented coping .....	214
8.3.3	The role of trait time perspective in the stress-strain process.....	215
8.3.4	Predictors of burnout – the proportion of variance in dimensions of burnout that can be accounted for by coping and trait time perspective .....	218
8.4	Strengths and Limitations of the Research Program and Suggestions for Future Research.....	220
8.4.1	Key strengths of the overall research program .....	220
8.4.2	Limitations of the current research.....	220
8.4.3	Suggested key areas for future research .....	223
8.5	Implications of Findings and Contributions to Theory and Practice.....	225
8.6	Concluding Remarks and Reflection.....	226

REFERENCES .....	227
APPENDICES .....	261
Appendix A: Phase One Interview Questions .....	261
Appendix B: Phase One Higher Order Coding Scheme for Thematic Analysis .....	262
Appendix C: Phase One Ethics Approval .....	264
Appendix D: Phase One Consent Information Statement .....	266
Appendix E: Phase One Participant Consent Form .....	268
Appendix F: Sample Social Media Recruitment Posts .....	269
Appendix G: Phase One Demographic Information Questionnaire .....	271
Appendix H: Phase Two Ethics Approval .....	272
Appendix I: Phase Two Participant Consent Information Statement .....	274
Appendix J: Phase Two Participant Debriefing Statement .....	276
Appendix K: Phase Two Questionnaire .....	278
Appendix L: Phase Two Ethics Amendment .....	284
Appendix M: Phase Two Ethics Amendment: Addition of Panel Recruitment .....	285

## LIST OF FIGURES

Figure 1: Chapter One Overview .....	3
Figure 2: Structure of the Thesis .....	20
Figure 3: Chapter Two Overview .....	23
Figure 4: Approach versus Avoidance Coping Classification System .....	43
Figure 5: Begley's 3x3 Matrix Coping Framework. Adapted from Begley (1998) .....	45
Figure 6: Begley's 3x3 Matrix Coping Framework Illustrating Emotion-focused, Problem-focused, Approach, and Avoidance Categories. Adapted from Begley (1998) .....	46
Figure 7: Chapter Three Overview .....	59
Figure 8: Graphical Representation of the Exploratory Sequential Research Design for the Overall Research Program. Adapted from Creswell and Plano Clark (2011) .....	61
Figure 9: Model of Analytical Procedure and Coding Categories .....	77
Figure 10: Chapter Four Overview .....	81
Figure 11: Chapter Five Overview .....	119
Figure 12: Modelling the Role of Individual Difference Variables in the Stress-strain process .....	123
Figure 13: Chapter Six Overview .....	135
Figure 14: Chapter Seven Overview .....	156
Figure 15: Scree Plot of Final Factor Solution of Functional Coping in the Current Study .....	172
Figure 16: Conceptual Model of Moderation. Adapted from Hayes (2013).....	177
Figure 17: Simple slopes for predicting Cynicism at low (-1SD), medium, and high (+1SD) levels of Perceived Stress and External Coping .....	180
Figure 18: Simple slopes for predicting Professional Efficacy at low (-1SD), medium, and high (+1SD) levels of Perceived Stress and External Coping .....	181
Figure 19: Simple slopes for predicting Professional Efficacy at low (-1SD), medium, and high (+1SD) levels of Perceived Stress and Relational Coping .....	184
Figure 20: Conceptual Diagram of Future-Oriented Coping as a Moderator of the Relationship Between Stress and Burnout.....	188
Figure 21: Mediation Model: Conceptual Diagram of the Indirect Effect of X on Y through M. Adapted from Preacher & Hayes (2008).....	194
Figure 22: Chapter Eight Overview .....	208

## LIST OF TABLES

Table 1: Burnout - Definition and Overview of its Three Dimensions .....	34
Table 2: Functional Coping Strategies (source: Carver, 1997) .....	39
Table 3: Summary of Coping Typologies Evaluated in the Current Research .....	54
Table 4: Phases of Thematic Analysis (Source: Braun & Clarke, 2006 p.35).....	65
Table 5: Data Types Considered in Phase One .....	66
Table 6: Summary of Phase One Participant Demographic Information .....	70
Table 7: Summary of The Temporal Dimensions of Functional Coping Strategies ....	106
Table 8: Considering Time Orientation as a Dimension of Coping Strategy Classification.....	116
Table 9: Summary of Aims and Hypotheses for Phase Two .....	130
Table 10: Demographic Background of the Sample (Phase Two) .....	144
Table 11: Recommended Interpretation of the MBI-GS (Maslach et al., 2010).....	151
Table 12: Summary of Measures for the Current Phase .....	153
Table 13: Comparison of demographic variables - Chi-Square test results.....	159
Table 14: Group Comparison of Demographic Variables - Mann-Whitney U Test Results .....	160
Table 15: Results of Little's MCAR Test for Measures Containing Missing Variables .....	162
Table 16: Means, Standard Errors, Standard Deviations, Skewness and Kurtosis Statistics for Predictor and Outcome Variables .....	166
Table 17: Cronbach's Alpha Coefficients for Scale Measures in the Current Study....	168
Table 18: Correlation Matrix of Brief COPE Subscales for the Current Data Set.....	171
Table 19: Rotated Factor (Simple) Structure of Brief COPE Subscales in the Current Sample of Entrepreneurs .....	173
Table 20: Communalities from Exploratory Factor Analysis with Direct Oblimin Rotation for a Three-Factor Structure of Coping in the Current Sample of Entrepreneurs .....	173
Table 21: Correlations Among Factors - Exploratory Factor Analysis with Direct Oblimin Rotation for a Three-Factor Structure of Coping in Entrepreneurs....	174
Table 22: Descriptive Statistics for the Three-Factor Structure of Coping in Entrepreneurs in the Current Study.....	175
Table 23: Bivariate Relationship Between External Coping, Internal Coping, and Relational Coping and (a) Stress, (b) Exhaustion, (c) Cynicism, and (d) Professional Efficacy.....	176
Table 24: Summary of Planned Moderation Analyses .....	177
Table 25: Summary of Regression Analysis for External Coping, Perceived Stress, and Exhaustion .....	179

Table 26: Summary of Regression Analysis for External Coping, Perceived Stress, and Cynicism.....	179
Table 27: Summary of Regression Analysis for External Coping, Perceived Stress, and Professional Efficacy.....	181
Table 28: Summary of Regression Analysis for Internal Coping, Perceived Stress, and Burnout Dimensions.....	183
Table 29: Summary of Regression Analysis for Relational Coping, Perceived Stress, and Burnout Dimensions .....	185
Table 30: Bivariate Relationship between Proactive Coping, Preventative Coping, and (a) Exhaustion, (b) Cynicism, and (c) Professional Efficacy .....	187
Table 31: Summary of Regression Analysis for Preventative Coping, Perceived Stress, and Burnout.....	190
Table 32: Summary of Regression Analysis for Proactive Coping, Perceived Stress, and Burnout .....	191
Table 33: Bivariate Relationship between Present Hedonism, Present Fatalism, and Future and (a) Exhaustion, (b) Cynicism, and (c) Professional Efficacy .....	193
Table 34: Planned Mediation Analyses: Investigating Coping as a Mediator of the Relationship Between Time Orientation and Burnout .....	196
Table 35: Summary of Final Models of Coping as a Mediator between Future and (a) Exhaustion, (b) Cynicism, and (c) Professional Efficacy.....	198
Table 36: Summary of Findings for Coping as a Mediator between Present Hedonism and (a) Exhaustion, (b) Cynicism, and (c) Professional Efficacy. ....	200
Table 37: Summary of Findings for Coping as a Mediator between Present Hedonism and (a) Exhaustion, (b) Cynicism, and (c) Professional Efficacy. ....	202
Table 38: Unstandardised (B) and Standardised ( $\beta$ ) Regression Coefficients, and Squared Semi-Partial Correlations ( $sr^2$ ) for Each Predictor in a Regression Model Predicting Exhaustion.....	203
Table 39: Unstandardised (B) and Standardised ( $\beta$ ) Regression Coefficients, and Squared Semi-Partial Correlations ( $sr^2$ ) for Each Predictor in a Regression Model Predicting Cynicism .....	204
Table 40: Unstandardised (B) and Standardised ( $\beta$ ) Regression Coefficients, and Squared Semi-Partial Correlations ( $sr^2$ ) for Each Predictor in a Regression Model Predicting Professional Efficacy .....	205

PART I  
RESEARCH CONTEXT

## CHAPTER 1: INTRODUCTION TO THE CURRENT RESEARCH

**1.1 Chapter Introduction**

The current research adopted a two-phased mixed-methods research design to investigate how entrepreneurs cope with stress, and implications for strain outcomes. Phase One explored the nature of coping in entrepreneurs. Findings from this first phase were adopted in the design of Phase Two, which investigated the role of individual difference variables (coping and trait time perspective) in the stress-strain process among entrepreneurs.

This chapter introduces the key variables presented in this thesis, and provides a practical and theoretical rationale for conducting the current research. The chapter concludes with an overview of the research program. The structure of the chapter is summarised overleaf in Figure 1.

**1.2 Context of the Current Research**

Developing the body of knowledge relating to stress and coping in entrepreneurs is perhaps now more pertinent than ever. This assertion is made based on two separate yet interconnected phenomena. The first is the number of people engaged in the pursuit of entrepreneurship. An estimated 388 million people world-wide are either starting or running their own ventures (Kelley, Singer, & Herrington, 2012). In Australia, there are over 2.1 million actively trading businesses (Singer, Amoros, & Moska, 2015). Such numbers are on an upward trend (Kelley, Singer, & Herrington, 2016), perhaps due to a combination of (a) promotion of the perceived value of entrepreneurship by governments (van Praag & Versloot, 2007), (b) an increase in the number of entrepreneurship-related programs offered by higher-education providers (O'Connor, 2013), and (c) popular media's portrayal of founders as celebrities (Anderson & Warren, 2011; Boyle & Magor, 2008). According to the Department of Industry, Innovation and Science (2015), the Australian Government is currently placing considerable emphasis on promoting entrepreneurship (and associated innovation), and actively working to enhance levels of entrepreneurial activity.



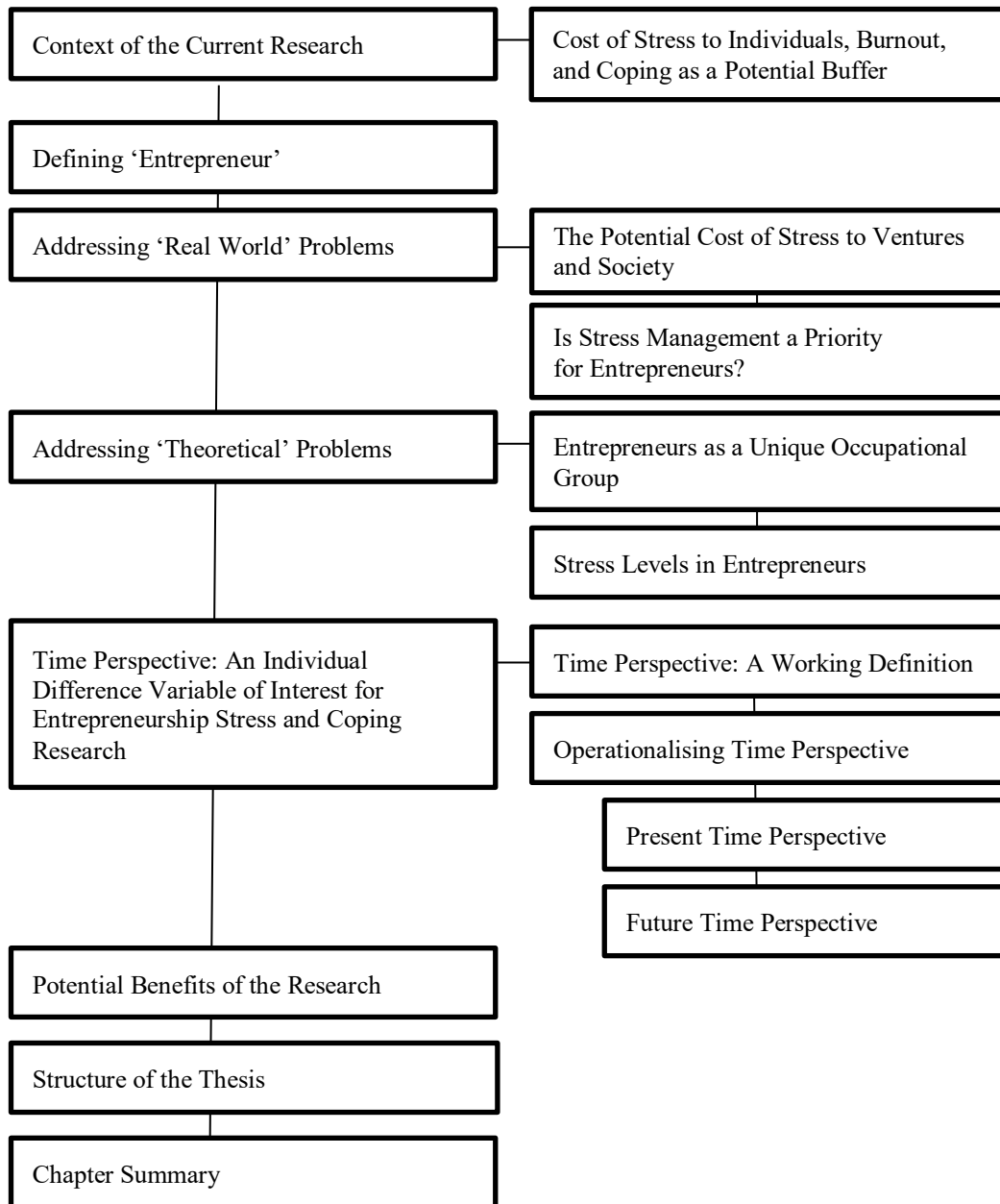


Figure 1: Chapter One Overview

The second phenomenon is ‘stress’, defined as “a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being” (Lazarus & Folkman, 1984, p.19). Many characteristics of selecting a career in entrepreneurship (e.g., longer working hours, the demands of stakeholders) may contribute to stress (Boyd & Webb, 1982; Boyd & Gumpert, 1983; Torres & Mondelus, 2011). Stress is a widely-recognised

accompaniment to entrepreneurial endeavours (Ahmad & Xavier, 2010; Cardon & Patel, 2013; George & Hamilton, 2011; Gorgievski, Bakker, Schaufeli, van der Veen, & Giesen, 2010; Kariv, 2012; Uy, Foo, & Song, 2013; Vasumathi, Govindarajalu, Anuratha, & Amudha, 2003). When experienced over long periods of time stress may result in 'strain', or negative psychological and physical health outcomes (Shinn, Rosario, Mørch, & Chestnut, 1984). It is well established in the medical literature that prolonged stress can influence the body's susceptibility to disease and cause adverse, long-term health effects (Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002; Lutgendorf et al., 2003).

When these phenomena are considered together, it appears that the number of entrepreneurs potentially at risk of stress-related health problems is considerable.

Early research found that 55 to 65 per cent of entrepreneurs show evidence of strain on a weekly basis (Boyd & Gumpert, 1983). Similar findings persist, with stress reported to contribute negatively to entrepreneurs' health, ranging from minor physical ailments to psychological breakdown (see e.g., Örtqvist, Drnovšek, & Wincent, 2007; Shepherd, Marchisio, Morrish, Deacon, & Miles, 2010; Stephan & Roesler, 2010).

In the current research, strain is operationalised as 'burnout', a psychological syndrome that is a cumulative condition resulting from a prolonged response to occupational 'stressors' i.e., sources of stress (Maslach, 2003). Three conceptually distinct dimensions represent the construct of burnout. These are: exhaustion i.e., physical fatigue; cynicism i.e., depersonalisation; and professional efficacy i.e., sense of personal accomplishment. Burnout and its three dimensions are detailed in Section 2.3.

'Coping' may diminish the effect of stress on strain (Carver & Connor-Smith, 2010). A traditionally adopted definition of coping is, "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984 p.141). The number of coping strategies and the contexts within which coping occurs is virtually infinite (Skinner & Zimmer-Gembeck, 2007). As such, the current research investigated coping 'typologies' (i.e., taxonomies or classifications; outlined in Sections 2.5 and 2.6).

A significant limitation of previous work on coping is its insufficient attention to the conceptual basis of coping in entrepreneurs. Specifically, which recognised coping typologies (as outlined in Section 2.5 and 2.6) capture the dimensions of coping that are relevant when investigating coping strategy effectiveness in entrepreneurs? In other words, which dimensions of coping, as described in seminal work in the stress and coping literature (see Carver & Connor-Smith, 2010), are linked to predicting strain? A related limitation is the lack of attention to the role of entrepreneurial characteristics in the stress-coping-strain process (presented in Section 1.6).

Given the problems stress may pose to entrepreneurs, their ventures, and society (discussed in Section 1.4.1) the current research aims to enhance understanding of the role of coping in the stressor-strain relationship in entrepreneurs. The next section delineates ‘entrepreneurs’ as an occupational group.

### **1.3 ‘Who is an Entrepreneur?’ in the Context of the Current Research**

Within the scholarly community, the search for an agreed definition of ‘entrepreneur’ is complex and continuing (Audretsch, Kuratko, & Link, 2015). Despite considerable work in this area, a homogenised definition of entrepreneur has not yet been agreed upon (Gartner, 2001; Howorth, Tempest, & Coupland, 2005; Kobia & Sikalieh, 2010; McKenzie, Ugbah, & Smothers, 2007; Nicolaou, Shane, Cherkas, Hunkin, & Spector, 2008; Shane & Venkataraman, 2000; Zahra & Wright, 2011). Furthermore, it is proposed that no single ‘type’ of entrepreneur exists (Ireland, Reutzell, & Webb, 2005). Defining ‘entrepreneur’ becomes further problematic when considering diverse application of the term in the scholarly domain. As Audretsch (2012) notes: entrepreneurship is complex and characterised by varied approaches and methodologies.

The focus of this research is not to discover the ‘true’ definition of an entrepreneur. However, a definition is needed to operationalise the term entrepreneur so as to provide a framework in which to conduct empirical research. The current research takes an ‘occupational category’ approach (Gorgievski & Stephan, 2016), and defines ‘entrepreneur’ as ‘active-owner manager’. This definition is chosen in recognition of Gartner’s (1990) research highlighting the centrality of management and ownership in

entrepreneurship, and also due to its previous adoption in entrepreneurship stress and coping research (see e.g., Jenkins, 2012; Uy et al., 2013). This definition includes small business owners, as consistent with the approach taken by previous literature (e.g., Zhao, Seibert, & Lumpkin, 2010). Additionally, the definition does not consider individuals employed by organisations as entrepreneurs.

In selecting this definition, the researcher aims to take an inclusive approach to the multi-faceted and diverse nature of individuals operating within the entrepreneurship domain. The definition recognises the contribution of owners and managers of small and medium-sized enterprises (SMEs) to the World's economy (see Section 1.4.1), and the potential for the research to have a positive impact on this group.

A narrowly focused definition of 'entrepreneur' that incorporates entrepreneurial type and/or type of organisation may allow research to offer more specific advice and application of research for policymakers, practitioners, and entrepreneurs themselves (Ucbasaran, Westhead, Wright, & Flores, 2010). However, a broad-brush definition is adopted owing to the lack of agreement within entrepreneurship scholarship as to 'who is an entrepreneur', and also in acknowledgement of Audretsch et al.'s (2015, p.703) view that "constricting the field [of entrepreneurship research] may be the wrong approach". The next section presents a practical rationale for investigating stress and coping in entrepreneurs.

#### **1.4 Real World Problems**

Expanding upon Section 1.2 – which introduced the negative effects of stress on an individual – this section outlines the potential detrimental impact of stress on an entrepreneur's venture, as well as the secondary costs of stress to society. This section concludes by considering whether entrepreneurs acknowledge stress as a problem, and the value they place on stress management intervention programs.

##### *1.4.1 The potential cost of stress to an entrepreneur's venture(s) and to society*

Prior research indicates that the performance of the entrepreneur plays a central role in the success of their venture (Shepherd et al., 2010). As such, it is not unreasonable to

assume that negative health consequences of stress (experienced by entrepreneurs) are likely to impact venture performance (Jamal, 2007; Lechat & Torrès, 2016). For example, strain may impede an entrepreneur's ability to process information and could lead to poor decision-making. Furthermore, an entrepreneur experiencing stress may negatively impact their venture through disengaging in an attempt to reduce stress (Halbesleben & Buckley, 2004). If disengagement were to occur, the entrepreneur's venture would likely be limited in its ability to meet the demands of stakeholders, and as such, may be more likely to fail.

For a significant proportion of entrepreneurs, venture failure will be experienced within the first seven years of operation (Ucbasaran, Shepherd, Lockett, & Lyon, 2013; Wiklund, Baker, & Shepherd, 2010). Entrepreneurs who experience forced venture closure are likely to endure considerable emotional, social and financial costs as a result (Cope, 2011; Shepherd, 2003). Examples include marriage breakdowns, loss of the family home, and psychological distress (Gorgievski et al., 2010).

One reason for such high venture mortality rates may be that some entrepreneurs lack the coping skills to deal with the stress inherent in entrepreneurial activity; entrepreneurs who are better able to cope with stress have been shown to run businesses with longer life spans than entrepreneurs who use less adaptive coping strategies (Drnovšek, Örtqvist, & Wincent, 2010). Thus, entrepreneurs who are better able to cope with the demands of entrepreneurship are thought to have a competitive advantage over others (Dijkhuizen, Gorgievski, van Veldhoven, & Schlak, 2016). Drnovšek et al., (2010) focused on a specific taxonomy of coping (introduced and limitations discussed in Section 2.5.1), however, there are other taxonomies considered in the current research.

In reference to societal costs, entrepreneurs are seen as major economic contributors and drivers of economic growth by way of the roles they play in reducing unemployment, generating goods and services, and improving social welfare overall (Kelley, Singer, & Herrington, 2016; Stephan & Roesler, 2010; van Praag & Versloot, 2008; Welter, 2011). The economic implications of entrepreneurs experiencing stress and related strain may include loss of jobs for those employed by entrepreneurs. Hendrickson,

Bucifal, Balaguer, and Hansell (2015) estimate that between 2006 and 2011, approximately 1.44 million full-time equivalent (FTE) jobs were added to the Australian economy via start-up activity. Other costs to society may include: decreased revenue, demands on health and social welfare systems, and decreased levels of customer service, creativity, innovation, and performance (Ahmad & Xavier, 2010).

An argument could be made that stress and coping research is warranted in any occupational group that has yet to be exhaustively studied. Whilst acknowledging this, the focus of the current study is on entrepreneurs. As outlined previously in this Chapter, the decision to focus on entrepreneurs was motivated by (a) a limited understanding of the stress-strain process in entrepreneurs, and (b) the considerable costs of stress to entrepreneurs, their venture(s), and society. Furthermore, the decision to focus on this occupational category is based on the increasing number of people choosing entrepreneurship as a career (Kelley, Singer, & Herrington, 2016) and the unique characteristics of self-employment versus organisational/salaried employment.

#### *1.4.2 Stress management: acknowledging and prioritising*

It is common for employees in large organisations to undergo stress-management training e.g., short duration stress awareness workshops and generalised stress management techniques (Carver & Connor-Smith, 2010; van der Hek & Plomp, 1997). However, access to these programs by entrepreneurs may be impractical due to an entrepreneurs' detachment/absence from traditional corporate environments in which such programs are typically offered (Schonfeld & Mazzola, 2015). Additionally, stress management programs designed to address stressors experienced by the organisationally employed may not be valid or suitable for entrepreneurs given that stressors experienced by entrepreneurs are expected to differ from those of other occupational groups (Grant & Ferris, 2009; Wincent & Örtqvist, 2009). Despite scholars identifying the urgent need for stress reduction programs for entrepreneurs as far back as the 1980s (Boyd & Webb, 1982), there continues to be a lack of empirical research to inform such programs.

It is plausible that the lack of stress management training in SMEs may be linked to entrepreneurs being more concerned with keeping up with day-to-day tasks than

allocating time for stress management programs, which may not immediately reward their ventures. In addition, the entrepreneur may be unable to divert resources (e.g., time and money) away from other areas within the business in order to support such training. Moreover, entrepreneurs have historically been shown to be reluctant to admit to those around them that they are suffering strain (Gumpert & Boyd, 1984). There are several reasons as to why this may be so. The first and popular view is that being able to deal with high levels of stress is akin to wearing a 'badge of honour' (Wessely, 1996) therefore limiting the ability of the entrepreneur to seek help from their friends, family members or colleagues for fear they would appear weak or incapable. The second reason is that when stress is discussed in the context of entrepreneurship, it has long been portrayed as potentially motivating, with research noting that entrepreneurs often report stress as a driver of success (Brockhaus & Horwitz, 1986; Grant, 2011; Kariv, 2012). Furthermore, it may not be appropriate or advantageous for entrepreneurs to discuss problems they are facing for reasons such as the possibility of revealing private information about their ventures' financial or competitive position, and/or raising alarm among their employees (Gumpert & Boyd, 1984).

An entrepreneurs' preference not to confide in those close to them may prevent them from seeking help (Boyd & Gumpert, 1983). This has implications for practitioners (i.e., psychologists, counsellors) in terms of engaging an occupational group that may have little interest in their services due to a preference for self-directed coping (Vasumathi et al., 2003). If an entrepreneur's reluctance to talk about stress is motivated by privacy concerns, this may represent an opportunity for practitioners to provide a unique environment, free from judgement or consequence, where entrepreneurs can be assisted in building coping skills. Professional support, which carries no ties to one's immediate social circles, may provide the anonymity and objectivity required for entrepreneurs to speak freely about stress. In order to make professional support a more attractive offering for entrepreneurs, research suggests that promotion of coping related education programs should focus on both the health benefits and the financial rewards (Gumpert & Boyd, 1984).

In summary, this section highlighted potential implications associated with costs of stress to an entrepreneurs' venture, and the wider costs incurred by society. Empirical

research findings regarding adaptive forms of coping in entrepreneurs can be used to inform stress management programs to potentially reduce these costs.

The next section discusses the theoretical problems in the literature on occupational stress in entrepreneurs, specifically, the practice of adopting current conceptualisations of stress and coping in an entrepreneurship context. Addressing these problems may advance research.

## 1.5 Theoretical Problems

Scholars' consideration of occupational stress in entrepreneurs has largely been informed by adopting theoretical assumptions derived from studying stress among those in organisational employment (Wincent & Örtqvist, 2009). However, due to the infancy of occupational stress research within the domain of entrepreneurship, it has not yet been established whether existing theories regarding influential variables in the stressor-strain relationship (discussed in Chapter Two) are a good fit for this occupational group.

On the one hand, academic literature relating to stress in management roles may provide a general framework on which to build scholarly understanding of stress and coping in an entrepreneurship context (Kariv, 2012). On the other hand, while the entrepreneurship domain has historically benefited from the transference of theories from other disciplines to its own, such an approach is often applied without consideration of the non-uniformity between occupational groups (Zahra & Wright, 2011). A major issue for researchers investigating stress in entrepreneurship is the “lack of grounded research frameworks” (Wincent & Örtqvist, 2009, p.1) in which to develop theory relevant to entrepreneurs. It would seem that the practice of adopting theoretical assumptions derived from studies among the organisationally employed (Wincent & Örtqvist, 2009) is somewhat problematic when we consider (in the following section) that entrepreneurs and the organisationally employed are unique populations.

### 1.5.1 *Entrepreneurs as a unique occupational group*

Entrepreneurs have long been considered a unique occupational group (Kets de Vries, 1985). Examples of the unique characteristics of entrepreneurs include the



entrepreneurs' financial and emotional investment; risk taking propensity; and undertaking of the venture creation process (Buttner, 1992; Miner, 1990; Sarasvathy, 2009). Entrepreneurs tend to work in isolation with limited support from co-workers, work longer hours, experience difficulty in separating work and family time, experience lower accomplishment, and tend to operate in states of uncertainty (Jenkins, Wiklund, & Brundin, 2014; Ucbasaran et al., 2013). In addition, they also tend to earn less than salaried workers in similar areas of work and may have jobs to support themselves during the start-up phase (Jamal, 2007; Perry, Penney, & Witt, 2008). Buttner (1992) notes that entrepreneurs typically lack the resources available in larger organisations (e.g., human and financial resources), and may be required to work across many roles, compared to the often compartmentalised and well-defined roles of salaried workers.

Buttner (1992) cited the unique nature of entrepreneurship and its associated stressors as a justification for extending research on stress in entrepreneurs beyond research on managerial stress. Patzelt and Shepherd (2011) suggest that the process by which stress translates into strain outcomes may differ between employees and the self-employed, whilst Rahim (1996) showed that entrepreneurs may be more psychologically prepared to deal with stressors than managers, owing to entrepreneurs' typical personality characteristics (e.g., high internal locus of control). As such, it is not unreasonable to assume that characteristics commonly observed among entrepreneurs may influence the stress-strain process. The aim of the current research was not to investigate whether entrepreneurs cope using different strategies compared to other occupational groups. Rather, the focus was on investigating which dimensions of coping in entrepreneurs are linked to predicting strain given the unique demands of entrepreneurship.

The next section discusses findings regarding entrepreneurs' and non-entrepreneurs' levels of stress.

### *1.5.2 Stress levels in entrepreneurs*

Findings relating to stress levels in entrepreneurs are largely derived from studies investigating comparative levels of stress between entrepreneurs and the organisationally employed. These findings are inconsistent. Some studies have shown that entrepreneurs report higher levels of well-being and lower levels of stress (see e.g.,

Andersson, 2008; Baron, Franklin, & Hmieleski, 2016), while other studies have found some entrepreneurs to be worse off than wage-earners (see e.g., Cardon & Patel, 2013; Jamal, 1997; Lewin-Epstein & Yuchtman-Yaar, 1991; Parslow et al., 2004; Perry et al., 2008). Some studies report no difference (see e.g., Oren, 2012).

One explanation for the discrepancies in findings may be that existing stress measures (derived from organisational research) are not valid in the context of entrepreneurship. Recent work examining the conceptualisation and measurement of stressors among entrepreneurs has shown that existing occupational stress measures inaccurately capture the nature of stressors in entrepreneurs (Grant, 2011; Grant & Ferris, 2009, 2012). Existing measures were shown to omit many of the sources of stress experienced by entrepreneurs, and some items on existing scales were shown to be irrelevant. As such, use of existing stress scales with entrepreneurs could produce lower scores due to irrelevant and/or missing items. These findings mirror earlier observations that entrepreneurs may deal with the stressors of salaried managers *plus* additional stressors unique to entrepreneurship (Kariv, 2012). More recently, efforts to capture job demands specific to entrepreneurs (Dijkhuizen, van Veldhoven, & Schalk, 2014) found traditional stress measures to be lacking in an entrepreneurship context. Such findings have prompted the development of stress measures for use with entrepreneurs, for example, the Entrepreneurial Job Demands Scale (EJDS), which was developed using data from a sample of 291 Dutch entrepreneurs. At the time of writing, the EJDS was valid for use in The Netherlands only.

In summary, Section 1.5 presented the theoretical problems associated with stress and coping in entrepreneurs. The key points raised include: entrepreneurs are a unique occupational group who experience unique stressors; and, therefore characteristics unique to entrepreneurs should be considered in entrepreneurship stress and coping research. The next section introduces an individual difference variable of interest in the current research: trait time perspective, which is a trait related to temporal perspective. It is argued that this variable be considered when investigating stress and coping in entrepreneurs.

### **1.6 Trait Time Perspective: An Individual Difference Variable of Interest for Entrepreneurship Stress and Coping Research**

Trait-based research has long attempted to differentiate entrepreneurs from non-entrepreneurs, and has included investigation of need for achievement (McClelland, 1965), internal locus of control (Ahmed, 1985), initiative, imagination, ability to think conceptually, creativity, flexibility, innovativeness, adaptability to change and ability to inspire others (McClelland, 1965; Sexton & Bowman, 1985). In other words, attempts have been made to theorise ‘entrepreneurial personality’ (Kets de Vries, 1977).

Continuing investigation was somewhat halted during the late eighties, due in part to Gartner’s (1988) view that seeking clarification of entrepreneurial traits would not aid understanding of entrepreneurship, and Aldrich’s (1999) view that empirical investigation of traits in entrepreneurs had reached a ‘dead end’. More recent literature reflects renewed scholarly enthusiasm, as evidenced by the inclusion of over one hundred publications focused on personality traits and entrepreneurial behaviour as included in Rauch and Frese’s (2007) meta-analytic review.

Renewed interest in trait-based research is likely due to repeated calls for individual difference variables that may influence success to be investigated in entrepreneurship research (see e.g., Baum, Frese, & Baron, 2007; Das & Teng, 1997; Hisrich, Langan-Fox, & Grant, 2007; Rauch & Frese, 2007). Brandstätter’s (2011) examination of five meta-analyses on personality traits in entrepreneurs highlights the centrality of individual differences in the entrepreneurship role and the need to better understand the (as yet largely unexplored) influence of individual differences on entrepreneurs’ intentions, actions, and outcomes. Research in this area has established links between individual difference variables and, for example, entrepreneurial competence (Obschonka, Silbereisen, & Schmitt-Rodermund, 2012; Schmitt-Rodermund, 2004), venture survival (Ciavarella, Buchholtz, Riordan, Gatewood, & Stokes, 2004), the entrepreneurship gender gap (Obschonka, Schmitt-Rodermund, & Terracciano, 2014), venture growth (Baum & Locke, 2004), and entrepreneurial intentions and performance (Zhao, Seibert, & Lumpkin, 2010).

In the section that follows, a trait related to temporal perspective is introduced as an individual difference variable that may influence the entrepreneurship process. A measure of trait time perspective is introduced to operationalise this variable in the current research.

### *1.6.1 Considering trait time perspective as an influential individual difference variable in entrepreneurs*

Time is said to be an influencing factor in decision-making and actions (Sword, Sword, Brunskill, & Zimbardo, 2014), and a variable that should be centrally placed when conducting business related research (for a review see Shipp & Cole, 2015). Time perspective (also referred to as time orientation) is defined herein as the “often non-conscious process whereby the continual flows of personal and social experiences are assigned to temporal categories, or time frames, that help to give order, coherence, and meaning to those events” (Zimbardo & Boyd, 1999 p.1271).

Entrepreneurship scholars have suggested temporal dynamics play an important role in the entrepreneurship process. For example, Przepiorka (2015) found a positive relationship between an entrepreneur’s orientation towards the future (i.e., future time perspective) and avoiding potentially negative consequences. In the context of coping with stress, this might suggest that high trait future time perspective individuals are less likely to encounter stressors in the future owing to having strategically avoided the stressor occurring in the first place. At the time of writing, only one study explicitly investigating the effect of trait time perspective on stress could be located in entrepreneurship literature. This study, conducted by Bluedorn and Martin (2008), investigated the relationships between temporal variables and stress in a sample of entrepreneurs ( $N = 191$ ). Their study focused on ‘temporal depth’, which refers to the distance an individual’s thoughts are projected into the past or the future. After controlling for age, gender, and entrepreneurial experience, Bluedorn and Martin found an entrepreneur’s future temporal depth negatively correlated with general life stress ( $r = -.15$ ). Although this relationship is statistically considered ‘weak’, it should be noted that the mean age of participants was 52.57 ( $SD = 10.31$ ). Some studies find future time perspective to regress in more senior years (Hall et al., 2015), whilst other studies (de

Jong et al. 2015) note that the shape of the relationship between age and future-oriented behaviours is an inverted U. As such, a stronger correlation would perhaps be observed in a different aged cohort.

In considering the role of time in the venture creation process, Bird (1992) found an orientation towards the future may positively influence new venture creation via its role in setting and attaining goals. In later research, Bird and West (1997), advocated for temporal dynamics to be placed at the epicentre of entrepreneurship, noting that entrepreneurs must constantly navigate a course between the present and the future, and that entrepreneurs are actively engaged in decision-making relating to investing current resources in expectation of future gains. Shipp, Edwards, and Lambert (2009) regard time orientation as the root cause of entrepreneurs' attitudes, decision-making and behaviours. Furthermore, Bluedorn and Martin (2008) find evidence to suggest that the degree to which an individual looks to the future influences the successful management of startup ventures through the entrepreneur focussing on implementing plans and adhering to deadlines.

### *1.6.2 Operationalising trait time perspective in the current research using the Zimbardo Time Perspective Inventory*

Trait time perspective is operationalised in the current research using Zimbardo and Boyd's (1999) theory of 'time perspective' and associated measure: the Zimbardo Time Perspective Inventory (ZTPI). The ZTPI is introduced below, and its psychometric properties for the current study are presented in Chapter Six (Section 6.6.4).

According to Zimbardo and Boyd (1999), there are five dominant time perspectives, each reflected in one of the subscales comprising the ZTPI. These subscales are: Past Positive (i.e., a positive view of the past), Past Negative (i.e., a negative view of the past), Present Hedonistic (i.e., a risk taking, hedonistic approach to time and life), Present Fatalistic (i.e., a hopeless view of life), and Future (i.e., an orientation towards the future). Each is measured independently, such that scoring high on one subscale does not preclude a high score on another subscale (Zimbardo & Boyd, 1999).

The chronic use of one time perspective results in a dispositional style (or trait), such that an individual can be said to exhibit a past, present or future orientation. Time perspective tends to remain relatively stable over time (Drake, Duncan, Sutherland, Abernethy, & Henry, 2008; Hall, Fong, & Sansone, 2015; Keough, Zimbardo, & Boyd, 1999; Shipp et al., 2009; Zimbardo & Boyd, 1999). However, it may be influenced by extreme events (e.g., September 11<sup>th</sup> terrorist attacks Holman & Silver, 2005), therapy interventions (Sword et al., 2014), as well as by factors such as level of education; a higher level of education is linked to increased orientation towards the future (Zimbardo & Boyd, 1999).

Three of the five subscales in the ZTPI are used in the current research: Present Hedonism, Present Fatalism, and Future. The decision to use three, rather than five, subscales was twofold. Firstly, these three subscales have been established as meaningful in health-related research (Griva, Tseferidi, & Anagnostopoulos, 2015; Guthrie, Butler, & Ward, 2009; Papastamatelou, Unger, Giotakos, & Athanasiadou, 2015). Secondly, the current research conceptualises coping as a reactive and an anticipatory process. As such, time perspective scales congruent with present (i.e., reactive) and future (i.e., anticipatory) behaviours were selected, as these were expected to relate to reactive and anticipatory coping respectively. Time perspective scales related to past were therefore excluded, though the researcher acknowledges that these may be relevant when investigating the influence of trait time perspective on coping among entrepreneurs. This is discussed in section 5.4. Coping as a reactive and anticipatory process is discussed in detail in Chapter Two. The three trait time perspective subscales used in the current research program are defined in turn below.

*1.6.2.1 A definition of 'trait present time perspective' and its two sub-dimensions: 'Present Fatalism' and 'Present Hedonism'*

When considered as a uni-dimensional construct, trait present orientation reflects an individual's tendency to react to stimuli in their immediate environment rather than pausing to consider long-term implications (Zimbardo & Boyd, 1999); present orientated individuals typically exhibit reactive behaviours. High present oriented individuals are characterised as negotiating a fine line between seizing current

opportunities and engaging in impulsive behaviours (Shipp et al., 2009). The uni-dimensional approach has been criticised due to its failure to acknowledge that individuals may hold a fatalistic or hedonistic view of the present (Henson, Carey, Carey, & Maisto, 2006). Accordingly, the current research acknowledges both fatalistic and hedonistic perspectives, which are captured using two present oriented subscales in the ZTPI (Zimbardo & Boyd, 1999).

The ZTPI's Present Fatalistic subscale reflects a hopeless view of life. It is measured using items such as "Since whatever will be will be, it doesn't really matter what I do" (Zimbardo & Boyd, 1999). The Present Hedonistic subscale reflects a risk taking, pleasure seeking approach to time and life. Present hedonism is captured by items such as "I believe that getting together with one's friends to party is one of life's important pleasures" (Zimbardo & Boyd, 1999).

#### *1.6.2.2 A definition of 'trait future time perspective'*

Trait future time perspective (as captured by the ZTPI; Zimbardo & Boyd, 1999) is reflective of behaviours aimed at achieving future goals and realising future rewards. An example of a subscale item is: "Meeting tomorrow's deadlines and doing other necessary work comes before tonight's play". An individual with high trait future time perspective exhibits anticipatory behaviours (e.g., planning, resource accumulation) and holds positive expectations of future events (Zimbardo & Boyd, 1999). While the ZTPI recognises both positive and negative time perspectives in regard to the past, it does not do so when measuring an individual's orientation towards the future (Holman & Silver, 2005; Zimbardo & Boyd, 1999). In response to this limitation, Swedish researchers Carelli, Wiberg and Wiberg (2015) developed a modified version of the ZTPI which incorporates both positive and negative expectations of the future. At the time of writing, this measure had not been validated in an English language population, and as such was not used in the current research.

By definition, individuals with a high trait future time perspective are proactive; that is, they can be characterised as possessing "an opportunity-seeking, forward-looking perspective" (Rauch, Wiklund, Lumpkin, & Frese, 2009 p.763). Proactivity is considered a salient characteristic of entrepreneurs (Becherer & Maurer, 1999; Bolton

& Lane, 2012; Crant, 1996; Frese & Gielnik, 2014; Prabhu, McGuire, Drost, & Kwong, 2012) and of entrepreneurship (Covin & Slevin, 1989; Covin & Wales, 2012; Lumpkin & Dess, 1996).

Research shows that proactivity is positively associated with entrepreneurial behaviours (Becherer & Maurer, 1999; Chan, Uy, Chernyshenko, Ho, & Sam, 2015; de Jong, Parker, Wennekers, & Wu, 2015). Przepiorka's (2015) study comparing temporal dimensions in entrepreneurs as compared to non-entrepreneurs found current and nascent entrepreneurs to be more future oriented than individuals with no intention of starting a business. Additionally, Business leaders (e.g., CEOs and individuals who are part of high-level management teams), who likely share characteristics with entrepreneurs, are shown to have high levels of future orientation (West & Meyer, 1997; Yadav, Prabhu, & Chandy, 2007).

### *1.6.3 Other measures of temporal perspective*

Other measures of temporal perspective include: Temporal Depth Index (Bluedorn, 2002), Consideration of Future Consequences Scale (Strathman, Gleicher, Boninger, & Edwards, 1994), Temporal Focus Scale (Shipp et al., 2009), and Temporal Orientation Scale (Holman & Silver, 1998). These alternatives fall short as to their frequency of use in comparison to the ZTPI (Zimbardo & Body, 1999). This is perhaps due to the ZTPI distinguishing between fatalistic and hedonistic present, as well as between negative and positive past – these distinctions are lost in other scales. The ZTPI also measures an individual's orientation towards the past, present, and future in a single measure, whereas other scales focus on only one temporal perspective (e.g., future), or two temporal perspectives (past and future). As is presented in Chapter Six, the ZTPI is shown to be valid and has good reliability (see Zimbardo & Boyd, 1999).

The next section introduces the potential benefits of moving towards a better understanding of the interplay of individual difference variables (e.g., coping and trait time perspective), stress and strain.



### **1.7 Overview of Potential Benefits of the Current Research**

Potential benefits of the current research are detailed in Chapter Eight. In summary, the current research is expected to add to the emergent body of knowledge on coping with occupational stress in entrepreneurs through:

1. Exploring how entrepreneurs cope with stress
2. Establishing which dimensions of coping, as presented in the stress and coping literature and detailed in Chapter Two, appear to capture the nature of coping strategies among a sample of entrepreneurs, and the influence of coping in the stress-strain process
3. Investigating whether an entrepreneur's trait time perspective may have implications for coping and the stress-strain process

Perhaps the greatest contribution of this thesis is aiding understanding of coping in entrepreneurs so as to move towards a better understanding of influencing variables in the stressor-strain process in entrepreneurs. Findings from the research could further be used to inform recommendations about stress management to professional advisors (i.e., psychologists, counsellors) who could subsequently provide more informed counsel to their entrepreneurial clients. Additionally, findings may benefit entrepreneurs through providing insights into how other entrepreneurs cope with stress. Lastly, findings from the current research may assist researchers in making more informed decisions as to the dimensions of coping to adopt when investigating coping in entrepreneurs.

### **1.8 Structure of the Thesis**

The thesis consists of two studies: Phase One and Phase Two. The two phases are designed sequentially, such that findings from Phase One inform the design of Phase Two. The thesis is structured in three parts, as outlined overleaf in Figure 2.

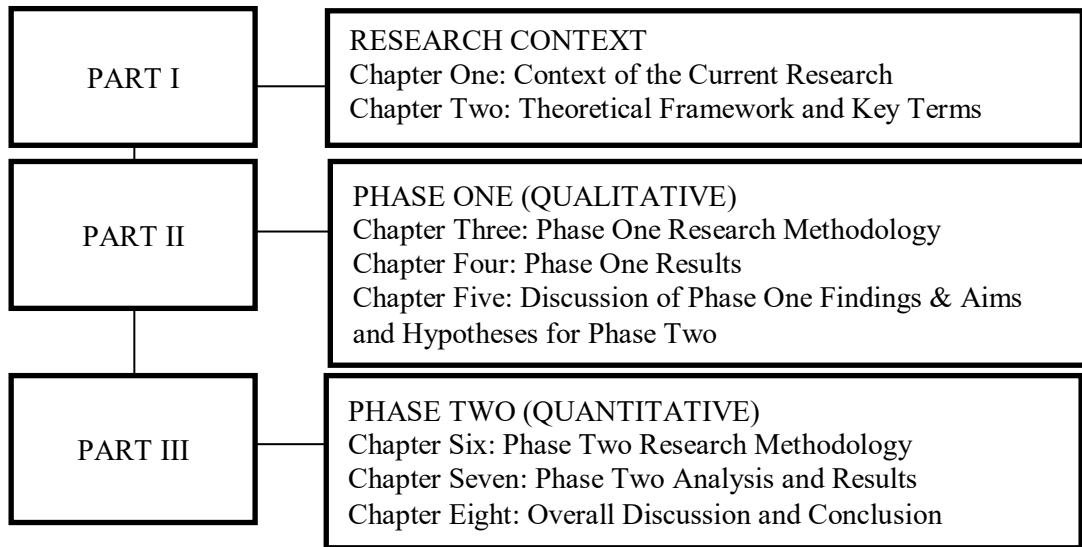


Figure 2: Structure of the Thesis

Part I (Chapters One and Two) provides context for the current research and is informed by a literature review. So far, Chapter One has introduced key variables investigated in Phase One and Phase Two. Understanding of key variables is advanced in Chapter Two, which further defines and discusses key concepts, such as stress, stressor and strain, in an entrepreneurship context. Furthermore, Chapter Two introduces burnout, chosen to operationalise strain in the current research, and defines and discusses its three conceptually distinct constructs (exhaustion, cynicism, and professional efficacy). Following this, coping is introduced as a process by which the effects of strain may be mitigated. The coping strategies considered in this thesis are outlined and examined with respect to their relevance to entrepreneurs. Part I concludes with a summary of aims for Phase One.

Part II (Chapters Three – Five) begins in Chapter Three by outlining the overarching methodological framework for the current research, then discusses philosophical decisions, ethical considerations, and the research methods used for Phase One. This phase of the research program was theory driven and used qualitative methods. Justification is provided for data collection and analysis techniques: semi-structured interviews and thematic analysis. Sampling techniques are also explained. Chapter Four

presents the results of Phase One, which are discussed in Chapter Five in relation to Phase One aims. Part II concludes with a summary of research aims and hypotheses for Phase Two, which arose from Phase One findings and a review of key literature.

Part III (Chapters Six – Eight) presents Phase Two, a correlational study utilising quantitative methods. Chapter Six outlines the advantages and limitations of adopting survey-based methods (as used in Phase Two), the sampling framework, and measures for the current study (e.g., stress, coping, trait time perspective and burnout). Data analysis procedures and results for Phase Two are presented in Chapter Seven. The thesis concludes in Chapter Eight, with a discussion of overall findings from Phases One and Two, strengths and limitations of the overall research program, and suggestions for future scholarship.

### **1.9 Chapter Summary**

This chapter provided context for the thesis. The aim of this chapter was to introduce key variables presented in the current research. A definition of ‘entrepreneur’ was provided. An operational definition was chosen for the current study while acknowledging that debate as to ‘who is an entrepreneur?’ is continuing. Rationale was given for the importance of investigating stress, coping and trait time perspective in this occupational group. Furthermore, an overview of the potential benefits of the overall research program was provided. The next chapter presents the key terms and theoretical framework used to examine stress and coping in entrepreneurs. The framework is evaluated for its application to stress and coping in an entrepreneurship context.

## CHAPTER 2: THEORETICAL FRAMEWORK AND KEY TERMS

### 2.1 Chapter Introduction

This chapter presents a theoretical framework in which to investigate stress and coping in entrepreneurs. The chapter proceeds as follows. Section 2.2 defines the key concepts of ‘stress’, ‘stressors’, and ‘strain’ and contextualises each in an occupational setting. Section 2.3 introduces ‘burnout’, chosen to operationalise strain in the current research. Section 2.4 presents coping as a ‘process’, and introduces a measure that assesses coping responses according to ‘function’. Section 2.5 outlines higher-order categories to which functional coping strategies may be grouped (i.e., coping typologies). Section 2.6 presents coping as a time-oriented process. Section 2.7 considers coping typologies in entrepreneurship research, and questions whether traditionally adopted coping typologies adequately capture the nature of coping in entrepreneurs. The chapter concludes with a summary of the overarching aims of the research program. The structure of this chapter is summarised overleaf in Figure 3.

### 2.2 Stress as a Stimulus-Response Process

#### 2.2.1 *Defining ‘stress’, ‘stressor’, and ‘strain’*

The term stress is derived from the Latin word *stringere*, a verb meaning ‘to press’, or ‘to be tight’. The term draws on an engineering analogy where stress is seen as a force, pressure, or strong effort exerted on the individual (Cartwright & Cooper, 1997). Stress has traditionally been defined in three ways: as a ‘stimulus’, a ‘response’ and a ‘stimulus-response’ process. Each definition is explained in turn below.

The stimulus definition (engineering approach) defines stress as a stimulus or ‘stressor’ i.e., a possible source of stress (Jex, 1998) within the environment that is normatively associated with an adaptive response (Bartlett, 1998). An example of the stimulus approach, which focuses on identifying and measuring events that may lead to distress, is the Social Rating Readjustment Scale (SRRS) (Holmes & Rahe, 1967). This scale measures the occurrence of various life events, which are ranked according to life change units or degree of adaptation required.

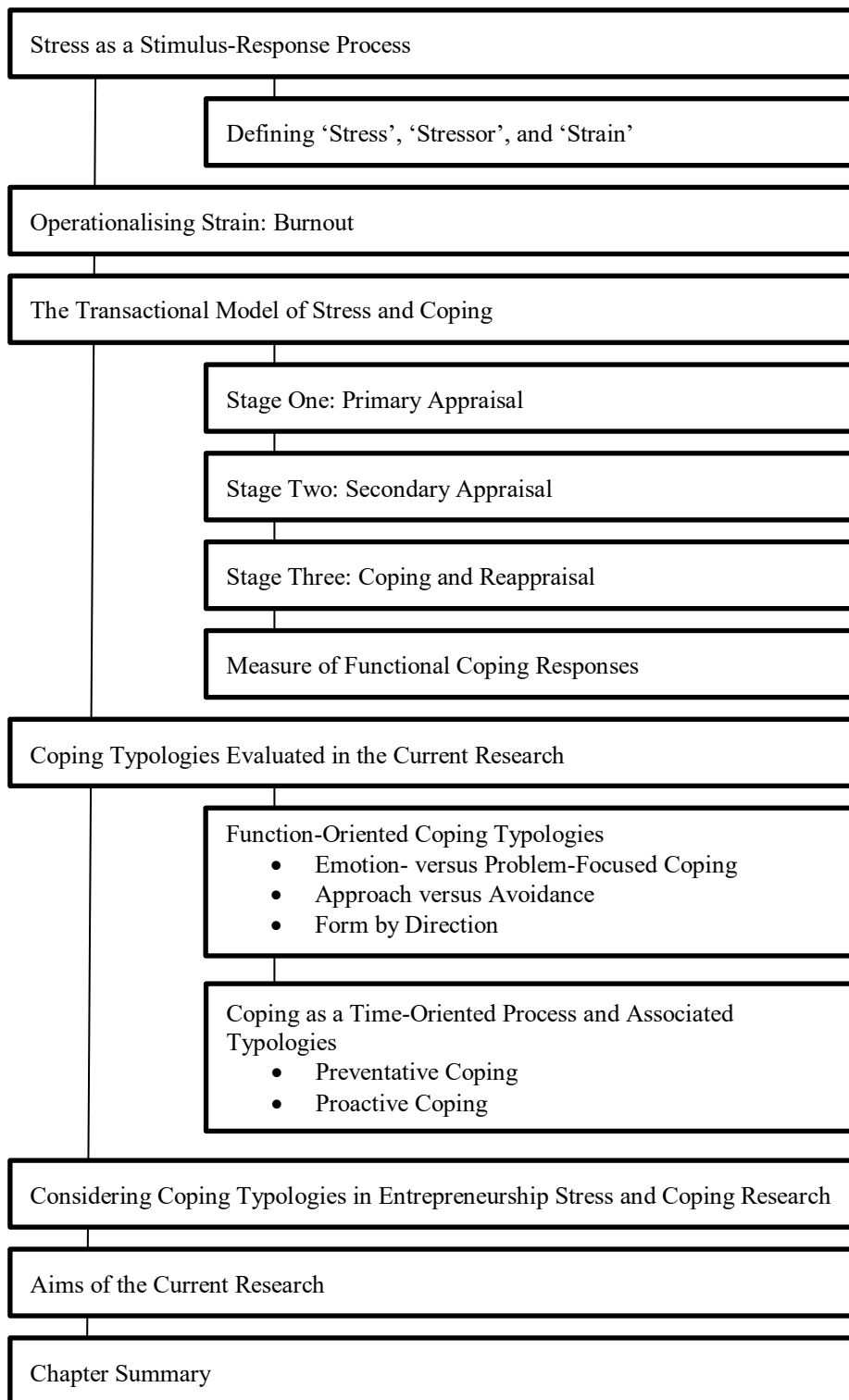


Figure 3: Chapter Two Overview

The validity of conceptualising stress as a stimulus has been questioned. For example, McGrath's (1976) research criticised the validity of the SRRS for the assumption that the individual's personal perception of whether the event is aversive was the single most important factor in determining its impact. Furthermore, the stimulus model has more broadly been criticised for not taking into account that individuals experience stress differently (Brown, 1974; Hough, Fairbank, & Garcia, 1976). The model assumes that stressors affect individuals in the same way, yet, with the exception of extreme events (e.g., life threatening situations), the effect of stress has been shown to differ between individuals (Monat & Lazarus, 1991). An alternate model to the SRRS, which also takes a stimulus approach, is the Hassles and Uplifts Scale (Kanner, Coyne, Schaefer, & Lazarus, 1981). This scale focuses on relatively minor events, and includes items such as: "yard work or outside home maintenance" (hassle) and "relating well with your spouse or lover" (uplift). Daily hassles and uplifts are reported to be a better indicator of somatic health than major life events (DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982; Kanner et al., 1981), however the model is somewhat limited as it still suffers from a failure to consider that stress affects people in different ways.

The response definition (physiological approach) of stress defines it in terms of a generalised physiological response to demands. The work of Hans Selye is considered to have contributed greatly towards the study and documentation of the stress response. Selye's pioneering work began in the 1930s but did not gain wide acknowledgement in the academic community until the late 1940s. It is noted as the earliest attempt to scientifically explain the relationship between stress and illness (Monat & Lazarus, 1991; Selye, 1976). Selye described stress as the "nonspecific response of the body to any demand" (Selye, 1976, p.53) and theorised that stress has four fundamental variations: eustress (i.e., positive or beneficial stress), distress (negative stress), hyperstress (overstress), and hypostress (understress).

Performance under stress follows an inverted-U-relationship (Yerkes & Dodson, 1908) – known as the 'Yerkes-Dodson Law'. According to this model, the top of the inverted 'U' can be thought of as a peak level of operation, whereby performance is enhanced through an optimal level of stressor exposure; in the middle lies an optimum level of stress where maximum benefit is gained. Within this region of the model, stress is

thought to energise an individual, although only to a certain point. Once this level is exceeded the stress outcome becomes negative, and will inevitably lead to strain (discussed in Section 2.3).

Selye's work focused on the physiological approach to stress through the development of a model termed the 'General Adaptation Syndrome' (GAS). The GAS describes the stress response in terms of three stages: alarm (i.e., realisation of a stressor), resistance (i.e., coping) and exhaustion (i.e., depletion of resources) (Monat & Lazarus, 1991). The GAS is an adaptive process, which focuses on the defence of the body to noxious stimuli or stressors. According to this process, if alarm is caused on a continuing basis, the individual will resist, with ongoing resistance leading to exhaustion. Selye's early work on stress was criticised for its focus on physiological outcomes, failure to recognise the psychological impact of stressors upon the individual, and its suggestion that there is one response to all stressful events, and failing to consider that individuals change their responses over time based on feedback (Cartwright & Cooper, 1997).

An alternative to the two aforementioned definitions of stress is to define stress as a stimulus-response process (psychological approach). This definition is adopted in the current research and refers to an interaction between the individual and his/her environment. According to this approach, 'stress' describes a normal, generalised, psychophysiological response (e.g., increased blood pressure) to a perceived demand or threat, and occurs when demands (or stressors) exceed one's ability to cope (see Fleming, Baum, & Singer, 1984; Jex, 1998). When stress fails to dissipate, strain arises. Strain is defined as a negative outcome for an individual in response to stress (Shinn et al., 1984). The stimulus-response model adopted within the current research is presented in Section 2.4, and was selected for use in the current research owing to its acknowledgement of the role of the individual in the stress-strain process.

There is vast research relating to psychological stress; over 186,000 stress studies and 36,000 coping studies have been conducted (Aldwin, 2011). Yet despite these numbers, clarification of the stress concept is plagued by definitional ambiguity. This may be due to the existence of competing models, the popularisation of the term stress in everyday language, and the tendency for academics to study stress without reference to a clear

framework (Hobfoll, 1989). To avoid ambiguity in the current research, the next section further defines ‘stress’, ‘stressor’ and ‘strain’ in an occupational context to clarify how the terms are operationally defined in the current research.

### 2.2.2 *‘Stress’, ‘stressors’ and ‘strain’ – defined in an occupational context*

#### 2.2.2.1 *‘Occupational stress’*

In an occupational context, stress is defined as “a situation wherein job-related factors interact with a worker to change (i.e., disrupt or enhance) his or her psychological and/or physiological condition such that the person (i.e., mind-body) is forced to deviate from normal functioning” (Beehr & Newman, 1978 p.670). This definition is adopted in the current research, due to its incorporation of psychological and physical responses, and because it does not exclude the potential positive effects that stress may have on the individual.

In keeping with the stimulus-response approach, organisational psychologists argue that occupational stress is determined by the relationship between an individual and his or her environment (Chemers, Hays, Rhodewalt, & Wycsocki, 1985; Edwards & Cooper, 1990; Edwards & Rothbard, 1999). Given this, individual differences may play a role in influencing stress, and strain outcomes.

#### 2.2.2.2 *‘Occupational stressors’*

Occupational conditions that cause stress are referred to as ‘stressors’ (Jex, Bliese, Buzzell, & Primeau, 2001). One way of grouping stressors is according to whether they are acute or chronic. Acute stressors occur over short periods of time whereas chronic stressors are generally thought of as existing over an extended duration (McLean & Link, 1994). In addition to being linked to a time frame, chronic stressors differ from acute stressors because they persist over time (Wheaton, 1994). Acute and chronic stressors should not be thought of independently, as the two may interact to predict strain outcomes. For example, it has been shown that if individuals are faced with an acute stressor while already suffering from chronic stress, the negative effect of acute stress is heightened (Lepore, Miles, & Levy, 1997). Examples of chronic stressors



experienced by entrepreneurs may include: isolation, supervision, recruiting, and taxation issues (Grant & Ferris, 2012). Chronic stressors are not directly measured in the current research due to the lack of an established validated measure for use with entrepreneurs. However, the current research did measure self-reported stress (see Section 6.6.1).

Chronic stress in individuals has long been considered to take a toll on health, for example, being linked to coronary heart disease, hypertension and cancer (Chandola et al., 2008; Cohen et al., 1998; Glaser & Kiecolt-Glaser, 2005). Psychological outcomes may include cognitive impairment (e.g., inability to think clearly) and emotional responses (e.g., anxiety and depressed mood). Individuals may suffer physical outcomes ranging from minor headaches to coronary heart disease, and behavioural outcomes such as absenteeism and reduced performance, poor self-care, substance abuse and changes in eating habits (Jex, 1998). Strain outcomes (as introduced below) form the focus of the current research.

#### 2.2.2.3 *'Strain'*

As defined above, strain is a negative outcome for an individual that occurs as the result of stress (Shinn et al., 1984). Section 1.4.1 noted that the strain outcomes for entrepreneurs are considerable. Firstly, strain may manifest as poor health or well-being. Secondly, it may reduce personal or organisational performance (e.g., decreased productivity). Thirdly, strain has potentially negative impacts on society (e.g., costs associated with health infrastructure) (Boyd & Webb, 1982; Buttner, 1992; Dolinsky & Caputo, 2003; Jamal, 1997). To investigate the role of individual difference variables on the relationship between stress and strain, strain is operationalised as burnout. This is discussed next in Section 2.3.

### 2.3 Operationalising Strain: Burnout

This section provides a brief history of 'burnout', introduces a measure of burnout for use in the current research, and outlines the three dimensions by which burnout is measured: exhaustion (Section 2.3.2.1), cynicism (Section 2.3.2.2), and professional

efficacy (Section 2.3.2.3). This section concludes by discussing burnout in an entrepreneurship context.

### *2.3.1 A brief history of burnout*

Burnout is a psychological syndrome that is an outcome of chronic job stress (Laugaa, Rasle, & Bruchon-Schweitzer, 2008; Lewin & Sager, 2007; Mahoney, 2009). It is a cumulative condition (Maslach, Schaufeli, & Leiter, 2001) that results from a prolonged response to chronic emotional and interpersonal stressors (Maslach, 2003). Burnout was chosen to operationalise strain in the current research as it results from chronic stressors, which, as noted in Section 2.2.2.2, are reported by entrepreneurs to a greater degree than are acute stressors. Furthermore, burnout is considered a unique strain construct that captures outcomes of stress that result exclusively from one's employment (Law, 2010). Burnout is described as an occupational hazard for those involved in people-orientated professions and is considered damaging for organisations (Cooper, 1998).

The relationship between stressors and burnout is well established (Maslach, Leiter, & Jackson, 2012). Since the appearance of scholarly articles on burnout first appeared in the early 1970s, this area has received considerable attention within academic literature, with thousands of articles published on its definition, antecedents, buffers, and outcomes (Maslach et al., 2001). As such, burnout has been widely researched in an organisationally-employed context. By contrast, little is known about burnout in entrepreneurs, who by virtue of their self-employment have both autonomy/control over their work environments but also unique stressors (as outlined in Section 1.5.1).

Burnout among entrepreneurs is, in part, a focus of the current research.

At an organisational level, the consequences of burnout may range from increased absenteeism to business failure. For the individual, the consequences may include anxiety, self-doubt, breakdown in relationships, poor health, and drug abuse (Shepherd et al., 2010). The negative impact of burnout can be long-lasting.

There are several theories as to why an individual may experience burnout, for example, burnout can result from overload (i.e., demands exceeding resources), underload (i.e.,

tedium or monotony) (Maslach et al., 2001); and from the loss of resources (Hobfoll, 1989). Burnout has also been linked to one's belief in the importance of one's work (i.e., whether one's work represents a significant contribution to the world) and from being exceptionally idealistic, which are linked to the 'existential perspective' (see Pines, 1993; Pines, 2002) – not considered in the current research.

Initially dismissed as 'pop psychology', the burnout phenomenon has grown into a well-established construct with over 6000 books, chapters, dissertations and journal articles having been published on the subject (Schaufeli, Leiter, & Maslach, 2009). The term 'burnout' was first developed and documented in the occupational stress literature by psychiatrist Herbert Freudenberger (1974), whose work drew from his personal experience with burnout as well as the experiences he observed in employees and volunteers involved in human services people-work, who suffered from professional exhaustion and fatigue.

Occurring simultaneously to the research of Freudenberger was the work of social psychologist Christina Maslach. Similar to Freudenberger, Maslach's work originally focused on human services workers and health professionals (i.e., professions characterised by high levels of interpersonal stressors) (Maslach & Jackson, 1981). However, unlike Freudenberger, whose work was largely autobiographical, Maslach placed a higher emphasis on empirical findings.

As the concept of burnout developed from its origins as a layman's term to one that is frequently used in the psychological domain, its definition evolved, and its application increased to a wider cross-section of occupations (Maslach et al., 2001). By the 1990s, the burnout construct had gained traction within industrial-organisational psychology, and expanded to include a wide range of occupations, though these occupations were still characterised by their involvement with people-work in some capacity (Maslach & Jackson, 1981).

Later research revealed that burnout is found in any occupation characterised by chronically difficult job demands, lack of resources given the demands, and high levels of conflict (between people, role demands, and/or values) (Maslach, 2003). Burnout is now thought to exist across all occupational groups (Schaufeli et al., 2009). The

definition of burnout used in the current research is: “A crisis in one’s relationship with work” (Maslach, Jackson, & Leiter 2010, p.20). Given that entrepreneurs tend to report chronic stressors as a greater source of stress than acute stressors (Grant & Ferris, 2009; Thompson & Prottas, 2006), burnout appears a fitting construct to operationalise strain within the current study.

### *2.3.2 Three dimensions of burnout: exhaustion, cynicism and professional efficacy*

Burnout may result in ‘emotional exhaustion’, ‘cynicism’ (also referred to in burnout literature as ‘depersonalisation’), and a reduced sense of ‘professional efficacy’ (Hobfoll & Shirom, 2001; Maslach & Jackson, 1981; Maslach et al., 2001; Shepherd et al., 2010). Each dimension is outlined below, then considered in an entrepreneurship context.

#### *2.3.2.1 Exhaustion dimension of burnout*

‘Exhaustion’ is considered the central quality of burnout (Maslach et al., 2001), and is characterised by physical fatigue and dysfunctional traits such as apathy, and feelings of helplessness. Exhaustion may lead to health problems such as substance abuse, increased anxiety, irritability and depression (Maslach & Leiter, 2008; Toker & Biron, 2012). It has been suggested that exhaustion also leads to withdrawal, which in turn leads to negative outcomes such as absenteeism, turnover, lowered productivity, decreased job satisfaction and commitment, and this may also spill over into the individual’s home life (Maslach et al., 2001). The presence of exhaustion alone does not imply one is ‘burnt out’ (Maslach, 2003).

#### *2.3.2.2 Cynicism dimension of burnout*

Cynicism is the second dimension of burnout and represents the *interpersonal context dimension* (Maslach & Leiter, 2008). Cynicism may be thought of as ‘depersonalisation’ in that an individual may attempt to distance themselves from their work, which may lead to negative and/or uncaring attitudes towards others.

### 2.3.2.3 *Professional efficacy dimension of burnout*

The third dimension of burnout is ‘professional efficacy’. This dimension represents *self-evaluation* (Maslach & Leiter, 2008). Burnout is associated with low levels of Professional Efficacy, which can result from a lack of resources in the workplace (Maslach, 2003) and in a reduced sense of personal accomplishment that leads to diminished feelings of confidence and achievement (Shepherd et al., 2010).

### 2.3.3 *Burnout and its three dimensions in an entrepreneurship context*

Burnout is considered a psychological outcome of chronic stressor exposure in certain professional occupations (Laugaa et al., 2008; Mahoney, 2009; Maslach, 2003). Given the chronic stressors associated with an entrepreneurs’ occupation (Grant & Ferris, 2009), it is somewhat surprising that a sparse number of studies exist that explore burnout in entrepreneurs. Scholarly findings are mixed as to the levels and impact of burnout and its dimensions in entrepreneurs.

It could be reasonably assumed that high levels of overall burnout would be present in entrepreneurs, given that (some) studies have reported that entrepreneurs experience higher job stress and higher strain than the organisationally employed (see e.g., Jamal, 1997; Perry et al., 2008). In support of this assumption, one study found that entrepreneurs reported lower psychological health, higher turnover, and higher overall burnout than the organisationally employed (Perry et al., 2008). Another study compared burnout in the organisationally employed and entrepreneurs and found that those in self-employment tended to experience higher burnout (specifically emotional exhaustion) compared to those employed in large organisations (Maslach et al., 2012).

Scholarly findings on levels of burnout dimensions in entrepreneurs are mixed. Some studies find emotional exhaustion to be higher in entrepreneurs than non-entrepreneurs (see Jamal, 2007; Lechat & Torrès, 2016), yet other studies find emotional exhaustion to be lower than for those in other occupations (e.g., Tetrick, Slack, Da Silva, & Sinclair, 2000; Voltmer, Spahn, Schaarschmidt, & Kieschke, 2011). With regard to cynicism, with the exception of Jamal’s (2007) study which finds no significant difference between the levels of cynicism in entrepreneurs compared to the

organisationally employed, it is largely unknown whether entrepreneurs may be especially prone to cynicism due to their work conditions. Lastly, investigation of professional efficacy in entrepreneurs has received scant attention. However, this dimension appears particularly pertinent to entrepreneurs in light of findings from Alarcon, Eschleman and Bowling's (2009) meta-analysis examining the relationship between personality variables and burnout. Alarcon et al. find proactive personality – a trait which is characteristic of entrepreneurs (Becherer & Maurer, 1999; Bolton & Lane, 2012; Crant, 1996; Prabhu et al., 2012) – to positively relate to professional efficacy ( $r = .38$ ). Furthermore, they found that the strength of the relationship between proactive personality and both emotional exhaustion and cynicism to be weaker than for professional efficacy ( $r = -.21$  and  $-.25$  respectively).

Research on burnout in entrepreneurs acknowledges that an individual's propensity to burnout is likely reduced as their ability to cope with stress increases (Perry et al., 2008). However, empirical work with which to inform recommendations as to how entrepreneurs should effectively cope with stress, remains sparse. The limited number of studies investigating burnout in entrepreneurs (see e.g., Fernet, Torrès, Austin, & St-Pierre, 2016; Jamal, 2007; Perry et al., 2008; Shepherd et al., 2010; Sikora & Saha, 2009) is surprising given that burnout is noted to be of particular concern for those engaged in entrepreneurial activity (Shepherd et al., 2010). One reason for the lack of studies may be the relative newness of entrepreneurship as an area of academic research.

The need for further studies is imperative, for burnout may result in numerous and considerable negative outcomes. For example, scholars have identified stress and burnout to impact the following: engagement with work, performance, attendance, ability to effectively carry out tasks, satisfaction, and retention (see Buttner, 1992; Endler & Parker, 1994; Halbesleben, 2006; Jamal, 2007; Shepherd et al., 2010). Burnout may also result in accidents, insomnia, headaches, indigestion, anxiety, and drug use (see Mahoney, 2009; Vasumathi et al., 2003).

One of the intended benefits of this research is its contribution to the body of knowledge relating to the stress-coping-strain relationship in entrepreneurs. As this body of

knowledge grows, it could be expected that professional advisors would be better resourced when advising their entrepreneur clients as to how they may better cope with stress and reduce their likelihood of experiencing burnout.

In summary, the dimensions of burnout outlined above (i.e., exhaustion, cynicism and professional efficacy) represent a three-dimensional picture of an individual's propensity to burnout. A measure of burnout used for the current research is outlined below.

#### *2.3.4 Measure of burnout used for the current research*

Historically, burnout has popularly been measured using the Maslach Burnout Inventory (MBI), and its use was limited to individuals working in human services occupations (Maslach & Jackson, 1981). In response to the demand to measure burnout in other occupations, the Maslach Burnout Inventory – General Survey (MBI-GS) was developed (Schaufeli, Leiter, Maslach & Jackson, 1996). The MBI-GS assesses an individual's propensity to burnout across three dimensions: 'exhaustion', 'cynicism' and 'professional efficacy'. The three sub-dimensions within the continuum are exhaustion–energy, cynicism–involvement, and inefficacy–efficacy. Rather than giving a definitive 'yes' or 'no' answer as to whether one is 'burnt out', the MBI-GS charts an individual's position along a burnout-engagement continuum, rendering a three-dimensional perspective of one's relationship with their work (Maslach et al., 2012). The 'burnout' end of the scale represents a negative experience characterised by exhaustion, cynicism, and inefficacy (i.e., lack of professional efficacy) and, as such, is considered an undesired state. The other end of the continuum, 'engagement', represents positive experience and a desired state in the form of energy, involvement, and efficacy (Maslach & Leiter, 2008; Maslach et al., 2012). Given the diverse nature of entrepreneurship (i.e., entrepreneurs work in many different industry areas), and the ability of the MBI-GS to measure burnout across professions, this measure has been chosen to assess burnout within this study.

According to the MBI-GS (Schaufeli et al., 1996), a propensity for burnout is indicated by high scores on exhaustion and cynicism dimensions combined with a low score in the professional efficacy dimension. Combining these scores into a single score, which

would represent an overall level of burnout, is not recommended owing to each dimension representing a conceptually distinct construct (Maslach et al., 2001). The definition of burnout and its three dimensions are outlined in Table 1. The psychometric properties of the MBI-GS (for the current study) are presented in Chapter Six (Section 6.6.5).

*Table 1: Burnout - Definition and Overview of its Three Dimensions*

Term	Definition
Burnout	<p>“A crisis in one’s relationship with work” (Maslach et al., 2010, p.20)</p> <p>The three dimensions against which an individual’s propensity to burnout is measured are ‘exhaustion’, ‘cynicism’ and ‘professional efficacy’.</p>
Exhaustion	Exhaustion is typically characterised by physical fatigue, and is considered to represent burnout’s central quality (Maslach et al., 2001)
Cynicism	Represents the interpersonal context dimension of burnout and may be thought of as ‘depersonalisation’ in that an individual may attempt to distance themselves from their work (Maslach & Leiter, 2008).
Professional Efficacy	Represents the self-evaluation dimension of burnout (Maslach & Leiter, 2008), resulting in a reduced sense of personal accomplishment that leads to diminished feelings of confidence and achievement (Shepherd et al., 2010).

Researchers have attempted to modify the MBI to create a measure of burnout specific to entrepreneurs (see Wei, Cang, & Hisrich, 2015). The modified version was not used in the current research owing to its relative newness in comparison to the more established measure.

The next section presents the most widely adopted framework of stress and coping: The Transactional Model of Stress and Coping (Lazarus & Folkman, 1984). It is within this framework that the current research investigates the role of coping in the stress-strain process in entrepreneurs.

## **2.4 The Transactional Model of Stress and Coping**

Perhaps the most influential and widely adopted stimulus-response (stressor-strain) model of stress (Goh, Sawang, & Oei, 2010; Vollrath, 2001) is the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984). Stress is defined within this model as “a particular relationship between the person and the environment that is appraised by



the person as taxing or exceeding his or her resources and endangering his or her well-being” (Lazarus & Folkman, 1984, p.19). The Transactional Model (Lazarus & Folkman, 1984) focuses on cognitive appraisal and coping as key variables in the stimulus-response process (Monroe & Kelley, 1997) and consists of three stages: primary appraisal, secondary appraisal (including coping strategy selection and implementation), and reappraisal (Lazarus & Folkman, 1984). This model provides a framework within which to investigate ‘coping’ in entrepreneurs, where coping is defined as efforts of an individual to manage demands (Folkman & Lazarus, 1980; Folkman & Lazarus, 1985; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986) and reduce stress and strain (Shinn et al., 1984). Each stage is outlined below.

#### *2.4.1 Stage One - Primary appraisal*

Primary appraisal is the first stage in the Transactional Model (Lazarus & Folkman, 1984), and is based on an individual’s appraisal of the stressor at hand, wherein the following question is asked (though not necessarily at a conscious level): “what is at stake?” The response to this question determines whether a potential stressor is appraised as irrelevant (no action required), benign-positive (a positive outcome expected), or stressful. For example, a tax bill received by someone who has money put aside in anticipation of its arrival would likely appraise the situation as benign, whereas someone who is severely in debt with limited financial resources may appraise the tax bill as representing a threat. ‘Stressful’ appraisals can take three forms: ‘harm-loss’, ‘threat’, or ‘challenge’. Harm-loss refers to appraisal that injury has already occurred; threat is the anticipation of harm, or a negative impact to one’s goals, well-being or self-esteem; challenge oscillates between a state of positive arousal and negative arousal, and is concerned with the potential for growth or mastery (Folkman & Lazarus, 1985; Lazarus & Folkman, 1987).

To illustrate how this stage may apply to entrepreneurs, consider the common stressor of venture failure. In this context, there can be a ‘time-lag’ between awareness of a failure trajectory (i.e., the anticipation of an identified stressor) and the point of ‘actual failure’ (Shepherd, Wiklund, & Haynie, 2009). As such, venture failure may be considered a process occurring over a prolonged period of time. It therefore follows that

as the process of failure advances, the way in which a stressor (e.g., firm failure) is appraised may transition from threatening (and to a lesser degree challenging) (i.e., anticipatory) to harm-loss (i.e., reactive). This suggests that anticipatory *and* reactive forms of appraisal are taking place throughout the failure process, yet perhaps being enacted to different degrees based on the amount of time between the identification and occurrence of the stressor. Therefore, as time advances, the way in which an individual appraises stressors is likely to transition.

#### *2.4.2 Stage Two - Secondary appraisal*

Secondary appraisal is the second stage in the Transactional Model (Lazarus & Folkman, 1984). Secondary appraisal is related to the outcome of primary appraisal. While a coping response will not be elicited if the situation is deemed as irrelevant or benign, if the situation is stressful then coping is required. A situation is stressful to the extent that (a) it is perceived as harmful, threatening or challenging (primary appraisal) and (b) it is perceived that an adequate or appropriate coping response is unavailable. The individual will determine what coping options are available, given their personal resources, in order to prevent harm or to benefit (Folkman et al., 1986). Thus, the coping strategy selected will be determined by what is at stake (i.e., primary appraisal) and available resources (Folkman et al., 1986). Despite the suggestion of a linear relationship, primary and secondary appraisal converge to determine whether the potential stressor is appraised as stressful (Folkman et al., 1986).

#### *2.4.3 Stage Three - Coping and reappraisal*

Stage three refers to ‘coping’ and reappraisal. A widely accepted definition of coping is: “constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984 p.141). More recently coping has been defined as “efforts to prevent or diminish threat, harm, and loss or to reduce associated distress” (Carver & Connor-Smith, 2010 p.685). The current research focuses on an individual’s ‘dispositional’ coping style, that is, an individual’s tendency to “exhibit particular patterns of behaviour in a broad range of circumstances” (Reber, Allen, & Reber, 2009 p.225).

Coping is a dynamic process enacted by an individual to manage demands (Folkman & Lazarus, 1980; Folkman & Lazarus, 1985; Folkman et al., 1986). Coping may also be seen as efforts to reduce stress and strain (Shinn et al., 1984). A key feature of coping within the Transactional Model of Stress and Coping is that coping is enacted in order to correct a negatively oriented state. It is this feature that largely distinguishes coping as defined in the Transactional Model (cf. Lazarus & Folkman, 1984) from other models of coping that are introduced later in this chapter.

During the reappraisal stage, the individual re-evaluates the situation based on their initial coping efforts, and determines whether future coping efforts are needed, determined by the initial question: what is at stake? The individual will then assess whether the stressor is irrelevant or benign (in which case no further coping response is initiated), or whether the situation is stressful, in which case, the process of appraisal and coping is continued.

The key to the Transactional Model (Lazarus & Folkman, 1984) is that stress is a function of appraisal *and* coping, rather than the quality or intensity of the situation per se, as distinct from stimulus-based models. Although appraisal is a key component of the stress process, it is not directly measured within the current research. Omitting a measure of appraisal from the current research was in part motivated by limitations inherent in existing appraisal measures (see Eschleman, Alarcon, Lyons, Stokes, & Schneider, 2012; Schneider, 2008; Searle & Auton, 2015). For example, existing appraisal measures are shown to have questionable reliability and validity (Schneider, 2008). The decision to exclude a measure of appraisal was further motivated by the focus of the current research: coping rather than appraisal.

In summary, the Transactional Model (Lazarus & Folkman, 1984) asserts that whether stressors will lead to strain is largely determined by the individual's cognitive appraisal of the situation and their coping resources, including coping strategy effectiveness. Effective coping strategies may lead to a decrease in stress, but also to changes in future appraisal outcomes over time as effective coping strategies are learned and acted upon unconsciously. The next section introduces a measure with which to assess coping responses, which is used in the current research.

An alternative model to the Transactional Model (Lazarus & Folkman, 1984), which is widely used in occupational health psychology, is the Job Demands-Resources (JD-R) model (see: Bakker & Demerouti, 2007). According to this model, occupational well-being can be understood via the interaction of job-specific ‘demands’ (e.g., role ambiguity) and job-specific ‘resources’ (e.g., social support) (Demerouti & Bakker, 2011). Despite the model being widely used to investigate occupational stress and burnout in the organisationally employed (for a review, see: Schaufeli & Taris, 2014), the model is not used in the current research for two reasons. Firstly, the JD-R model focuses on demands and resources, rather than coping (which is the primary focus of the current research; although later versions of the model have incorporated personal resources alongside job resources, these are not central to the model). As such, the Transactional Model – which considers coping as a key variable in the stimulus-response process – was deemed by the researcher to be more appropriate. Secondly, as outlined in Section 1.5.2, there does not currently exist a suitable measure with which to quantify entrepreneurial demands (or ‘stressors’). Developing such a measure was beyond the scope of the current research.

Another influential model of occupational stress is the job demands-control model (DCM; Karasek, 1979). This model asserts that job strain can be distinguished by a) occupation-specific demands (i.e., stressors), and (b) the level of freedom a worker has (within their organisation) to decide how they will meet these demands i.e., decision latitude. It is questionable whether this model provides an appropriate conceptual framework for the current study as it could be expected that entrepreneurs (recruited into the current study) would have similar levels of decision latitude owing to their position in their organisation’s hierarchy (i.e., ‘owner’). With potentially little variability in decision latitude among study participants, use of the DCM would effectively reduce the study to an investigation of entrepreneurial demands/stressors. As mentioned above (in relation to the JD-R model), this is somewhat problematic owing to a lack of availability of a suitable measure of entrepreneurial stressors. The EJDS (see Section 1.5.2) is limited in scope and has not been fully validated. A Sources of Entrepreneurial Stress Scale is currently being validated by the author along with co-authors Grant, Vinberg, Nordenmark, Landstad and Wilson.

### 2.4.3.1 *Measure of functional coping responses*

A widely-used measure with which to assess coping responses is the Brief COPE (Carver, 1997). This measure focuses on coping ‘function’, and includes 14 functional coping responses (refer to Table 2), including: Active Coping, Planning, Positive Reframing, Acceptance, Humour, Religion, Using Emotional Support, Using Instrumental Support, Self-Distraction, Denial, Venting, Substance Use, Behavioural Disengagement, and Self-Blame. The psychometric properties of the Brief COPE are outlined in detail in Section 6.6.2.

*Table 2: Functional Coping Strategies* (source: Carver, 1997)

Scale name	Scale Items
Active Coping	1. I concentrate my efforts on doing something about the situation I’m in. 2. I take action to try to make the situation better.
Planning	1. I try to come up with a strategy about what to do. 2. I think hard about what steps to take.
Positive Reframing	1. I try to see it in a different light, to make it seem more positive. 2. I look for something good in what is happening.
Acceptance	1. I accept the reality of the fact that it has happened. 2. I learn to live with it.
Humour	1. I make jokes about it. 2. I make fun of the situation.
Religion	1. I try to find comfort in my religion or spiritual beliefs. 2. I pray or meditate.
Using Emotional Support	1. I get emotional support from others. 2. I get comfort and understanding from someone.
Using Instrumental Support	1. I try to get advice or help from other people about what to do. 2. I get help and advice from other people.
Self-Distraction	1. I turn to work or other activities to take my mind off things. 2. I do something to think about it less, such as going to the movies, watching TV, reading, daydreaming, sleeping, or shopping.
Denial	1. I say to myself “this isn’t real”. 2. I refuse to believe that it has happened.
Venting	1. I say things to let my unpleasant feelings escape. 2. I express my negative feelings.
Substance Use	1. I use alcohol or other drugs to make myself feel better. 2. I use alcohol or other drugs to help me get through it.
Behavioural Disengagement	1. I give up trying to deal with it. 2. I give up the attempt to cope.
Self-Blame	1. I criticize myself. 2. I blame myself for things that happen.

Investigating coping at the level of individual coping strategies becomes problematic when we consider that the number of coping strategies and the contexts within which coping occurs is virtually infinite (Skinner & Zimmer-Gembeck, 2007). To bring clarity to the coping construct, higher-order dimensions (i.e., typologies) of coping have been developed which attempt to group coping strategies based on their function (see Skinner, Edge, Altman, & Sherwood, 2003). Knowledge of these dimensions enables investigation of broad classes of coping rather than (the potentially infinite number of) individual coping strategies. Therefore, rather than considering individual coping strategies, the current research investigates coping ‘typologies’ (i.e., taxonomies or classifications). The next section presents the coping typologies evaluated in the current research.

## **2.5 Function-Oriented Coping Typologies Evaluated in the Current Research**

The research program investigated the role of coping in the stress-strain process at a coping typology level rather than at an individual coping strategy level. This section begins by presenting the coping typologies evaluated in the current research that focus on function. The coping typologies introduced herein include: *problem-focused* versus *emotion-focused* coping (Section 2.5.1); *approach* versus *avoidance* coping (Section 2.5.2); and classification based on *form* (*behavioural, affective, cognitive*) and *direction* (*change, adapt, or disengage*) (Section 2.5.3).

### *2.5.1 Problem-focused versus emotion-focused coping typology*

Coping may be classified according to two main functions (Folkman et al., 1986): the first function is to change/remove stressors in one’s environment, and is labelled problem-focused coping, and the second is to regulate one’s emotions in response to stressors, known as emotion-focused coping. Problem- and emotion-focused coping should not be thought of as independent or opposing coping strategies, but rather as complementary in that emotion-focused coping may be used initially to regulate emotions so that problem-focused coping may be enacted (Folkman & Moskowitz, 2004). For the purposes of discussion, they are outlined individually below.

### 2.5.1.1 *Problem-focused coping*

Problem-focused coping is defined as “coping that is aimed at managing or altering the problem causing the distress” (Lazarus & Folkman, 1984 p.150), whereby its function is to remove, evade or diminish the stressor. In reference to the Brief COPE (Carver, 1997), examples of problem-focused coping include: Active Coping, Planning, and Use of Instrumental Support. By definition, problem-focused coping involves actively addressing the source of stress in order to modify associated levels of distress (Carver & Connor-Smith, 2010). The efficacy of problem-focused coping is therefore somewhat determined by the level of control the individual has over the stressor i.e., whether an individual is *able to* actively address a stressor. Where the individual may have little or no control over a stressor, efforts to cope using problem-focused strategies may increase distress. Under these circumstances problem-focused coping strategies may be maladaptive. Entrepreneurs may utilise problem-focused coping strategies more readily than those who are organisationally employed due to having greater control over their work environments.

### 2.5.1.2 *Emotion-focused coping*

Lazarus and Folkman (1984 p.150) defined emotion-focused coping as “coping that is directed at regulating emotional responses to the problem” wherein emotion-focused coping relates to one’s emotional efforts to diminish stress. This may include reframing stressors in a way that reduces subsequent negative emotions. Emotion-focused coping comprises many forms, examples include self-soothing, expressing emotions, or escapist behaviour (Carver & Connor-Smith, 2010). Emotion-focused coping may be achieved through altering one’s behaviour (i.e., taking drugs, eating, exercise) or through cognitive means (i.e., Self-Distraction or Positive Reframing). With respect to the Brief COPE (Carver, 1997), examples of emotion-focused coping include: Venting, Substance Use, and Religion.

In the general coping literature, opinion remains heavily weighted towards emotion-focused coping being maladaptive (Baker & Berenbaum, 2007; Frydenberg, 2014). As such, emotion-focused coping is largely portrayed as inferior to problem-focused coping with regard to decreasing stress and strain. Long-term use of emotion-focused coping

strategies may lead to declining physical and psychological health (e.g., high blood pressure, heart disease, and depression) (Baker & Berenbaum, 2007; Carver & Connor-Smith, 2010).

Some emotion-focused strategies may be adaptive, yet, the adaptive nature of emotion-focused coping is largely unaccounted for in the emotion-problem dichotomy. With only two categories in which to classify emotion-focused or problem-focused strategies, variation in the adaptive/maladaptive nature of individual coping strategies is lost. This dichotomous approach fails to classify strategies according to whether coping is enacted to engage with (i.e., approach) the stressors or disengage from (i.e., avoid) the stressor. More recent typologies i.e., ‘approach’ and ‘avoidance’ coping, aim to capture the positive and negative nature of emotion- and problem-focused coping strategies, and encompass problem-focused and emotion-focused strategies within these higher-order dimensions. The next section introduces approach and avoidance coping typologies, which are further discussed in the context of entrepreneurship stress and coping research in Section 2.7.

### 2.5.2 *Approach versus avoidance coping typology*

While there are many typologies of coping, perhaps the most common typological distinction in the coping literature is between ‘approach’ and ‘avoidance’ (Skinner et al., 2003). As approach and avoidance category labels suggest, in this typology coping strategies are classified according to their orientation to the stressor i.e., approaching/engaging with a stressor, or at avoiding/disengaging with a stressor (Carver & Connor-Smith, 2010). Approach and avoidance classifications (which include sub-categories of emotion- and problem-focused coping) are outlined in Figure 4 overleaf. Problem- and emotion-focused strategies exist within each higher order category. The typology is not exhaustive, and it is believed that orientation alone is not sufficient to classify all coping strategies (Carver & Connor-Smith, 2010). The approach and avoidance typology somewhat alleviates the issues outlined above in Section 2.5.1, by providing clearer separation between adaptive and maladaptive coping strategies. Approach and avoidance coping are outlined individually below.



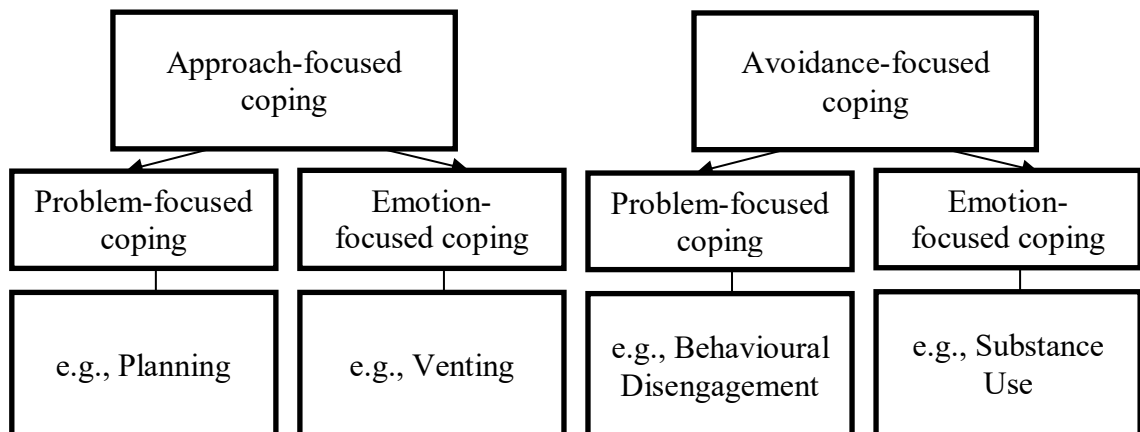


Figure 4: Approach versus Avoidance Coping Classification System

#### 2.5.2.1 Approach coping

Approach coping is action-oriented and deals with the stressor and associated emotions. Examples of functional coping strategies (cf. Carver, 1997) include: Planning, Venting, Using Emotional Support, and Positive Reframing. The aim of approach coping is to bring the individual towards the stressor i.e., to engage with the stressor in order to bring about change (Carver & Connor-Smith, 2010). The distinction between problem-focused and emotion-focused approach coping is made via the individual engaging with a stressor in an attempt to change the stressor (i.e., problem-focused approach coping) or as a way of regulating their own emotional response (emotion-focused approach coping).

The effectiveness of this form of coping is linked to both the level of control the individual has over the stressor and the expected reward from either engaging or disengaging with the stressor. Approach coping may be maladaptive if an individual does not perceive benefit arising from coping efforts – resulting in increased levels of distress and non-productive use of time worrying (Roth & Cohen, 1986).

When emotion-focused coping (see Section 2.5.1.2) is used to approach a stressor, the effectiveness of emotion-focused coping strategies is reported to increase (Baker & Berenbaum, 2007; Roth & Cohen, 1986; Stanton et al., 2000). ‘Emotion-approach coping’ is defined as “actively identifying, processing, and expressing one’s emotions,

thus providing information about one's goal status" (Baker & Berenbaum, 2007 p.96). Baker and Berenbaum's study showed that emotion-approach coping may facilitate the effectiveness of problem-focused coping strategy implementation because the individual has taken time to identify and process their emotions before hastily implementing a strategy. While Baker and Barenbaum acknowledge that emotion-focused coping is largely depicted as a maladaptive coping strategy within the wider coping literature, their research highlights that emotion-focused coping should also be viewed as an *adaptive* strategy: but (perhaps) only when used to 'approach' rather than 'avoid' stressors (avoidance is outlined in the next section).

#### 2.5.2.2 *Avoidance coping*

Avoidance coping is aimed at evading the stressor and/or related negative emotions. Avoidance coping is characterised by the individual aiming to put distance between themselves and the stressor, in order to pretend that the stressor does not exist. An example of emotion-focused avoidance coping is Substance Use, and an example of problem-focused avoidance coping is Behavioural Disengagement.

Avoidance coping may provide an individual with short-term relief (Schöenpflug & Battmann, 1988). However, long-term use is likely maladaptive due to the stressor persisting and its associated negative outcomes (Carver & Connor-Smith, 2010). Avoidance coping may also result in secondary stressors; for example, avoiding paying a bill by its due date may result in a damaged credit rating. As noted by Carver and Connor-Smith (2010), the longer the stressor goes unaddressed, the less time the individual has to find alternative coping strategies to alleviate harm. In the case of avoidance strategies such as substance abuse, health problems are also likely to arise.

#### 2.5.3 *Form by direction typology*

The last coping typology introduced in this section is Begley's (1998) nine-category matrix system. According to this system, coping strategies are classified according to their *form* (e.g., whether they are behavioural, affective, or cognitive) as well their *direction* (e.g., whether coping is enacted in order to change a stressor, adapt to a

stressor, or to disengage from a stressor). The classification system is represented in Figure 5, inclusive of examples of functional coping strategies (cf. Carver, 1997).

		DIRECTION		
		<i>Change a stressor</i>	<i>Adapt to a stressor</i>	<i>Disengage from a stressor</i>
FORM	<i>Behavioural</i>	e.g., Active Coping, Planning	e.g., Using Instrumental Support	e.g., Behavioural Disengagement
	<i>Affective</i>	e.g., Venting	e.g., Using Emotional Support	e.g., Religion, Substance Use
	<i>Cognitive</i>	e.g., Positive Reframing, Humour, Self-Blame	e.g., Acceptance	e.g., Denial, Self-Distracted

Figure 5: Begley's 3x3 Matrix Coping Framework. Adapted from Begley (1998)

One benefit of Begley's (1998) classification system is the increased number of categories within which to classify functional coping strategies compared to the aforementioned classifications systems; this approach is more nuanced than that provided by emotion- and problem-focused or approach and avoidance typologies. The implication of a more nuanced classification system is that it allows for more 'fine grained' analysis of the relationships between coping strategy types when investigating the influence of coping on the stress-strain process, as is investigated in the current research.

Additionally, any coping strategy that can be classified within the aforementioned classification systems (e.g., approach-, avoidance-, problem-focused, and emotion-focused) can also find place within Begley's (1998) 3x3 matrix. Problem-focused coping is captured by the *behavioural* category, emotion-focused coping by the *affective* and *cognitive* categories, approach by the *change* and *adapt* categories, and avoidance by the *disengage* category. This is illustrated in Figure 6.

		Approach		Avoidance	
		DIRECTION			
		<i>Change a stressor</i>	<i>Adapt to a stressor</i>	<i>Disengage from a stressor</i>	
Problem-focused	FORM	<i>Behavioural</i>	Active Coping Planning	Using Instrumental Support	Behavioural Disengagement
		<i>Affective</i>	Venting	Using Emotional Support	Religion Substance Use
Emotion-focused	FORM	<i>Cognitive</i>	Positive Reframing Humour Self-Blame	Acceptance	Denial Self-Distraction

Figure 6: Begley's 3x3 Matrix Coping Framework Illustrating Emotion-focused, Problem-focused, Approach, and Avoidance Categories. Adapted from Begley (1998)

In summary, this chapter has thus far presented the stress-coping-strain process according to a transactional framework of stress and coping (cf. Lazarus & Folkman, 1984). According to this framework, coping is largely a reactive process enacted in response to an *identified* stressor that is appraised as either threatening, harmful or challenging. Coping typologies associated with this framework were introduced above: emotion- and problem-focused coping; approach and avoidance coping; and the classification of functional coping strategies according to form by direction. A key feature of these typologies is their conceptualisation of coping as a present oriented process i.e., coping is enacted in response to the identification of actual stressors. Common to these typologies is the lack of attention paid to an individual's orientation towards time, notably the future. The next section introduces two additional (time-oriented) typologies of coping with which to investigate coping in entrepreneurs: preventative coping and proactive coping.

## 2.6 Coping as a Time-Oriented Process

Coping as a time-oriented process is a relatively recent development in the history of the coping literature. Its theoretical foundations are closely linked with Conservation of Resource (COR) theory (Hobfoll, 1989). Due to ideas within COR theory being attributed to the development of coping as a temporal process (Greenglass, 2002), COR is firstly outlined in brief below before introducing time-oriented coping typologies.

According to COR theory, stress occurs when at least one of the following three conditions is satisfied: (1) potential or actual threat of a net loss of ‘resources’ (defined below), (2) the net loss of resources, or (3) failure to achieve gain following investment of resources (Hobfoll, 1989). Additionally, Hobfoll states that stress may occur when individuals invest (significant) resources in the *expectation* of gain, yet the gain is not realised. Resources are “those objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions, or energies” (Hobfoll, 1989, p.516). While the term ‘resources’ may allude to a limitless number of possibilities, Hobfoll limits their scope to 74 empirically tested key resources that are deemed important to survival and well-being. Examples include: ‘feeling that I am successful’, ‘time for adequate sleep’, and ‘self-discipline’ (Hobfoll, 2001 p.342). The greater and more developed an individual's inventory of resources, the less likely the individual is to experience stress or strain.

Coping occurs when an individual acts in a proactive manner in order to gain new resources (e.g., developing job skills) or offset the potential for future loss of resources (e.g., finding a way to work around obstacles). Coping is conceptualised as a proactive method of risk and goal management (Greenglass, 2002) and is enacted *before* a stressor is encountered. As such, coping is conceptualised as a future-oriented process. Typologies of coping that classify future-oriented coping strategies are presented in the next section.

### 2.6.1 Future-oriented coping typology

Future-oriented coping (FOC) refers to coping as an anticipatory, rather than reactive, process. FOC is a single construct comprising two future-directed coping sub-constructs

(Gan, Yang, Zhou, & Zhang, 2007). The first sub-construct is termed ‘preventative coping’, the second ‘proactive coping’. Both can be measured using two subscales of the Proactive Coping Inventory (PCI) (Greenglass, Schwarzer, Jakubiec, Fiksenbaum, & Taubert, 1999): the proactive coping subscale and the preventative coping subscale respectively (this measure is discussed further in Section 6.6.3).

It is important to note that in the academic community, competition exists to claim ownership of the term 'proactive coping', with two conceptualisations of the term continuing to be used throughout the literature. One definition is provided by Aspinwall and Taylor (1997) and the other by Schwarzer and Taubert (2002). For the purpose of the current study, and in keeping with the approach taken by Greenglass (2002), and further endorsed by Sohl and Moyer (2009), Aspinwall and Taylor’s definition of proactive coping will be termed ‘preventative coping’, while Schwarzer and Taubert’s definition will continue to be termed ‘proactive coping’. Future-oriented coping typologies – as adopted in this research – are outlined below.

#### *2.6.1.1 Preventative Coping*

Preventative coping is defined as "an effort to build up general resistance resources that reduce the severity of the consequences of stress, should it occur, and lessen the likelihood of the onset of stressful events in the first place" (Greenglass, 2002 p.6). According to this definition, potential stressors are thought to represent a 'threat' or potential for 'harm-loss' to occur.

#### *2.6.1.2 Proactive Coping*

Proactive coping can be conceptualised as a self-regulatory, positively-oriented method of goal attainment (Greenglass, 2002; Sohl & Moyer, 2009) and is defined as “an effort to build up general resources that facilitate promotion toward challenging goals and personal growth” (Schwarzer & Taubert, 2002 p.9). Individuals that utilise proactive coping use mental simulation in a visionary manner and view potential stressors in a positive light.

Some scholars investigating coping in entrepreneurs have characterised problem-focused coping strategies as ‘proactive’ due to their action-oriented nature (see e.g., Drnovšek et al., 2010). Yet, proactive here appears limited to coping with identified stressors occurring in the future. As such, current descriptions of proactive coping within the entrepreneurship literature fundamentally differ from use of the term proactive in a future-oriented coping context (cf. Greenglass et al., 1999).

### *2.6.1.3 Preventative Coping and Proactive Coping – similarities and differences*

There are two main differences between proactive coping and preventative coping. The first relates to motivations and the second to the individual’s level of worry (Schwarzer & Taubert, 2002). In reference to motivation, Schwarzer and Taubert asserted that preventative coping is characterised by evaluating potential future stressors as harmful, whereas with proactive coping the individual assesses potential future stressors as challenges. According to future-oriented coping theory (Greenglass, 2002), when an individual appraises potential future stressor as a threat they will use ‘preventative coping’; when the stressor is appraised as a challenge they will use ‘proactive coping’. With respect to worry, Schwarzer and Taubert posit that preventative coping is associated with higher levels of worry, perhaps in response to the perception of impending harm, whereas those coping proactively would worry less (as a positive outcome is unlikely to induce worry). In an entrepreneurship context, an entrepreneur would likely be more worried about a downturn in the market (i.e., negative stressor), than they would be about increased demand for their product or service (i.e., positive stressor).

## **2.7 Considering Coping Typologies in Entrepreneurship Stress and Coping Research**

This section focuses on the use of coping typologies in entrepreneurship stress and coping research. Section 2.7.1 considers functional typologies of coping, and Section 2.7.2 considers time-oriented typologies.

### 2.7.1 *Considering function-oriented coping typologies in entrepreneurship research*

This section highlights key entrepreneurship studies which have adopted typologies of coping as drawn from seminal work in the stress and coping literature (see Carver & Connor-Smith, 2010). Common to these studies is their approach to conceptualising coping based on function.

Classifying coping strategies according to emotion- and problem-focused categories has dominated the study of coping in entrepreneurs (see e.g., Drnovšek et al., 2010; Patzelt & Shepherd, 2011; Singh, Corner, & Pavlovich, 2007). However, as illustrated below, limitations are associated with this classification system's use, and research findings are somewhat contradictory with respect to the efficacy of problem-focused coping versus emotion-focused coping in this context. For example, an exploratory qualitative study investigating how New Zealand entrepreneurs cope (and subsequently learn) from venture failure (Singh et al., 2007), reported that positive outcomes resulted from the use of emotion-focused coping strategies. Specifically, it was proposed that strategies such as 'reframing' and 'personal re-examination' led to adaptive outcomes (i.e., learning following venture failure). Furthermore, the study found that the use of coping strategies was dependent upon the area of the entrepreneurs' life affected: economic, social, psychological, or physiological (cf. Latack, Kinicki, & Prussia, 1995). Emotion-focused coping strategies were used predominantly when addressing psychological areas e.g., anger. The study found support for Shepherd's (2003) 'restoration approach', which advocates for some use of emotion-focused coping (avoidance) immediately following stressor exposure. In contrast, Drnovšek et al.'s (2010) research investigating the efficacy of entrepreneur's coping strategies for occupational stress found no empirical support for a relationship between emotion-focused coping and personal well-being. Drnovšek et al. recommended that entrepreneurs abandon emotion-focused coping strategies in preference for problem-focused ones in order to achieve more adaptive outcomes. Additionally, they suggested that entrepreneurs who use emotion-focused coping should be trained in problem-focused coping to improve coping outcomes. However, the application of problem-focused coping strategies may be limited to particular contexts. Singh et al. (2007) found problem-focused coping strategies were predominantly enacted by entrepreneurs in order to cope with economic



aspects of the entrepreneurs' life (i.e., lack of income), but were not used in relation to social, psychological or physiological aspects. A qualitative study of stress and coping in entrepreneurs self-employed in solo businesses (Schonfeld & Mazzola, 2015) found that participants described using problem-focused coping strategies three times more frequently than they described using emotion-focused coping strategies, however it was not known which type of strategy was more effective in managing stressors.

A possible explanation for disparate findings on the efficacy of emotion- and problem-focused coping strategies may be the classification system itself. For, as noted in Section 2.5.1, the dichotomous nature of the emotion-problem typology does not take into account whether emotion- and problem-focused strategies are used to approach and/or avoid stressors, and therefore does not account for the adaptive/maladaptive nature of coping.

Adoption of approach and avoidance typologies in entrepreneurship stress and coping research is minimal when compared to the aforementioned categories of emotion- and problem-focused coping. As presented below, some studies (albeit small in number) have adopted the approach and avoidance typology (either implicitly or explicitly). One such study was conducted by Ahmad and Xavier (2010), who investigated sources of stress and coping strategy use in 118 Malaysian entrepreneurs. While the researchers did not explicitly state the adoption of approach and avoidance coping classifications, their study found that the use of avoidance coping strategies (e.g., 'disregarding', 'diverts thinking by doing something else', and 'exercise') resulted in adaptive outcomes. Additionally, they proposed that 'spending time with friends' – also considered an avoidance style coping strategy – was "crucial" for entrepreneurs in managing stress levels. This finding differs somewhat from Oren's (2012) study of 149 entrepreneurs, wherein it was found that avoidance coping positively correlated with stress, and active strategies (i.e., approach-based strategies) negatively correlated with stress.

One issue in using coping typologies such as those outlined above (i.e., emotion-focused, problem-focused, approach, and avoidance) in entrepreneurship research may be that they carry with them preconceived notions about the efficacy of coping strategy

use in relation to strain outcomes. Begley's (1998) classification matrix somewhat removes these preconceptions, as it does not appear to have been used in entrepreneurship research to date. Furthermore, Begley claims that the system reserves judgement as to the efficacy of coping strategies in moderating the stressor-strain relationship.

### *2.7.2 Considering time-oriented coping typologies in entrepreneurship research*

Given that entrepreneurs are shown to have a high future orientation (see Section 1.6), and an orientation towards the future has been shown to be predicative of the use of anticipatory coping behaviours (Epel, Bandura, & Zimbardo, 1999), it is not unreasonable to assume that entrepreneurs would use time-oriented strategies when coping with stress.

There is some evidence to suggest entrepreneurs use future-oriented strategies when coping with stress. For example, Egan and Tosanguan (2004) found that entrepreneurs utilised proactive strategies when dealing with economic recession (e.g., accumulating financial reserves in anticipation of future need). Of the entrepreneurs who participated in their study, approximately half used such strategies. Additionally, Buttner (1992) found entrepreneurs to engage in proactive coping strategies e.g., exercise, abstaining from alcohol and cigarettes, meditating and engaging in religious faith. Although she did not refer to these strategies as being 'proactive', their description and use appears to align with the definition of 'proactive coping' as adopted in the current research. That is, entrepreneurs described coping in anticipation of future-events. Furthermore, Jenkins (2012) reported that entrepreneurs use 'planful problem solving' (i.e., coping in anticipation of an identified stressor appraised as a threat – preventative coping) when facing venture failure.

Within the entrepreneurship literature, Cope (2011) appears to suggest a need for considering temporal dimensions when investigating the stress-coping-strain process in entrepreneurs. His interpretative phenomenological analysis of data from eight entrepreneurs, which focused on entrepreneurs' learning from failure, is a rare contribution and one of the few qualitative studies of coping in entrepreneurs. Cope found that 'looking ahead' (after firm failure) was an important step for an entrepreneur

and a strategy that rendered more adaptive outcomes than reflecting on the past. The study appears to suggest a need to consider a future-oriented time perspective when investigating stress and coping in entrepreneurs, as it indicated that entrepreneurs who are future oriented experience lower levels of strain as a result of firm failure. The temporal nature of coping in entrepreneurs is further highlighted by Shepherd's (2003) work on 'restoration orientation'. Which refers to a period of time spent 'looking forward' and not back after encountering a 'stressor' (operationalised as venture failure). Shepherd appears to suggest that for adaptive outcomes, an entrepreneur should cope with the immediate stressor by using avoidance coping strategies (i.e., reactive coping) while simultaneously enacting anticipatory coping strategies to deal with secondary sources of stress. Taken in tandem, prior research indicates that investigating reactive *and* anticipatory coping may help shed light on the coping process in entrepreneurs.

In summary, the current research considers function-oriented coping typologies (i.e., emotion- versus problem-focused, approach versus avoidance, and form by direction) as well as time-oriented coping typologies (i.e., preventative coping and proactive coping), and considers their application to entrepreneurs. In doing so, the current research investigates coping as both a reactionary and anticipatory process. The coping typologies considered in the current research are summarised overleaf in Table 3. In the section that follows, the coping typologies presented so far are discussed in relation to their adoption in entrepreneurship stress and coping research.

*Table 3: Summary of Coping Typologies Evaluated in the Current Research*

Typology	Definition
Problem-focused coping	Coping aimed at “managing or altering the problem causing the distress” (Lazarus & Folkman, 1984 p.150) with the aim of removing, evading or diminishing the impact of a stressor.
Emotion-focused coping	“Coping that is directed at regulating emotional responses to the problem” (Lazarus & Folkman, 1984 p.150).
Approach coping	Action-orientated and is enacted in order to deal with a stressor and/or its associated emotions. The aim of approach coping is to bring the individual towards the stressor (Carver & Connor-Smith, 2010).
Avoidance coping	Aimed at evading a stressor and related negative emotions, with the aim of putting distance between one’s self and the stressor in order to pretend the stressor does not exist.
Form by Direction	Form and direction categories of coping are used to construct a 3x3 matrix within which coping strategies may be classified (Begley, 1998). A strategy’s ‘form’ refers to whether it is behavioural, affective, or cognitive; a strategy’s ‘direction’ refers to whether the coping strategy is enacted for the purpose of changing a stressor, adapting to a stressor, or to disengage from a stressor.
Preventative coping	"An effort to build up general resistance resources that reduce the severity of the consequences of stress, should it occur, and lessen the likelihood of the onset of stressful events in the first place" (Greenglass, 2002 p.6). Potential stressors are appraised as a ‘threat’ or having the potential to cause ‘harm-loss’.
Proactive coping	“An effort to build up general resources that facilitate promotion toward challenging goals and personal growth” (Schwarzer & Taubert, 2002, p.9). Potential stressors are appraised in a positive light.

In conclusion, it is perhaps not unreasonable to expect that the opportunity-seeking and forward-looking perspective that characterises (future-oriented) entrepreneurs (Rauch et al., 2009) may influence how entrepreneurs cope with stress. For, just as an orientation towards the future encourages anticipatory behaviour and action in advance of market changes (Hughes & Morgan, 2007), so too might it influence the use of future-oriented coping strategies. Moreover, coping in anticipation of the future is likely consistent with an entrepreneurs’ identity as a ‘doer and problem solver’ (Uy et al., 2013 p.593). Yet, whether entrepreneurs use future-oriented coping strategies in response to stress and the impact on strain remains largely unexplored in the entrepreneurship stress and coping literature.

Due to a lack of empirical research on coping among entrepreneurs, it was deemed necessary to investigate how entrepreneurs cope with stress, and the relevance of various coping typologies to this occupational group, *before* investigating which dimensions of coping have implications for strain outcomes in entrepreneurs. The research program guiding this investigation is introduced below.

## **2.8 Research Aims for Phase One of the Current Research**

The current research aimed to investigate dimensions of coping in entrepreneurs at a typological level. The typologies of coping evaluated in the current research were outlined above in Sections 2.5 and 2.6. These were: emotion- versus problem-focused coping, approach versus avoidance coping, classification of coping according to form and direction, and two time-oriented typologies: preventative coping and proactive coping. As was highlighted in this chapter, and in Chapter One, appropriate coping typologies for this investigation remained somewhat unknown at the commencement of the current research.

Where scarce scholarly work exists on a phenomenon, as is the case with coping in entrepreneurs, an exploratory research approach is recommended (Teddlie & Tashakkori, 2009). Therefore, the current research began with an exploratory study, termed 'Phase One'. The aims of Phase One were as follows:

1. To explore the coping strategies entrepreneurs use to cope with stress.
2. To determine whether time orientation might be a relevant dimension of coping in entrepreneurs.
3. To investigate whether recognised coping typologies (as described in seminal work in the stress and coping literature) appear to capture the dimensions of coping that may be relevant when investigating coping strategy effectiveness in entrepreneurs.

Upon achieving the aims of Phase One, measures of coping (that captured the dimensions of coping in entrepreneurs) were adopted for a second (correlational) study (i.e., Phase Two). The next chapter presents the methodological approach taken in

Phase One, and the results of this phase of the investigation are presented in Chapter Four.

## **2.9 Chapter Summary**

In this review, it was argued that traditionally adopted coping typologies (i.e., those that focus on function) may not adequately capture the nature of coping in entrepreneurs. It was further argued that time-oriented typologies of coping should be investigated for their relevance in this occupational group owing to entrepreneurs being characterised as future-oriented individuals. The key implication of this review is that before measures of coping are adopted in entrepreneurship research, clarification should be sought as to which dimensions of coping may meaningfully contribute to our understanding of coping and its role in the stress-strain process.

As a result of this review, a two-phased research program was developed. Phase One aimed to explore coping in entrepreneurs so as to determine which typologies of coping (as presented in this chapter) best represent how entrepreneurs cope with stress. Phase Two adopted measures of coping that were found in Phase One to reflect the dimensions of coping relevant to entrepreneurs. These measures were used to investigate dimensions of coping in entrepreneurs, and implications for burnout. The next chapter presents the methodology for Phase One.

PART II

PHASE ONE – QUALITATIVE STUDY

## CHAPTER 3: PHASE ONE RESEARCH METHODOLOGY

*“I think if we ignore the qualitative research... we miss really the opportunity for discovery and it is probably there that we begin to formulate some of the ideas that we can test further. And eventually test them with quantitative data.”*  
(Donald Sexton cited in Sarasvathy, 2000 p.55)

### 3.1 Chapter Introduction

This chapter introduces the mixed methods framework adopted in the current study, and focuses on the research methodology for *Phase One*, the first phase of a two-phased research program. This chapter is structured accordingly. Firstly, Section 3.2 introduces the overarching mixed methods research framework within which Phase One resides. Section 3.3 reiterates the aims of Phase One as were derived from the review presented in Chapters One and Two. Section 3.4 outlines the philosophical decisions informing the research design of Phase One. Section 3.5 highlights ethical considerations, and Section 3.6 presents the methods by which Phase One was conducted. Section 3.7 concludes this chapter with an overall summary. The structure of this chapter is summarised overleaf in Figure 7.

### 3.2 Mixed Methods Framework for the Current Research

The current research adopts a mixed-methods approach: an exploratory sequential research design (cf. Creswell & Plano Clark, 2011). ‘Sequential’ refers to the two-step nature of the research whereby the research is conducted in two phases; findings from an initial exploratory study (Phase One) inform the design of a second predictive (correlational) study (Phase Two). While an exploratory sequential design encompasses both exploratory and predictive approaches, focus is given to the first phase of the overall research program. ‘Exploratory’ refers to research which “generate[s] information about unknown aspects of a phenomenon” (Teddlie & Tashakkori, 2009 p.25). The choice to lead with an exploratory study is attributed to a review of the occupational stress and coping literature in entrepreneurs (as presented in Chapters One and Two), which showed understanding of how entrepreneurs cope with stress to remain largely unknown.



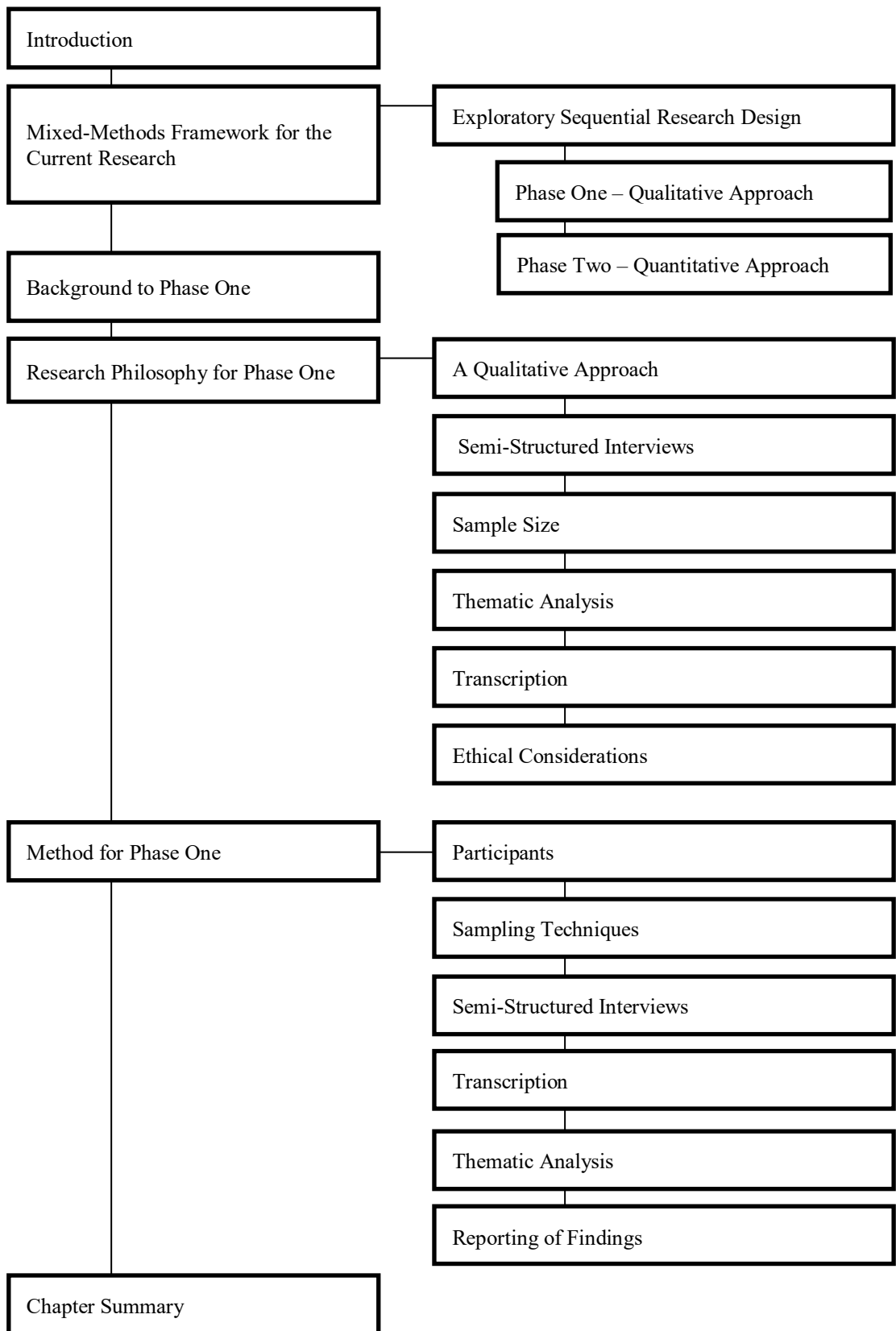


Figure 7: Chapter Three Overview

A qualitative approach, as adopted in Phase One of the current research, is warranted as prior research is lacking (Creswell, 2014). If, by contrast, the study had been led by an explanatory approach (i.e., adopted an *explanatory* sequential design), key variables that may help in explaining coping in entrepreneurs might have been omitted from investigation. The ‘point of interface’ at which the two phases of the research ‘mix’ occurs at the connection between analysis from Phase One informing the methodology adopted in Phase Two (Creswell & Plano Clark, 2011). A graphical representation of the exploratory sequential research design adopted in the current research is presented overleaf in Figure 8 (adapted from Creswell & Plano Clark, (2011)).

In adopting a mixed-methods approach, the researcher rejects the ‘*incompatibility of methods thesis*’, which asserts that combining qualitative and quantitative methods is incommensurable due to fundamental differences between the philosophical paradigms underlying each approach (see Teddlie & Tashakkori, 2012). Mixed-methods scholars have enduringly rejected this thesis (e.g., Creswell & Plano Clark, 2011; Howe, 1988; Morgan, 2007; Tashakkori & Teddlie, 2010; Teddlie & Tashakkori, 2009).

The current research adopts a pragmatic stance (for a review see Biesta, 2010). This approach is characterised by the research question(s) dictating the choice of methods i.e., methodological choices are adopted based on their perceived ability to answer the research questions. Through analysis of qualitative and quantitative data within one research program, a better understanding of the research problem may be obtained than would the analysis of qualitative or quantitative data alone (Creswell & Plano Clark, 2011). The philosophical assumptions adopted in the qualitative phase of the current research are presented in Section 3.4, while those relating to the quantitative phase are presented in Chapter Six. The remainder of this chapter focuses on presenting the research methodology for Phase One of the current study.

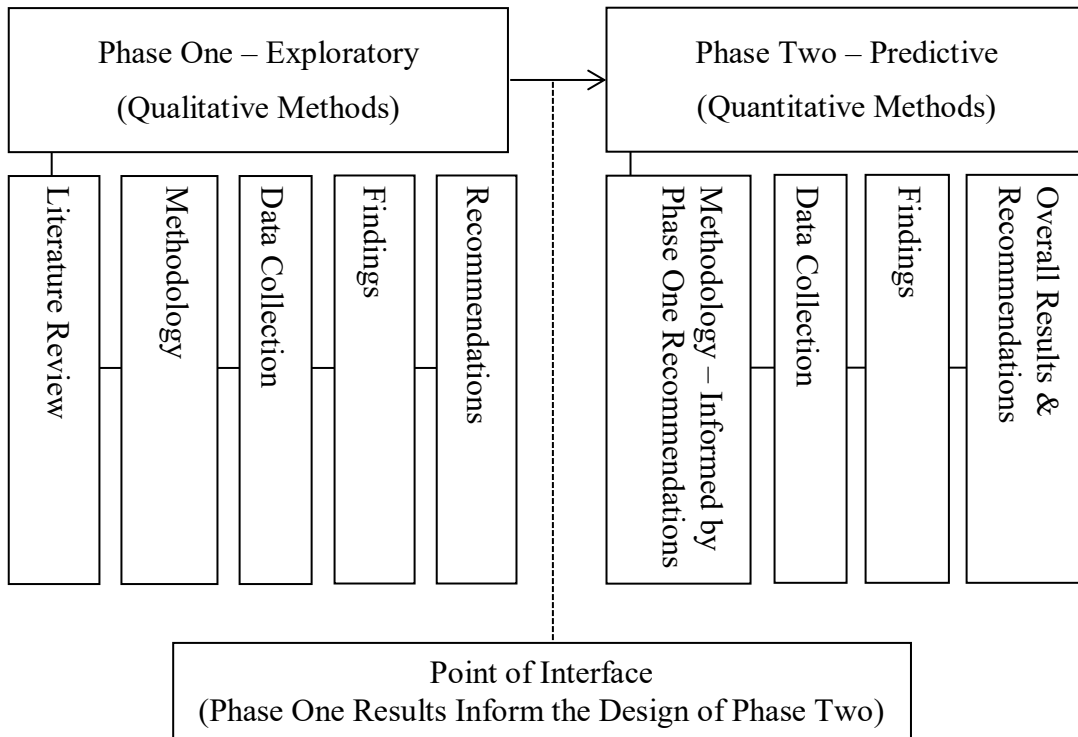


Figure 8: Graphical Representation of the Exploratory Sequential Research Design for the Overall Research Program. Adapted from Creswell and Plano Clark (2011)

### 3.3 Background to Phase One

As outlined in Part I, there are limitations in adopting current conceptualisations of the coping construct in the context of entrepreneurship. Specifically, it is not apparent whether current coping typologies presented in the stress and coping literature capture the nature of coping strategies used by entrepreneurs. A review of the occupational stress and coping literature in entrepreneurs led to the development of the following research aims, as presented in the previous chapter:

1. To explore the coping strategies entrepreneurs use to cope with stress.
2. To determine whether time orientation might be a relevant dimension of coping in entrepreneurs.
3. To investigate whether recognised coping typologies (as described in seminal work in the stress and coping literature) appear to capture the dimensions of coping that may be relevant when investigating coping strategy effectiveness in entrepreneurs.

Identifying relevant dimensions of coping in this occupational group is needed so as to move towards better understanding of which measures of coping should be used to measure the relationship between coping and health. In accordance with the exploratory sequential research design adopted for the current research, Phase One and Phase Two are complementary, such that findings from Phase One were used to inform which measures were selected to achieve the aims of Phase Two.

### **3.4 Research Philosophy**

In this section, the philosophical decisions that guided the design of Phase One are presented. The research philosophy adopted in Phase One is outlined, as are the use of semi-structured interviews, the thematic analysis technique, and the decisions that were made about sample size, data coding procedures, and transcription. The method by which the research was conducted will be described in Section 3.6.

#### *3.4.1 Philosophical assumptions*

Phase One was theory driven. As per the recommendations of Eisenhardt and Graebner (2007 p.26), who note that “sound empirical research begins with strong grounding in related literature, identifies a research gap, and proposes research questions that address the gap”, Phase One was prefaced by a review of relevant academic literature relating to stress and coping in entrepreneurs (as presented in Part I).

Phase One was exploratory in nature. Qualitative methods were employed to achieve the aims of the research. Historically, the number of academic publications in the entrepreneurship domain utilising qualitative methods has been over shadowed by the dominant adoption of positivist/functionalist paradigms and the accompanying use of quantitative methods (for a review see McDonald et al., 2015). This is despite scholars’ encouragement for an increased use of qualitative approaches in entrepreneurship (see e.g., Bouckenooghe, De Clercq, Willem, & Buelens, 2007; Cope, 2005, 2011; Gartner & Birley, 2002; Neergaard & Ulhøi, 2007; Sarasvathy, 2000). Research investigating stress and coping in entrepreneurs using qualitative methods is scarce. Purely qualitative research in this area has emerged only in recent years (for examples see Cope, 2011; Schonfeld & Mazzola, 2015; Singh et al., 2007). Mixed-methods studies utilising

qualitative methods as a precursor to a quantitative study (for examples see Akande, 1992; Gunnarsson & Josephson, 2011; Oren, 2012) are equally sparse. Hence, the approach taken in Phase One was somewhat unique in that it differed from that taken in the majority of scholarly work in entrepreneurship.

A qualitative approach is ideal when the researcher wishes to generate theories in ways quantitative research cannot, and also when the researcher is seeking unique perspectives on complex phenomena (Gartner & Birley, 2002; Hindle, 2004; Rauch, Doorn, & Hulsink, 2014). Despite this advantage, criticism abounds the use of qualitative methods, perhaps stemming from a misunderstanding that findings from qualitative studies lack generalisability (Ritchie, Lewis, Nicholls, & Ormston, 2013). Generalisability comes in multiple forms, and Phase One does not seek to achieve representational or inferential generalisation, but rather *theoretical* generalization. That is, Phase One aims to develop “theoretical propositions, principles or statements from the findings” (Ritchie et al., 2013 p.264). The ability for findings from Phase One to extend beyond theoretical generalisation is acknowledged as limited.

#### 3.4.2 *Data collection: semi-structured interviews*

Semi-structured interviews are the method of data collection utilised in Phase One. Semi-structured interviews are defined as a style of interview whereby the researcher begins with a set of predetermined themes, yet may vary the order in which these themes are investigated and may ask questions relating to new themes (where relevant to the objectives of the research) (Saunders, Saunders, Lewis, & Thornhill, 2011). The method by which semi-structured interviews were conducted is outlined in Section 3.6.3.

A list of themes and associated questions were developed in order to guide dialogue during the semi-structured interviews. Themes were chosen based on a review of the academic literature and related to appraisal and dimensions of coping: function and time orientation. For definitions and a review of constructs refer to Chapter Two. Interview questions were designed to explore these themes. As recommended by Rowley (2012), interview questions included prompts and sub-prompts in order to increase the depth of responses. Consistent with the technique of Bryman and Bell (2011), questions were

adapted and reordered during the interview to facilitate conversation style dialogue between the researcher and participant. For interview questions refer to Appendix A.

### 3.4.3 *Sample size*

The use of small sample sizes in qualitative research in entrepreneurship is not uncommon. For example, the sample sizes in studies utilising qualitative methods to investigate stress and/or coping in entrepreneurs range from 5 to 54 participants ( $M = 24$ ,  $SD = 17$ ) (see for examples: Akande, 1992; Cope, 2011; Grant & Ferris, 2012; Gunnarsson & Josephson, 2011; Schonfeld & Mazzola, 2015; Singh et al., 2007).

Given this, the sample size obtained in this phase ( $N = 22$ ) was seen to be adequate to answer the research questions under consideration. In addition, a larger sample size was not deemed necessary by the researcher, as this phase of the research program was not designed for the purpose of drawing representational or inferential generalisations. Details relating to the actual sample in Phase One are outlined in Section 3.6.1.

### 3.4.4 *Qualitative method: thematic analysis*

Thematic analysis was the method by which the data obtained from the semi-structured interviews were analysed. According to Braun and Clarke (2006 p.10), thematic analysis is defined as "a method for identifying, analysing, and reporting patterns (themes) within data", where themes are defined as "something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set".

Thematic analysis may be 'inductive' or 'theoretical'. In inductive analysis themes 'emerge' from the data, whereas with a theoretical approach, coding takes place according to pre-identified themes (identified within the literature) or research questions. Within Phase One a theoretical approach was taken. Accordingly, thematic analysis was preceded by a review of relevant literature (refer to Part I). The coding of data took place at a semantic (or explicit) level. Details relating to the themes chosen for analysis within Phase One are outlined in Section 3.6.5.

The six-phase process suggested by Braun and Clarke (2006) for conducting a thematic analysis is outlined in Table 4 below. Importantly, Braun and Clarke (2006) recommend that the six-phases be treated as a guide rather than as rules. Additionally, the process is recursive, not linear. The method by which the thematic analysis was carried out is outlined in Section 3.6.5. The types of data used within Phase One are outlined overleaf in Table 5.

*Table 4: Phases of Thematic Analysis (Source: Braun & Clarke, 2006 p.35)*

Phase	Description of the process
1. Familiarising yourself with your data	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes	Checking themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
6. Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of analysis.

*Table 5: Data Types Considered in Phase One*

Data type	Definition	Example of data type used within Phase One
Source: (Braun & Clarke, 2006 p.6)		
Data corpus	All data collected for a particular project	All data collected within Phase One
Data set	All the data from the corpus that is being used for a particular analysis	All interview data that related to coping
Data item	Each piece of data collected, which together make up the data set or corpus	Interview with entrepreneur
Data extract	An individual coded chunk of data, which has been identified within, and extracted from, a data item	Individual coded chunk of data from within an interview (data item)

#### *3.4.4.1 Reliability and agreement of coded data*

To assess the reliability and agreement of coded data, the three-stage process suggested by Campbell, Quincy, Osserman and Pedersen (2013) was used. Accordingly, the following three stage process was followed:

- Stage 1: A higher-order coding scheme (refer to Section 3.6.5) was developed and testing of this coding scheme for intercoder reliability was carried out using a sample of transcripts. This was achieved through data from four transcripts (representing approximately 20% of the total data) being coded by an additional researcher.
- Stage 2: The coded transcripts from both researchers were compared by the primary researcher to check for consistency. As coding decisions aligned, no changes were made to coded data as a result of this process.
- Stage 3: The coding scheme was deployed on the remaining transcripts by the primary researcher.

Refer to Appendix B for the coding scheme used in Phase One.



### 3.4.5 *Transcription decisions*

Transcription is the process of transforming audio into written words. While this provides a broad-brush overview of managing audio data, specific direction as to how this should be done is generally not offered by scholarly books aimed at guiding qualitative studies by business faculty researchers. Unfortunately, limited direction is faced across the wider literature (Easton, McComish, & Greenberg, 2000; Wellard & McKenna, 2001). The greatest area of ambiguity regarding the process of transcription relates to whether transcriptions should be transcribed verbatim (Halcomb & Davidson, 2006) and whether both verbal and non-verbal cues should be included in the word-processed transcript – both are cited as factors contributing to the reliability, validity and trustworthiness of the qualitative work conducted (MacLean, Meyer, & Estable, 2004). The researcher was cognisant of these factors when methodological decisions were made which could impact the future data analysis of the transcripts. Below, the choices that guided the method of transcription are discussed.

Firstly, consideration was given to whether transcription would be verbatim. While verbatim transcription may yield greater detail, it is reported to not be required when transcriptions will be used in conjunction with thematic analysis techniques (Braun & Clarke, 2006; Halcomb & Davidson, 2006; Silverman, 2011). As such, verbatim transcription was not used in the current research, however, the researcher did choose to include verbal cues such as laughing, yet only when they added value to the transcription (e.g., when the speech was in jest and the implication of this would be lost if presented in a word-processed document).

Secondly, decisions were made as to who would undertake the transcription process. While some researchers feel that transcription by the researcher is central to the scholarly process (Bird, 2005), given time limitations, it was decided that initially transcripts would be transcribed by the researcher in order to gain an understanding of the transcription process, but then, future interviews would be transcribed by a third party company who specialises in the secure transcription of audio data. Transcribing the initial four interviews personally allowed the researcher to gain an initial overview

of responses and to inform the way in which subsequent interviews should be approached. Refer to Section 3.6.4 for the method of transcription.

### **3.5 Ethical Considerations**

Prior to the research being conducted, ethical approval was obtained from Swinburne University Human Research Ethics Committee (SUHREC) (refer to Appendix C). In accordance with the conditions of approval, prior to taking part in the study, potential participants were provided with a Consent Information Statement (refer to Appendix D), which outlined details of the study, its importance, confidentiality, and what could be expected by the individual if participating. If individuals wished to take part they were provided with a Consent Form (refer to Appendix E) that was signed and returned to the researcher prior to an interview taking place.

Through the course of completing an interview, participants were asked to reveal personal information about coping with stress that they had experienced. As such, the researcher attempted to reduce any discomfort associated with participating in the research by informing participants about what they can expect prior to commencement (e.g., verbally and through the Consent Information Statement [refer to Appendix D]). As a precautionary measure, details for the Swinburne University Psychology Clinic and Lifeline were provided to participants for their use, should any problems arise (e.g., it was possible that questions/discussion surrounding stressful events could invoke distress in some participants).

Throughout the transcription process, data was de-identified. For example, if the company the participant owned was mentioned, the name of the company was replaced with a generic indicator such as 'Company A'. Participant names were replaced with a code allocated at the time of interview (e.g., the code 'E1' was used to indicate the first entrepreneur interviewed, 'E2' the second entrepreneur interviewed, and so on). De-identified data was used during the analysis process.

Hard copies of signed consent forms (refer to Appendix E) and any interview transcripts were stored separately in a locked filing cabinet located at the researcher's desk at Swinburne University of Technology (SUT). Electronic data was stored on a password-

protected computer, and a backup was stored on a password protected electronic storage device (also stored in the locked filing cabinet at the researcher's desk at SUT).

### 3.6 Method

#### 3.6.1 Participants

Within the study, the researcher sought to recruit entrepreneurs within a targeted age range of 18-65 years – reflective of the adult working population in Australia. To be classified as an entrepreneur within this study, potential participants were required to meet the definition of an entrepreneur, as outlined earlier in Chapter One, whereby an individual is considered an entrepreneur if they are an 'active-owner manager' (cf. Gartner, 1990).

The actual sample consisted of 22 entrepreneurs. There were 15 men ( $M = 39$  years,  $SD = 10.5$  years) and 7 women ( $M = 38$  years,  $SD = 7.8$  years). All participants were located in Australia, and were active owner-managers of ventures, that employed between 0 to 60 employees ( $M = 7$ ,  $SD = 14$ ). Their highest level of education ranged from 'no formal education' to 'postgraduate degree'. Participants identified as having run their own ventures from between 10 months to 34 years ( $M = 9$  years,  $SD = 9.4$ ). While all participants self-identified as being entrepreneurs, the researcher also checked the participant's publicly available LinkedIn profile for reference to them running a venture, and at the start of the interview the participant was asked to clarify the nature of their business and their role within it. For participant demographic information refer to Table 6 overleaf.

#### 3.6.2 Sampling techniques

Three sampling techniques were used in Phase One: purposeful sampling, snowball sampling and self-selection sampling. Descriptions and implementation methods pertaining to each of these techniques are outlined in the sections below.

3.6.2.1 *Purposeful sampling*

Purposeful sampling is defined as a technique whereby cases are selected by the researcher to enable research aims and objectives to be met (Saunders et al., 2011). This technique is commonly used in research projects containing small sample sizes (such is the case here). Given the researcher's experience in entrepreneurship and personal business networks, this technique represented a logical way in which to begin recruiting potential participants. A limitation of purposeful sampling is the lack of statistical representativeness of a larger population (Babbie, 2007). Yet, as mentioned above, Phase One was not designed for the purpose of drawing generalisations across a population.

Table 6: Summary of Phase One Participant Demographic Information

Demographic variable	Category	Frequency	Percentage
Gender	Male	15	68.2%
	Female	7	31.8%
Number of employees	0	12	54.5%
	1	3	13.6%
	6	2	9.1%
	10	2	9.1%
	17	1	4.5%
	34	1	4.5%
	60	1	4.5%
Highest level of education	No formal education	1	4.5%
	Pass in Year 12	1	4.5%
	Vocational Education/ TAFE certificate	1	4.5%
	Bachelor degree	10	45.5%
	Postgraduate degree	9	40.9%
Length of time in business	< 1 year	1	4.5%
	1 – <5 years	10	45.5%
	5 – <10 years	2	9.1%
	10 – <15 years	4	18.2%
	15+ years	5	22.7%

In order to increase the possibility for varied responses to interview questions, a heterogeneous sampling method (focused on recruiting participants with varying demographic profiles) was employed. Initial cases were selected from the researcher's contacts. Once identified, potential participants were contacted via email or phone and the nature of the study explained (either in writing or verbally). Participants were then asked if they would be interested in participating. If the participant expressed interest, they were provided with a Consent Information Statement (refer to Appendix D) that outlined the study. If the participant wished to participate, a signed consent form was presented for signature.

### *3.6.2.2 Snowball sampling*

Snowball sampling is a technique wherein initial cases are asked to identify further cases, and so forth, hence creating a 'snowball' effect (Saunders et al., 2011). It is also a technique historically used in conjunction with qualitative entrepreneurship research (Baltar & Brunet, 2012; Foley & O'Connor, 2013; Shinnar & Young, 2008; Singh et al., 2007). This method is recommended where potential participants may be difficult to locate (Babbie, 2007). Snowball sampling has at times been criticised for creating homogeneous samples (Lee, 1993; Saunders et al., 2011) due to the likelihood of participants referring the researcher to 'similar' cases as themselves. This, however, does not appear to have occurred in the current study, as indicated by participant responses to questions relating to their demographic profile (refer to Table 6 on the previous page). As this data shows, diverse responses were obtained for participants' highest level of education, number of employees, and years of business experience.

At the completion of each interview, participants were asked if they knew anyone who may wish to take part in the study. If a further case was suggested, the current participant was asked by the researcher to forward the researcher's details to the identified case. In all instances of a referral being made, the current participant gave the researcher the details of the identified case, and told the researcher they would contact the identified case to notify them that the referral had been made. After the researcher was notified by the current participant that contact had been made with the potential case, an implementation technique as per 'purposeful sampling' (as outlined above in

Section 3.6.2.1) was then employed. All of the potential participants contacted indicated that they wished to participate in the study. Five of the referred potential participants, however, were not available immediately due to work commitments and were therefore unable to participate due to time frames for interview completion.

Efforts to recruit female entrepreneurs proved more challenging than the recruitment of male entrepreneurs. To address this, at the completion of an interview (when a snowball sampling technique was employed) the researcher noted that she was looking to recruit more women into the study. The reason for the gender imbalance may be reflective of the gender imbalance in entrepreneurship (see Obschonka et al., 2014), and is characteristic of the higher rates of total entrepreneurial activity (TEA) for men (both early stage and established business owners) compared to women in GEM economies (Global Entrepreneurship Monitor, 2014).

### 3.6.2.3 *Self-selection sampling*

Self-selection is a technique where cases are allowed to “identify their desire to take part in the research” (Saunders et al., 2011, p.241). A ‘tweet’ advertising the research project was posted on the social media site Twitter, using the researcher's personal account (for sample social media posts used in the research program refer to Appendix F). The tweet requested that interested participants contact the researcher for more information. Upon receiving a request, a Consent Information Statement (Appendix D) was emailed to the potential participant. The email specified that if the potential participant wished to take part in the study, then they could reply to the email. Where expressions of interest were received, a time and location that was convenient for the participant was arranged. Participants also self-selected into the study by contacting the researcher after reading an unpaid advertisement that was placed in the email newsletters of two entrepreneurship related associations located in Melbourne, Australia: The Churchill Club ([www.churchillclub.org.au](http://www.churchillclub.org.au)) and Startup Victoria ([www.startupvictoria.com.au](http://www.startupvictoria.com.au)).

When using self-selection sampling techniques, it is common for those who offer to participate in the study to do so due to a strong connection with the research topic (Saunders et al., 2011). This was the case in the current study: individuals who

responded to both the social-media post and the newsletter advertisement indicated that they did so due to having been affected by stress, or having a desire to help the entrepreneurial community.

### 3.6.3 *Semi-structured interviews*

Semi-structured interviews were the primary data source from which to address the aims of Phase One. The rationale for using semi-structured interviews as a means of data collection is outlined above in Section 3.4.2.

The approach taken by the researcher in conducting the semi-structured interviews was consistent with the approach recommended for novice researchers engaged in writing a thesis (Rowley, 2012). Rowley suggests that the success of using a semi-structured interviewing technique is often determined by the skill of the researcher. Given this, to increase experience prior to conducting interviews with participants, the researcher held a mock interview with a colleague in order to gain confidence as well as to test the overall guiding structure of the interview questions and ensure sufficient scope existed in which to explore the desired themes. No changes were made to the interview questions as a result of this exercise.

#### 3.6.3.1 *Interview procedure*

Participants chose both the time and location of the interview. All interviews took place on weekdays during normal business hours. Examples of interview locations included: Melbourne co-working spaces (e.g., Inspire9, York Butter Factory, and NAB Village), Swinburne University of Technology, participants' offices, and via the telephone. Participants were informed prior to taking part in the study that the interview may take approximately 45 minutes; on average, interviews lasted for 38 minutes. Interview length was somewhat determined by the availability of the participant as well as the length of responses to the interview questions.

At the start of each interview the researcher attempted to put the participant at ease by treating the interview like a conversation (cf. Brinkmann & Kvale, 2015). After the participant appeared relaxed, the research project was described and explained to the

participant (this was in addition to the participant having earlier received an email containing the Consent Information Statement [refer to Appendix D]). Participants were also reminded that the interview would be audio recorded with an electronic recording device and were asked for verbal consent for this to take place (note, this information had been provided in the Consent Information Statement and signed consent had been obtained prior to the interview). No participant objected to a recording taking place. Next, participants were asked if they had any questions they would like to ask prior to commencement of the recorded interview. If questions were raised, the researcher addressed them.

Participants were asked to complete a Demographic Information Questionnaire (refer to Appendix G). This included questions regarding the participant's age, sex, education, marital status, country of birth, business age, business/industry type, business size (e.g., number of employees). These questions were asked for the purpose of sample description. If the interview was conducted via the telephone, these questions were read aloud to the participant and responses recorded by the researcher using pen and paper; this was done prior to the interview being audio recorded. The full name of the participant was not recorded on either the audio or Demographic Information Questionnaire, instead, a random code was used for data matching purposes. The code followed the format of the letter 'E' (to indicate 'entrepreneur') followed by sequential numbering indicating the order in which the interview had taken place (where E1 was the first interview and E22 was the 22nd interview).

During the interview, participants were invited to discuss how they cope with stress via one-to-one semi-structured informal interviews with the researcher. The researcher employed a responsive interviewing technique (Rubin & Rubin, 2012) in that while interviews were led by a predetermined overarching structure, the researcher evolved and adapted questions according to participants' responses to previously answered questions. At all times the researcher aimed to create a friendly, supportive and nonthreatening environment. Each participant was given room to explore their own responses to questions about stress and coping and the researcher was comfortable in allowing times of silence where the participant could reflect and add more depth and detail to responses if desired.



### 3.6.4 *Transcription procedure*

Philosophical decisions informing the transcription process are outlined above in Section 3.4.5. The first four interviews were transcribed by the researcher. Each interview took approximately three hours to transcribe. After each of these four interviews was transcribed, an initial analysis of themes and relevance of questions was conducted to ensure the research design was adequate to answer the research questions. No changes were made to the initial interview questions as a result of this process, and data collection continued in the same manner as was used in the first four interviews. The researcher felt she had gained adequate insight into the transcription process after transcribing these first four interviews. Audio data collected for the remainder of the interviews was transcribed by a third party.

All transcripts (those transcribed by the researcher and those transcribed by a third party company) were cross-checked against the original audio file once the initial transcription had taken place. This was felt to be particularly pertinent in the case of third party transcribed audio data. Cross-checking was carried out to minimise potential errors associated with subjectivity (e.g., punctuation use which may change meaning), to update text which may have been incorrectly transcribed, to address potential omissions, and to address instances where the audio was deemed 'inaudible' by the third party company. As per recommendations by MacLean et al., (2004), sections of the interview that were inaudible were indicated on the transcript as "[inaudible]" rather than the researcher guessing what was being said. Inaudible data occurred minimally, and was not thought to influence the outcome of the analysis process. Additionally, in reviewing third party transcribed audio data, the researcher was able to include verbal cues (e.g., laughter) in transcripts where applicable. Upon completion of the interview, the digital audio file was transferred from the electronic voice recorder onto the researcher's password protected computer and the audio file was then deleted from the digital voice recorder.

Once the cross-checking of transcriptions was complete, the researcher then de-identified any details within the transcript that may identify the participant (e.g., company name, name of suburb in which the participant lived). The de-identified

transcripts were used to conduct data analysis. The total word count from the 22 interviews conducted in Phase One was calculated at 117, 517 words. The identified transcripts were retained in a password protected electronic file on the researcher's computer.

### *3.6.5 Thematic analysis and coding procedure*

Thematic analysis (cf. Braun & Clarke, 2006) was used to address the aims of Phase One. The suggested method for conducting a thematic analysis is outlined in Section 3.4.4. The analysis of data was carried out using NVivo 10 for Windows, a software package commonly used for analysing unstructured data.

#### *3.6.5.1 Immersion: exploration of themes*

The process of analysis began with immersion in the data. The researcher initially took an inductive approach to coding data (cf. Braun & Clarke, 2006), whereby coding categories 'emerged' as interview transcripts were read and re-read and audio data reviewed multiple times. Additionally, immersion was achieved through the researcher reviewing transcription data against audio data (to ensure consistency); reading and re-reading transcripts; listening to audio transcripts daily throughout the analysis process; and transcribing the first four interviews. This was done actively in that the researcher made memos regarding potential themes, patterns, relationships and observations while reading or listening to the data. This process allowed for effective reflection on the dataset, and the development of an analytical model, constructed in order to provide a visual representation to the analytical procedure (and subsequent coding categories) by which thematic analysis would take place. While the overall process of analysis was iterative, it was generally carried out according to the structure of the model outlined overleaf in Figure 9, as described in more detail below.

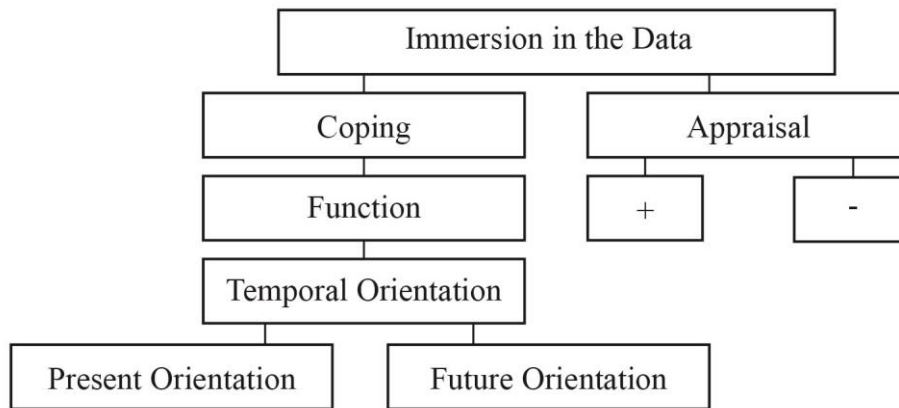


Figure 9: Model of Analytical Procedure and Coding Categories

3.6.5.2 Coping and appraisal classifications

Guided by the research aims relating to Phase One, the data corpus was first coded holistically into three categories. The first two categories were ‘coping’ and ‘appraisal’ (details relating to each category are outlined below). The third category represented data not coded to either of these first two categories and was henceforth excluded from further analysis due to being irrelevant to the current study.

3.6.5.3 Appraisal classifications

While not directly measured in the current study, how entrepreneurs appraised stressors was considered in Phase One in relation to future-oriented coping theory (FOC) (cf. Greenglass, 2002). According to FOC theory, where stressors are appraised negatively coping is termed ‘preventative’ and where stressors are appraised positively coping is termed ‘proactive’ (refer to Section 2.6). When coding data, where stressors appeared to be appraised by the participant as being ‘positive’ or ‘negative’ they were coded accordingly.

3.6.5.4 Coping classification

Coping descriptions were first classified according to ‘function’ (cf. Carver, 1997). As outlined in Section 2.4.3.1, a functional classification allows for a large and diverse number of coping strategies and the context within which they occur to be classified against higher-order dimensions. Coding categories were informed by the Brief COPE

(Carver, 1997) and included: Active Coping, Planning, Positive Reframing, Acceptance, Humour, Religion, Using Emotional Support, Using Instrumental Support, Self-Distraction, Denial, Venting, Substance Use, Behavioural Disengagement, and Self-Blame.

Then, data were further coded according to ‘time orientation’ (cf. Zimbardo & Boyd, 1999) because time orientation was identified in Part I as an important attribute in entrepreneurs, and furthermore, the current research aimed to determine whether time orientation was a relevant dimension of coping for this occupational group. This was achieved by considering descriptions of functional coping strategies in reference to ‘present-oriented’ and ‘future-orientated’ time-perspectives. Refer to Section 2.6.1 for category definitions. If data were categorised within a future-oriented category, it was then further coded as representative of either ‘preventative’ or ‘proactive’ coping strategies (cf. Greenglass et al., 1999). As outlined above, in respect to coding appraisal, at this stage, the ways in which participants appraised stressors (already coded) was considered in order to check whether conceptualisations of proactive and preventative coping typologies (as presented in the literature) appeared to hold true for participant’s descriptions of appraisal; for example, to discover whether participants who described using preventative coping strategies also described appraisal in terms of a threat, and that participants who described using proactive coping methods showed evidence of appraising stressors in a positive light, as is the convention prescribed by Greenglass et al. (1999).

#### 3.6.5.5 *Unit of analysis*

Throughout the coding process, the unit of analysis varied in length, and ranged from one sentence to multiple paragraphs. Coding decisions relating to unit length were made based on criteria of capturing the richest level of description and context (as per Braun & Clarke, 2006). In general, the researcher displayed a preference for longer units of analysis in order to increase her awareness of the context of coded data when it was later analysed in isolation of the original (i.e., entire) transcript. This approach was taken throughout all stages of coding.

#### 3.6.5.6 *Prevalence of themes*

As per Braun and Clarke's (2006) recommendations, more instances of a theme within the data set was not assumed to indicate that a theme was more or less important than another theme. The purpose of analysis was the identification of the presence of themes, not to determine a theme's relative importance. This is perhaps one key difference between thematic analysis and content analysis (where a uniform unit of analysis is salient in order to draw quantitative conclusions of prevalence). For the purpose of reporting findings, prevalence of themes was reported based on the number of interviews in which a theme was cited; however, the researcher does not assert that increased prevalence indicates increased importance.

#### 3.6.6 *Reporting and presentation of findings*

The choice of how best to report findings from the above analysis was made upon reflection of the data. With regard to coping, the functional coping strategies as outlined in the Brief COPE (Carver, 1997) provided a structure in which to present findings. Reporting of findings includes data extracts to support the observations made by the researcher and to assist the reader in remembering key points.

### 3.7 Chapter Summary

In summary, this chapter outlined the research methodology for Phase One of the current research program. Phase One was exploratory in nature and informed by a pragmatic stance. Data were collected by way of semi-structured interviews conducted with 22 entrepreneurs, and analysed using a thematic analysis technique (cf. Braun & Clarke, 2006). Themes were identified based on a review of relevant stress and coping literature (outlined in Part I), and included: functional coping strategies (as per the Brief COPE Carver, 1997), appraisal, the time orientation of coping strategies (cf. Zimbardo & Boyd, 1999), and proactive and preventative coping strategies (cf. Greenglass et al., 1999). The next chapter presents the results of this investigation.

## CHAPTER 4: PHASE ONE RESULTS

### 4.1 Chapter Introduction

This chapter presents results from a thematic analysis of data obtained from semi-structured interviews conducted in Phase One. The presentation of findings is organised as follows. Section 4.2 reiterates the aims and method of analysis that was presented in the previous chapter. Section 4.3 describes the coping strategies used by participants to cope with stress, and the temporal orientation in terms of which coping was described. Section 4.4 reports findings relating to positive and negative appraisal of stressors. Section 4.5 considers the relevance of recognised coping typologies in light of the data collected in Phase One. Lastly, Section 4.6 presents a chapter summary. The structure of this chapter is summarised overleaf in Figure 10.

Where examples are given throughout this chapter, data are reported verbatim except where indicated by an asterisk (\*). Where data are not reported verbatim, minor changes have been made with the intention of improving readability.

### 4.2 Overview of the Aims and Method of Analysis Used in Phase One

An overview of the research method employed in Phase One is provided below. A detailed description of methods for Phase One can be found in Chapter Three.

Phase One was informed by three aims. Firstly, the research aimed to explore the coping strategies entrepreneurs use to cope with stress. Secondly, it aimed to determine whether time orientation (present and/or future orientation) might be a relevant dimension of coping in entrepreneurs. Thirdly, the research sought to investigate whether recognised coping typologies, as described in the seminal work in the stress and coping literature, appear to capture the dimensions of coping that may be relevant when investigating coping strategy effectiveness in entrepreneurs.

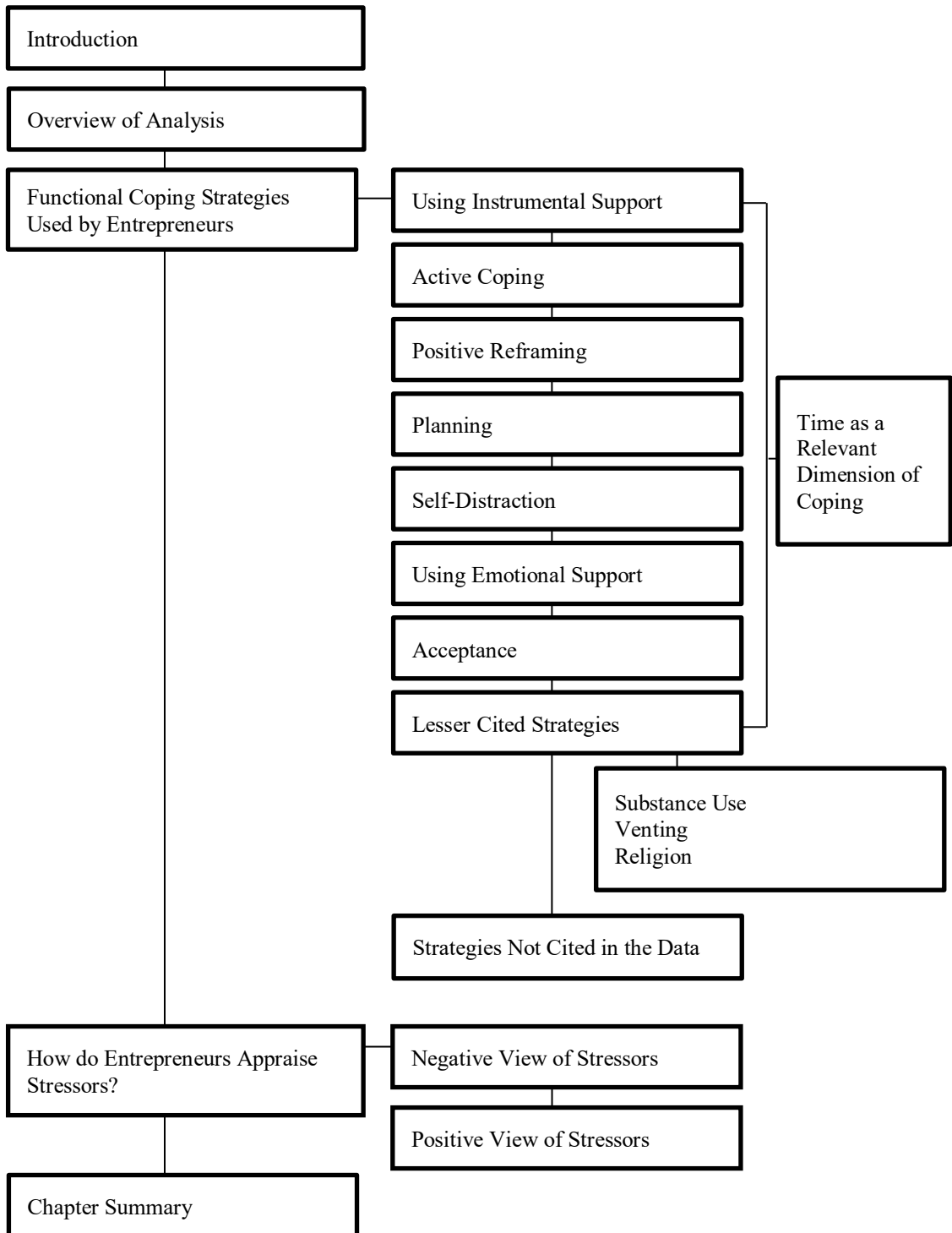


Figure 10: Chapter Four Overview

To achieve these aims, data, which was obtained from semi-structured interviews conducted with 22 entrepreneurs, were analysed using thematic analysis (cf. Braun & Clarke, 2006). Data were coded according to predetermined themes, which were identified prior to analysis based on a review of relevant literature (see Chapters One and Two). The two higher-order themes were ‘coping’ and ‘appraisal’. Where coping strategies were cited within the data, they were coded according to their ‘function’ (cf. Carver, 1997). Subsequently, descriptions of functional coping strategies were considered for temporal orientation – whether the functional coping strategy appeared to be used as a reaction to a stressor (i.e., reactive coping) or in anticipation of a potential/identified stressor (i.e., anticipatory coping).

Given that appraisal plays an important role in determining the type of future-oriented coping (i.e., preventative or proactive), analysis also focused on how participants appraise stressors. Only future-oriented dimensions of appraisal were examined (i.e., only ‘threat’ and ‘challenge’, but not ‘harm-loss’). In doing so, descriptions of appraisal were classified according to whether potential outcomes of stressor exposure appeared to be perceived as resulting in a negative or positive outcome. The structure of this chapter (summarised in Figure 10) reflects the process by which data were coded. The next section explores how entrepreneurs cope with stress, and whether descriptions of coping strategy use can be considered reactive and/or anticipatory.

### **4.3 Coping Strategies Used by Entrepreneurs**

This section presents findings concerning the coping strategies described by participants as being used to cope with stressors. To garner data about coping strategy use, during a semi-structured interview, participants were asked questions including:

- How do you cope with stress?
- What do you think is the best way to cope with sources of stress that affect you at work?
- How do you prepare yourself for dealing with stress?
- What coping strategies would you recommend to other business owners?



#### 4.3.1 *Functional coping strategies cited as being used by participants*

Where participants' data included descriptions of coping, these descriptions were coded according to function (cf. Carver, 1997). The functional coping strategies cited within participant's data included:

- Using Instrumental Support
- Active Coping
- Positive Reframing
- Planning
- Self-Distraction
- Using Emotional Support
- Acceptance
- Substance Use
- Venting
- Religion

Strategies present in the functional coping literature but not directly cited within the data included: Behavioural Disengagement, Self-Blame, Denial, and Humour.

Functional coping strategies identified within the data were further considered regarding whether they were enacted from a present- and/or future-orientated perspective. Where functional coping strategies were described as having been enacted in response to an actual/identified stressor they were considered to be present-oriented. Where functional coping strategies were described as being enacted in anticipation of an actual and/or potential (i.e., unidentified) stressor, they were considered to be future oriented.

Presentation of findings relating to functional coping strategy use and time orientation are outlined in the proceeding sections.

#### 4.3.2 *Using Instrumental Support*

Using Instrumental Support is defined as "seeking advice, assistance, or information" (Carver, Scheier, & Weintraub, 1989 p.269). Every participant in the study showed evidence of Using Instrumental Support to cope with stressors. Furthermore,

participants overwhelmingly described positive associations with coping strategies that involved connecting with others.

*"Unless you've got other people to call on and ask advice from it's just so much harder. It's harder to deal with the problems and the stress builds because of that." (E6)*

Analysis of the data revealed two sub-dimensions of Using Instrumental Support. One of these was the acquisition of a network, which could be accessed at a later date if support was required. The other was drawing on the resources of an existing network in order to deal with an actual/potential stressor. Findings relating to network acquisition and gaining access to resources within one's network are presented below.

#### 4.3.2.1 Network acquisition as a precursor to Using Instrumental Support

*"Surround yourself with people that can help you." (E11)*

In order for advice, assistance, or information to be obtained (if/when it was needed), participants appeared to actively work at increasing the number of people in their network. With a network already in place, assistance could be sought when and if it was required. As network acquisition was carried out in advance of an identified stressor it could be considered a future-oriented strategy.

The growing of one's network was described by participants as being achieved through social interactions – through placing oneself in contexts where other entrepreneurs frequented (e.g., networking events, co-working spaces, conferences, incubators). Examples of the importance and process of acquiring a network are given below:

*"I will go to events just because there's either people I'll meet who will be interesting, useful in my life, you know, business opportunities, all of those things." (E1)*

*"There's plenty of knowledge out there that I don't know, so the more people I talk to the more I find out... Doesn't matter how old they are or what they do for a living. They've always got something that I'll go 'that was pretty good' ... Surrounding yourself with good people is probably the number one thing." (E2)*

*“A shared space like this [co-working space] is great because you can just roll your chair over to someone and say ‘You know, look as an outsider what do you think of this, or how would you perceive it if I said I was going to do something like this?’” (E14)*

*“I am a serial networker. Usually if I have a goal in mind I’ll try to network and get as much inside action as I can. Position myself so that I’m able to know the right people when it comes to it.”\*<sup>1</sup> (E22)*

Participants noted that acquiring a network was not solely about increasing the number of people that they knew. Instead of quantity, the perceived value in network acquisition was related to building connections of potential value (e.g., people who could provide answers to problems, or increase levels of understanding of a stressor that the participant was facing). Subsequently, participants desired to add people to their network who were intelligent, knowledgeable and/or experienced in entrepreneurship.

*“Surrounding yourself with the right people is imperative. That’s part of the networking as well. That’s why on average, every single week I’ll do two networking functions a week. I had one last night... I’m running my own ones starting in a couple of weeks.” (E9)*

*“I’d rather ask someone else who’s either done it or knows someone that has done it and then can refer me to whoever I need to speak to.” (E15)*

*“I really needed to get connected with mentors and advisors that could help me work through those very difficult problems. So I started creating a support network of people who were open to those new trends. I really needed to find people who could help me address some really significant challenges.” (E19)*

#### 4.3.2.2 Accessing resources within a previously acquired network

The resources within a (previously acquired) network were described as being leveraged in order to cope with specific (i.e., identified) stressors. Descriptions of this type of

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<sup>1</sup> \* indicates data are not reported verbatim

support tended to relate to the operation of a venture (i.e., opinions on branding, issues with the Australian Taxation Office, or staffing).

*“Like if I had a major problem, all it is me ringing and going ‘this is my problem, this is what I’m thinking of doing, what do you think?’ ... You don’t really fix your own problems. It’s more them going ‘ring this guy, he looked after me when I went through that’, or ‘ring that guy and they’ll do this’, and you know it’s all covered.” (E5)*

*“[when I have a problem] quite often I will ask other people around me... generally someone says something which triggers something good in my mind... if I ask five people and someone comes up with a better idea than I do, go with it.” (E2)*

As illustrated in the examples given above, it appears that before responses to stressors were actioned, participants sought advice from their network. Even in cases where the participant did not agree with the advice they received, they used the advice to widen their perspective of the stressor they were facing. As such, Using Instrumental Support appears to be a precursor to Active Coping.

Limitations in seeking help were acknowledged by three participants. Their data revealed that while advice could be sought from one’s inner network, it is important to portray a successful appearance to your outer network (and the wider entrepreneurial community). This involved only discussing sensitive topics (i.e., mental health issues) with trusted members of your inner network (i.e., formal business advisors or trusted colleagues). The general broadcast of one’s problems was not advised, as it appeared to impede the ability of the participant to attract investment or custom. For example:

*“People aren’t going to do business with somebody who’s not confident and doesn’t have it together, it’s just not going to happen.” (E4)*

*“Obviously when you have got a growing business there’s a component to it where you try and get good PR exposure and you want your brand to be out there and you want to look successful and it’s something to go to someone that you know in the industry to say ‘actually we’re not going too well at the moment and this is why.’” (E6)*

*“You can’t go to investors and say ‘Hey, I’m depressed and invest in my company’.” (E22)*

In cases where participants wished to discuss ‘sensitive stressors’ (e.g., fears of inadequate skills or lack of financial resources), eight participants described seeking support from a mentor.

*“I wouldn’t say I’ve got mentors, but I’ve certainly got people that I watch that I’m close friends with. See how they succeeded and what they’ve done.” (E5)*

*“We didn’t use any sort of business mentors or guidance in that respect earlier on... we tried to do everything ourselves and that was a bad thing to do in hindsight.” (E6)*

In some cases the mentoring relationship was formally established, and in other cases the participant had formed a relationship with a trusted more experienced entrepreneur whom they spoke to regularly for advice (but the official title of ‘mentor’ was absent from the relationship).

#### 4.3.2.3 Time orientation as a dimension of Using Instrumental Support

Using Instrumental Support was a strategy used by all participants in both a future- and present-oriented fashion. The strategy was future oriented in that a network was acquired in advance of needing to access its resources, in a fashion akin to taking out an insurance policy. The strategy was used reactively when networks were accessed to assist in coping with an identified stressor.

#### *4.3.3 Active Coping*

Active coping is defined as “the process of taking active steps to try to remove or circumvent the stressor or to ameliorate its effects” (Carver et al., 1989 p.268). All participants reported using Active Coping strategies to deal with stressors.

*“To deal with stress... my motto is just take some action... I’ll just make a decision one way or another and start moving. So I’ll be de-stressed because at least I’ll be doing something about it.” (E2)*

Three themes emerged from analysis of the data in respect to Active Coping: motivations for use, adaptive outcomes, and maladaptive outcomes. Each is discussed below.

#### 4.3.3.1 Motivations for using Active Coping strategies

The use of Active Coping strategies appears to be motivated in some participants by a need to relieve ruminating thoughts relating to unaddressed stressors. For example:

*“If I can’t sleep because of something, I will wake up and send myself an email... the itch [i.e., thoughts relating to needing to address a stressor] is gone because I’ve taken a step. I have momentum... Soon as you do something or start something that itch stops. So you stop thinking about it as much.” (E2)*

*“It’s like being a hamster in a hamster wheel, [thoughts relating to problems] just go around and around, and you’re not thinking about how it actually solves the problem, you’re just thinking about the problem, which is pointless. After a while you have to go, ‘I’ve already thought about this, now what am I going to do about it?’” (E16)*

The use of Active Coping also appears to be motivated through reward-based incentives. Cited rewards included small treats (e.g., coffee, chocolate bar) and relaxation based activities (e.g., 'having a facial' or 'taking the afternoon off'). Such rewards may positively reinforce the use of Active Coping strategies and subsequently increase the use of Active Coping strategy selection in the future.

#### 4.3.3.2 Adaptive outcomes from using Active Coping strategies

A number of participants noted positive outcomes (e.g., increased sense of achievement) to be associated with the use of Active Coping strategies. As participants below indicated:

*“... [doing something] gives me some satisfaction... seeing some completed frogs [i.e., tasks] that I’ve eaten inspires me to eat more frogs.” (E2)*

*“When I get stressed I either do something about it, which is positive, or my other way of dealing with it is to procrastinate, which is self-harming really, it*

*doesn't solve the problem obviously. If I can see that I'm getting things done, I feel like I'm doing the right thing.” (E17)*

#### 4.3.3.3 Maladaptive outcomes from using Active Coping strategies

Five participants referred to negative outcomes resulting from the use of Active Coping strategies. These participants referred to becoming exhausted from actively coping with stressors through implementing strategies during non-traditional work hours, and from the inability to sleep until stressors were addressed (as already outlined above). This is pertinent given that 15 participants also referred to adequate levels of sleep as being important to successfully coping with the demands of entrepreneurship.

*“When I'm not being productive I'm just doing things for the sake of doing them and the act of doing them is a stress” (E17)*

#### 4.3.3.4 Time orientation as a dimension of Active Coping

Concerning time orientation, evidence can be seen in the data regarding Active Coping appearing to be a present- and future-oriented coping strategy. Evidence of Active Coping as a future-oriented strategy was seen in the data from eight participants. Of these eight, six participants showed evidence of using Active Coping as both a preventative and proactive coping strategy; one participant appeared to use Active Coping exclusively in a preventative manner; and finally, one participant appeared to use Active Coping exclusively as a proactive coping strategy.

Descriptions of a future-oriented time perspective overlaying Active Coping (as a functional strategy) can be seen in explicit statements such as:

*“If I know I've got a frog, something I've got to deal with, if it's really small and I eat it now it's still not going to be tasty, but it's better than if I leave it until it gets to be really big, because then I've got to take lots of bites at it to swallow that frog. If I don't take action it's going to get worse and then that frog becomes massive and sometimes it can take years to eat that frog. So I try to identify them early if I can.”\* (E2) (i.e., preventative)*

*“It’s more putting things into play to prevent a mental breakdown.” (E15) (i.e., preventative)*

In summary, all participants used Active Coping, resulting in both adaptive and maladaptive outcomes. Use of this strategy appears to render adaptive outcomes when not used too extensively. Regarding time orientation, Active Coping strategies were used reactively (to deal with identified stressors), and also in an anticipatory manner (to deal with potential stressors which may or may not occur in the future).

#### 4.3.4 Positive Reframing

Positive reframing is defined as “construing a stressful transaction in positive terms” (Carver et al., 1989 p.269). The use of this strategy was observed in the data of 17 participants.

*“If you're feeling stress but you look at it in a positive way, i.e., this is going to help me get there, and when I get there how good is it going to be, that positive relationship to stress. And that's the way that I try to look at it.” (E11)*

Strain outcomes (most notably, exhaustion) appeared at times to be interpreted as positive representations of the level of effort the participant considered that they had contributed to running their venture. The greater the level of exhaustion, the better the participant considered their commitment to running their venture to be. As mentioned in Section 1.4.2, such behaviour is seen as akin to ‘wearing a badge of honour’ (Wessely, 1996).

Participants used Positive Reframing in order to reappraise stress as a sign of their contribution to achieving a 'higher purpose'. In such cases, the existence of an overarching vision (of one’s entrepreneurial endeavour) was present in the data.

*“[in a previous venture] I started the business without a solid ‘why’. This is related to stress. If you don’t have a solid ‘why’... you’ve got a pretty sour recipe pretty much. You’re not going to be successful.” (E9)*



*“Do I have a vision of my future? Absolutely. Clear and compelling. Do I have a powerful, strong and resonating ‘why’ about what’s driving me to achieve my vision? Absolutely... Some days it’s the only thing that gets you through.” (E19)*

Coping in this manner appears to increase engagement with one’s work. This was most obvious in cases where the participant's vision involved providing benefit to the community, as was described by seven participants in the study. In these cases, feelings of reward appeared to justify and motivate participants towards their continued engagement in entrepreneurship.

*“You have to [have a] mantra of why you’re doing this, that transcends everything you do. What [that] does is provide some clarity about why [what you’re doing] is important. And you know, why you are being seemingly reckless and jumping in and enduring all this stress. There has to be a higher purpose to the activity that brings the whole thing together in some kind of cohesive idea.”\**  
(E1)

*“If you’re not offering something, if you’re not solving a problem, you would be stuck. It would make you feel that you never achieved anything. The fact that I feel that achieving something is what keeps me there, and what takes the stress away.” (E12)*

*“Sixty, seventy-hour weeks can be normal for us. And you know, that can be exciting for a while, but if you’re doing it all the time it can grind. And then at some point I think you’ve got to understand why you got into it... You’ve got to wake up in the morning going ‘I’m still in love with this’, otherwise it can become tough.” (E2)*

#### 4.3.4.1 Time orientation as a dimension of Positive Reframing

Positive reframing appears to be a coping strategy that is used in reference to the past and/or present. This strategy appeared to be used both to motivate participants towards achieving their goals when confronted with stressors and also as a justification for continued engagement with their work.

#### 4.3.5 Planning

Planning is defined as “thinking about how to cope with a stressor” (Carver et al., 1989 p.268), and was a strategy used by 16 participants.

*“Once I have got a clear plan of what I want to do it’s not so bad anymore.”  
(E13)*

Participants showed a preference for flexible approaches to planning rather than rigid adherence to a predefined order of task completion. Given the limitations of long-term planning in environments characterised by rapid change (i.e., entrepreneurship), the participant below suggests that 'preparing' rather than 'planning' may increase one's likelihood of success.

*“I mean a lot of the situations you face as an entrepreneur are beyond your control. So, while you can prepare, I think the planning is somewhat enthusiastic compared to what you can do. You are preparing to plan. I mean, you don't know when you go to a meeting whether the guy's going to like your product and buy it or tell you not to come back, you don't know when you go to pitch to investors whether they are going to like you and give you money or not. You can't plan for those things. I kinda prefer the concept of 'going to prepare the best I can'... Planning kind of implies that you can control but I don't know if that's the case.’ (E1)*

Planning was acknowledged by six participants to have limitations when carried out at a micro, or task prescriptive level, due to the changing marketplaces entrepreneurs operate within. Therefore, while Planning was considered an adaptive strategy, relying too heavily on realising desired outcomes (of planning) was considered somewhat unrealistic, as illustrated below:

*“You’re never going to be in complete control of your environment.” (E1)*

*“I think you can only plan for so much.” (E4)*

*“I find it a bit crazy to plan so far ahead.” (E12)*

*“If you have a very, very clear idea what the endpoint is, I almost think that that’s a bad thing.” (E17)*

#### 4.3.5.1 Time orientation as a dimension of Planning

Of the 16 participants who described using Planning strategies, one participant described using reactive strategies alone, two participants used reactive and future-oriented strategies, while the remaining 13 participants described using future-oriented strategies exclusively. Planning within reactive, preventative and proactive contexts is discussed below.

#### 4.3.5.2 Planning as a reactive coping strategy

Where Planning was described as a reactive strategy, it appeared to be enacted as a way of managing stressor overload. This was achieved by breaking down larger actions into smaller actions (i.e., chunking), or as a way of automating actions so that the participant could ‘switch off’ and function in an autopilot type state. For instance:

*“Say I’ve got ten issues I’ve got to deal with, but two of them are going to occur tomorrow, I really just think about the next 24 hours and then I just pass the next lot of problems to Friday and then the next lot of problems to Saturday and I just make the chunks smaller.” (E4)*

*“There’s a large aspect of being reactive on maybe a weekly or the two weekly sort of scale. Daily really fluctuates. Sometimes I will put everything in the calendar and go off the calendar notifications, and run that way. That’s the structure that I used to just carry myself through some of the down periods.” (E10)*

#### 4.3.5.3 Planning as a future-oriented coping strategy

Planning, by definition, appears to be inherently future oriented. This is evident in the wording of Planning scale items in the Brief COPE (Carver, 1997) (e.g., ‘I try to come up with a strategy about what to do’, ‘I think hard about what steps to take’). It is therefore not surprising that descriptions of Planning were overwhelmingly representative of future-oriented coping typologies.

*“I’d much rather be knowing what’s happening and have it all organized in advance.” (E13)*

*“I never get to the point where I’m so stressed that I have no idea what the answer is and what the solution might be because I thought of many different options along the way.” (E14)*

Of the 15 participants who described using Planning as a future-oriented coping strategy, seven participants described using ‘proactive’ coping strategies and three participants described using ‘preventative’ coping strategies. Examples are given below.

*“We’re always looking ‘what’s the point of stress?’. If it’s income, what can we do about that, if it’s you know, the chance that something’s going to happen, then how do we mitigate that from happening.” (E6) (i.e., preventative)*

*“I tried to circumvent any stress by just organizing and planning it so much that it doesn’t become stressful. It becomes quite manageable and I know that I just have to complete these steps in order to make that thing happen” (E14)*

*“I think I’d tried to avoid [stress] just through planning my organization generally” (E14) (i.e., preventative)*

Where participants described Planning as a proactive strategy, it appeared that Planning was linked to the achievement of a long-term vision.

*“I’ll sit down with my husband and say what’s our family goals as far as five, ten, fifteen, twenty years. Then he’s talked to me about his career goals, and I’ve talked about my career goals, and we’ve negotiated what they are.”\* (E8)*

*“I like to imagine a future and then try to create it. It wouldn’t say I plan for it, what I’m doing, like many entrepreneurs, is trying to create it.” (E19) (i.e., proactive)*

*“I have a three year visualization in my head... I’m always thinking forward and what’s the next milestone we can achieve.” (E20) (i.e., proactive)*

In summary, 16 participants used Planning to cope with stressors. Planning strategies were described as being enacted in both a reactive and future-oriented manner. Long-term (i.e., future-oriented) planning appeared to be used in preference to short-term

planning. Participants noted the limitations of Planning in environments characterised by economic change, and as such tended to shun short-term (detailed) planning in favour of long-term goal oriented planning. These findings were expected given popular notions of entrepreneurs as visionaries.

#### 4.3.6 *Self-Distraction*

Self-Distraction is defined as “focusing more explicitly on doing things to take one’s mind off the stressors.” (Carver, 1997 p.95). All 22 participants used Self-Distraction to cope with stressors. Self-Distraction was described predominantly as a present-oriented strategy used in order to provide temporary relief from existing stressors. The strategy allowed participants a (physical and/or psychological) space in which to 'recharge their batteries' in order to enact another coping strategy (e.g., Planning or Active Coping) at a later date.

*“You must have something. I don’t care what it is, macramé, it doesn’t matter. It has to be something that is not at all related to what you’re doing so that you can have your passion but you can have a vent for that passion.” (E7)*

A strong and recurrent theme that emerged from analysis of the data was participants’ view that Self-Distraction coping strategies render adaptive outcomes when used as a precursor to a coping strategy aimed at changing a stressor (typically Planning or Active Coping strategies). This was perhaps because Self-Distraction strategies allowed for stress levels to be temporarily reduced. As several participants noted, Self-Distraction strategies provided sanctuary from existing stressors, for instance:

*“[going to the gym and listening to music] really disconnects me... That’s the only time I can really disconnect from the noises in my head.” (E3)*

*“I think the outlet is just being able to zone out.” (E5)*

*“Just dumb time where you don’t think about anything... Anything that is, I guess, a distraction almost is a good way to think about it. Anything that is not related to the core stresses. Then after that, stress feels a lot better.” (E13)*

*“[When disengaging] those really responsive thoughts like ‘do this, do that, do this, do that’, they lose a bit of intensity.” (E18)*

Participants commented that the temporary relief gained from using a Self-Distraction disengagement coping strategy resulted in increased effectiveness of subsequently executed coping strategies. In such cases, disengaging from existing stressors allowed participants to ‘recharge’ in preparation for future coping efforts.

*“[doing yoga] hasn’t solved any of my problems, but it put me in a state when I could be more productive and get things done.” (E1)*

*“I find that I get overwhelmed, so either I go for a walk, have a deep breath, go to the gym, or just something where I can take my mind off it, and generally when I do that and I come back, I get possibly a better solution instead of trying to force my way through it.” (E2)*

Participants recalled Self-Distraction strategies to increase their levels of well-being, and improve productivity.

*“Doing activities that are completely not business related really helps.”\* (E18)*

*“I felt that a lot of problems in your head can be fixed or at least cleared after a 20-minute jog – just getting out of the environment.” (E20)*

*“[exercise is] a great kind of hack to improve efficiency.” (E22)*

*“[running] was good... because [when running] you didn’t think about work, you didn’t think about stress, and I got a fair bit out of that... going for a run was good because I could clear my mind.” (E6)*

Participants often referenced engaging in Self-Distraction coping in environments physically removed from work related environments.

*“[When engaging in a hobby] I’m completely divorced from my computer and anything else.” (E1)*

*“Listening to stand-up comedy... That’s the only time I can really disconnect from the noises in my head.”\* (E3)*

*“[Having a facial] is part of my stress and coping strategies. What it does first of all, it physically distances me from work” (E8)*

*“The conscious decision to change location to refocus and just leave the environment, going ‘Okay, right, this is a bad cycle, a bad loop’ and just go somewhere else.” (E10)*

The duration of which Self-Distraction strategies were undertaken did not appear salient with regard to coping efficacy. One participant reported requiring just a ‘couple of minutes’, another an hour, and the longest duration of engaging in Self-Distraction activities was a week.

*“Even if it’s just a couple of minutes of just focusing on one point. That limits a lot of the stress and takes you back to ‘it’s ok, chill out’. Yeah, it’s an amazing couple of minutes away from thinking, or away from email. It’s helped me a huge amount.” (E20)*

Health related coping activities (e.g., exercise) were the most common forms of Self-Distraction. Comments suggest that participants felt exercise aided them in reducing current levels of stress and also contributed favourably to being able to deal with stress in the future (from increased levels of physical fitness and resilience) – however, the strategy does not appear to be deliberately engaged in for future-oriented benefits. Engaging in exercise appeared to aid the participant in gaining new perspectives on current stressors.

*“I do stuff that exhausts me physically and that way I can rest mentally.” (E4)*

*“Going to the gym is probably, for me, one of the better stress relievers.” (E11)*

*“I exercise three times a week which helps. I find that if I have one of those really stressful days and I go and exercise, it does help calm me, and lets me see beyond the stupid stress levels that sometime happen. I find that does help a lot.” (E13)*

Despite participants noting increased levels of efficiency/productivity after using Self-Distraction strategies, obstacles were cited as preventing participants from using this form of coping; most notably feelings of guilt at spending time away from their venture.

*“I would feel terribly guilty if I spent the whole day not doing anything.” (E8)*

Where Self-Distraction was used as a form of procrastination its outcomes were cited as maladaptive.

*“I think instead of procrastinating too much, cause I understand what happens when I do that, it becomes worse for me. I’ll just make a decision one way or another and start moving. So I’ll be de-stressed because at least I’ll be doing something about it.” (E2)*

*“I either do something about it which is positive, or my other way of dealing with it is to procrastinate which is self-harming, really. Like it doesn’t solve the problem obviously.” (E17)*

#### 4.3.6.1 Time orientation as a dimension of Self-Distraction

Self-Distraction appears to be predominantly used as a present-oriented strategy.

#### 4.3.7 Using Emotional Support

Using Emotional Support is defined as “getting moral support, sympathy, or understanding” (Carver et al., 1989 p.269). Twelve participants described using this strategy when coping with stressors.

*“If it wasn’t for a very supportive mother and father, brother and sister, close friends, we may not be having this conversation today.” (E4)*

When asked to describe the sources from which emotional support was sought, participants replied: friends, family, other entrepreneurs, and romantic partners (i.e., spouse or girlfriend/boyfriend). As shown below, participants described this support to occur in the context of spoken dialogue.

*“It was just good to talk about it as well. You talk about something that’s an issue in your head and it also helps you clarify anything and you verbalise things its... for me it was good to do that.” (E6)*

*“If you talk about [coping] strategies, I think one of them is having someone, may not always be a partner, who you can talk... I think family, or whoever, is a huge support structure. If you’ve got their support they’re great.” (E8)*



*“It’s not that he gives me super advice or anything, but he always makes me feel a lot better talking to me.” (E12)*

*“It helps me to have a group of people that I can discuss and share what I am going through.”\* (E18)*

#### 4.3.7.1 Time orientation as a dimension of Using Emotional Support

Analysis of the data showed that participants who sought emotional support did so 'reactively' in response to identified stressors. The use of emotional-support did not appear to be future-oriented. Evidence of the strategies use is detailed below.

While descriptions of support from friends, family members (excluding spouse) and other entrepreneurs tended to be discussed in reference to positive outcomes, descriptions of seeking emotional support from one’s romantic partner could be classified in terms of two opposing themes. The first theme was that romantic partners were a positive source of emotional support: six participants described their partners in this context. For instance:

*“I’ve got a girlfriend now and she’s wonderful... She’s a really great person to talk to about the journey.” (E4)*

*“My wife is definitely a support.” (E5)*

*“My girlfriend helps a lot. Prior to having her around I didn’t really have that many people... She’s helped me a lot.” (E10)*

Of note, participant E5 talked to his partner to gain emotional support, but commented that he never talked to his partner for Using Instrumental Support in relation to the business, for this he relied on other entrepreneurs. This theme generally emerged in reverse when instrumental support was discussed earlier, in that emotional support was rarely sought from business networks.

The second theme relating to emotional support was that of stress not being discussed with one’s romantic partner because doing so would render increased levels of stress. The reasons for this appeared to be twofold: disparate tolerances for risk, and not wanting to increase their partner’s level of stress. Five participants mentioned

withholding information about stressors from their romantic partners. This was due to reducing the likelihood of the partner becoming stressed. Where partners did experience stress, participants commented that their home no longer provided relief from stress but instead compounded existing stress levels.

*“There are certain things I don’t share with her because I don’t want to alarm her.” (E3)*

*“I actually did try to communicate the reality of where we were to my wife, and I see why men don’t, because her appetite for risk was completely different to my appetite for risk. So, I can’t be her and she can’t be me, so what do you do? You’ve got to misrepresent the reality of the situation... I couldn’t go home and rest, I had her eyes on me... so that would just compound the stress.” (E4)*

*“I find myself wanting to talk about situations but feel like I can’t because if I speak to her about it she stresses about it, and she handles it badly. It was probably tougher on me than she realizes because I think she sees me as the one who handles it all pretty well but I had to handle it well in front of her so it was tough.” (E6)*

*“Talking to my wife about [stress] wasn’t very effective just because I don’t think I got much back from her, and it made me stress more because she worried about it as well.” (E6)*

*“I try not to tell my wife about the things that I need to deliver. I don’t want her to get worried about that. If I am able to talk to her, it would be good, but I try not to do that because I don’t want her to get worried, but at the same time, I’m getting all cooped up inside.” (E21)*

One participant, who cited his partner as becoming a source of stress when (his) stress levels were discussed, remarked that in order to cope, he would ignore her.

*“I’m not trying to be rude, but I just ignore her. You have to... I tell her what she wants to hear.” (E11)*

The reason for the perceived lack of support from one's partner may be due to the length of the time the participant has been engaged in entrepreneurial activity. For example, as

one participant who had been an entrepreneur for 13 years commented, he no longer sought support from his wife as:

*“She’s sick of hearing me complaining because she’s been listening to it for ten years.” (E3)*

Positive associations between one's partner and the levels of support received tended to be observed in participants who were involved in more recently formed relationships and had more recently (less than 5 years) become an entrepreneur. For example, one participant who had been an entrepreneur for 18 months described his girlfriend as his: *“Number one [source of support]” (E22).*

In another case, a female participant described not wanting to talk about stressors with her partner so as not to appear like she was failing.

*“I didn’t really speak to my husband about the fact that I was quite stressed with my business and how it was all going to work... I think because I didn’t want him to see me as a failure, so I kept it to myself.” (E15)*

Data from five participants showed a preference for seeking emotional support from other entrepreneurs due to perceptions that they would understand the stressors faced. For example:

*“No one’s ever going to understand the absolute intricacies of your own business and the hurdles that you face... But you can gain empathy from other entrepreneurs because they will talk you through the process they’ve had dealing with [stressors] and you can go right ‘oh, right, I’m not the only one’.” (E11)*

*“As far as [non-entrepreneurs] being able to identify issues or solutions, [they] can’t really. They don’t understand... unless you’re here, it’s very hard to understand what it’s like.” (E16)*

In one instance, where the participant’s partner was also an entrepreneur, the participant commented:

*“It makes us extremely empathic with what we are going through. We both understand.”\* (E18)*

In summary, Using Emotional Support was a strategy used by 12 participants. It was noted to be a strategy that was enacted in response to an identified stressor in a manner in keeping with the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984). This strategy did not appear to be described in relation to future-oriented coping. Of particular interest were findings that emerged from participants’ descriptions of the adaptive and maladaptive outcomes arising from seeking emotional support from one’s romantic partner. These findings showed participants made deliberate decisions regarding the degree to which they would discuss stressors with partners based on the partner’s ‘risk appetite’ and the effect that such discussions would have on the participant’s home life. In many cases, seeking emotional support from one’s partner appeared to *increase* the level of stress experienced. The efficacy of the strategy therefore appears to be linked to the individual from which support is sought.

#### 4.3.8 Acceptance

Acceptance is defined as “accept[ing] the reality of a stressful situation” (Carver et al., 1989 p.270). Eleven participants spoke in reference to the use of Acceptance as a coping strategy.

*“Accept that stress is just a very, very real part of entrepreneurial endeavour. Because if you are feeling no stress... you’re probably not an entrepreneur, because you’re not trying hard enough.” (E4)*

Two themes surrounding Acceptance coping emerged from participants’ data. The first, illustrated by the above quote, was that stress is perceived by many to be an inseparable feature of entrepreneurship. The second theme related to participants’ perceptions regarding their ability to control the outcome of a stressor: where a stressor was uncontrollable Acceptance was enacted. In cases where stressors were uncontrollable (for example, the Global Financial Crisis [GFC]), no attempt appeared to be made to change the stressor. Instead, participants described accepting the existence of the stressor, and ‘moving on’.

*“I just have to deal with it and make this reality successful.” (E3)*

*“After a while you just realise that ‘ok, why am I so upset over something I cannot fix?’ ... I’m just making that realization and it all goes away.” (E12)*

*“If there’s something that comes up that’s an issue, well, it’s like that’s the reality of the situation. If I can change it I can change it, if I can’t then I can’t. That’s life. Accept it I guess. I accept that that’s what we have to do and move on with it.”\* (E13)*

Participants did not comment as to the effectiveness of using Acceptance strategies to deal with stressors. The researcher noted some participants to show indifference towards stressors they perceived as uncontrollable.

*“So when there was the global financial crisis, that somewhat impacted on my business, but not hugely. I can’t change that, that’s just the way of the world.” (E8)*

#### 4.3.8.1 Time orientation as a dimension of Acceptance

In cases where participants used Acceptance strategies, their use appeared to be present-oriented.

In summary, Acceptance coping was used by 11 participants, and all descriptions of use appeared to be present-oriented. This strategy was used in situations where the participant faced stressors they noted to be uncontrollable; this is consistent with findings relating to Acceptance coping within the stress and coping literature.

#### *4.3.9 Lesser cited strategies*

Venting, Substance Use and Religion were described sparingly within the data. Findings relating to each are outlined below.

##### 4.3.9.1 Substance Use

Substance Use is defined as using alcohol or other drugs to cope (Carver, 1997). Seven participants referred to using alcohol to relieve stress. The strategy was noted in all cases as an unhealthy behaviour and engaged in as a means of escaping current levels of

stress. Use of this strategy was described in terms of being a short-term present-oriented strategy, and as a coping strategy with limited long-term effectiveness.

*"So wine helps... But again, you know, you can't do it to excess... Because if you go 'I had a great time and drank all this wine, then the next time you feel like shit' and then you don't get anything done, and then it really doesn't help. While wine and exercise and all these things are effectively putting [stressors] aside, unless it actually enables you to be productive and get things done it doesn't help in the long run." (E1)*

*"There was a time I was drinking too much, so I kind of had to reign that in... It was definitely an escapism. Some of the stuff that I've done I'm like 'You've got to stop doing that'. It's not healthy." (E8)*

*"Early on, from 2011-2012 I was using anti-social behaviour. Certainly drinking to much, and I would suggest that I hadn't engaged support networks. I literally didn't have any. There were lots of anti-social behaviours involved in dealing with, or at least distancing myself from the challenges of the moment." (E19)*

*"You're really stressed and all of a sudden you start drinking a bit more at night instead of looking for a healthy alternative of going for a run. I'm not saying I wouldn't smash myself every night, but it would be just enough to wind down." (E20)*

#### 4.3.9.2 Venting

Venting is defined as “the tendency to focus on whatever distress or upset one is experiencing and to ventilate those feelings” (Carver et al., 1989 p.269). Venting was described by six participants as being a short-term present-oriented strategy, the outcome of which was a temporary release. Use of this strategy did not appear to be linked to long-term reduction in stress. Where anger was expressed it was externally oriented (e.g., at co-founders).

*"Sometimes [expressing frustration through yelling] is a bit of a catharsis and that's useful." (E10)*

*"I've thrown a pillow across the room at home or just punched the couch or whatever and yelled a bit. That's been the escape that's been therapeutic." (E20)*

One participant spoke in reference to controlling feelings of frustration:

*"I don't internalize anger. So I don't bubble it up. I won't let it explode. I think in some respects it's good that I don't explode, but in other ways you need another outlet for it." (E5)*

Another participant expressed negative emotion through crying:

*"Doing something like, literally, even crying is an outlet because, for me, sometimes I cry out of anger. It's strange. It's a bit of an outlet." (E12)*

#### 4.3.9.3 Religion

Religion is defined as “the tendency to turn to religion in times of stress” (Carver et al., 1989 p.270). Two participants referred to religious based coping strategies. In the first case it was not clear whether the participant was referring to acts of meditation as a health based coping behaviour or in the context of Religion. In the second case, the participant self-identified as a religious person. He described writing "status updates to God" as a way of keeping himself accountable for fulfilling his goals and using gurus for social support.

*"You know what gurus are right? When I pray or when I meditate, then I talk to them. I tell them about things that I'm struggling with, and that's sort of like my virtual mentorship I guess." (E21)*

#### 4.3.10 *Coping strategies not cited in the data*

Use of the following coping strategies was not cited in participants' data: Behavioural Disengagement, Self-Blame, Denial, and Humour.

*4.3.11 Summary of the temporal dimension(s) of functional coping strategies as used by entrepreneurs*

Thus far, this chapter has presented findings relating to the functional coping strategies used by entrepreneurs to cope with stress, as cited in the data for the current study. In addition, descriptions of functional coping strategies were examined in terms of whether coping appeared to be used as a reactive strategy (i.e., present oriented) and/or as an anticipatory strategy (i.e., future-oriented). Analysis of the data showed that all functional coping strategies (as described as being used by entrepreneurs in this study) were enacted in response to the present. Only three functional coping strategies (Using Instrumental Support, Active Coping, and Planning) appeared to be described as enacted in relation to the future. These findings are summarised in Table 7.

*Table 7: Summary of The Temporal Dimensions of Functional Coping Strategies*

Functional Coping Strategy Cited in the Current Data	Temporal Dimension(s) of Coping	
	Reactive Coping i.e., Present Oriented	Anticipatory Coping i.e., Future Oriented
Using Instrumental Support	✓	✓
Active Coping	✓	✓
Positive Reframing	✓	
Planning	✓	✓
Self-Distraction	✓	
Using Emotional Support	✓	
Acceptance	✓	
Substance Use	✓	
Venting	✓	
Religion	✓	

Where descriptions of coping were cited in the data as representing future-oriented coping strategies i.e., coping enacted in anticipation of stressors that may or may not occur in the future (cf. Greenglass et al., 1999), these descriptions were further considered as to whether they appeared to represent preventative or proactive coping.



As outlined in Section 2.6, the key feature distinguishing preventative from proactive coping is how the individual appraises stressors:

- Preventative coping is prefaced by stressors being appraised negatively
- Proactive coping is prefaced by stressors being appraised positively

In order to move closer to establishing whether future-oriented coping strategies (i.e., preventative and/or proactive coping strategies) might be used by entrepreneurs, it was deemed necessary to determine whether the ways in which entrepreneurs appraise stressors aligned with conceptualisations of these two future-oriented coping typologies. Findings relating to the positive and negative appraisal of stressors by entrepreneurs in the current study are outlined next in Section 4.4.

#### **4.4 How do Entrepreneurs Appraise Stressors?**

This section presents findings relating to whether entrepreneurs in the current study appeared to appraise stressors in a negative and/or positive light. For the purpose of analysis, descriptions of appraisal were categorised as outlined below (cf. Folkman & Lazarus, 1985; Lazarus & Folkman, 1987).

- Negative appraisal: descriptions of appraisal represented a threat, that is, anticipation of a stressor that would result in harm or negatively impact one's goals, physical well-being or self-esteem.
- Positive appraisal: represented the anticipation of a stressor that is expected to result in the potential for growth or mastery.

The need to consider how entrepreneurs appraise stressors was motivated by a review of the literature, which highlighted the role of appraisal in distinguishing the two forms of future-oriented coping (refer to Section 2.6): preventative coping being prefaced by negative appraisal and proactive coping by positive appraisal of stressors which may or may not occur in the future.

Although the researcher acknowledged that appraisal might also take the form of harm-loss (see Section 2.4.1), it was not considered owing to its past and present (yet not future) orientation. It was also acknowledged that stressor appraisal can vary based on stressor type and context. To establish how entrepreneurs appraise stressors, during a

semi-structured one-to-one interview, participants were asked questions including: “How do you think stress impacts your business?”, “How do you think stress impacts your personal life?”, and “How do you feel about the future?” The results derived from this enquiry are reported in the proceeding sections.

#### 4.4.1 *Negative appraisal*

Thirteen participants appeared to appraise stressors negatively i.e., as a threat. Six of these participants exclusively appraised stressors in a negative light. That is, their descriptions did not include any reference to stressors resulting in growth or mastery. The remainder at times described appraising stressors negatively, and at other times positively. Examples of stressors appraised negatively include:

*“Stress is a killer. I think that it’s underrated. It can take your life.” (E11)*

*“Stress can be very destructive, if it’s too much of it, it’s very acidic.” (E17)*

A negative perception of stressors appears to be strongly linked to three factors: negatively linked to familiarity (e.g., prior experience dealing with the stressor); negatively linked to controllability (i.e., the entrepreneur’s ability to influence the outcome of the stressor); and positively linked to valence (i.e., how ‘stressful’ the participant deemed the situation to be).

The adaptive function of stress was suggested to be dependent upon the number of stressors present at any one time as well as the environment from which the stressor(s) might originate. For instance, a stressor from one source (e.g., one’s work environment) was seen as potentially stimulating, but when stressors came from work and family domains concurrently, participants reported that they might become overwhelmed. Similarly, participants reported that one or two stressful situations in the workplace might be easily managed but if multiple stressors were to arise (i.e., five to 10) then the participant would likely feel overwhelmed. For example:

*“If my work is really busy and my personal life gets really busy and then something else happens then sometimes that can push me over the edge.” (E8)*

*"If I'm stressed enough for a long time, then it becomes very negative. It becomes a bit of a paralysing thing." (E12)*

Where the desired level of stress was exceeded, entrepreneurs reported significant strain outcomes including depression, insomnia, panic attacks, divorce, and the contemplation of suicide.

#### 4.4.2 Positive appraisal

Sixteen participants appeared to describe stressors positively. For example, as:

*"A friend." (E2)*

*"Exciting." (E3)*

*"It's all motivating." (E6)*

*"A good thing." (E7)*

*"A way to get things done." (E11)*

*"Giving me the edge that I need." (E12)*

Of the 16 participants who described stressors positively, nine did so exclusively i.e., the descriptions of stressors by these participants could not be contextualized as representing a threat. The remaining seven participants appraised stressors as a challenge and also as a threat (i.e., mixed appraisal). In cases where both challenge and threat appraisals were cited, polar and alternating responses were noted: either a see-saw analogy was employed or extremes were described. For example:

*"I kind of see it as a roller coaster ride. There are some times when you feel really good and elated, and other times you know you wonder why you even bothered to start the process and it's all just going to end in tears." (E1)*

In cases where stressors were described positively, the perceived potential for growth or mastery appeared to arise from the participant's view that increased stressor levels were associated with increased levels of motivation, and subsequently increased levels of productivity. A theme was that stress is a motivator and a tool to be used by the entrepreneur in order to achieve their goals.

*"I find I need a certain amount of stress in my life to be functional. And if I don't have some level of stress then I'm kind of bored and will go looking for things to do." (E1)*

*"I think a certain level of stress keeps you motivated and keeps you going." (E8)*

*"It's a motivator and it leads me to achieve things I'm pretty excited by and quite proud of." (E10)*

*"Don't focus on [stressors] as problems, focus on them as an opportunity to find a solution. And I think if you can do that, then the world suddenly becomes a very, very different place to operate." (E11)*

*"I feel it can help you with doing things... it gives me the edge that I need." (E12)*

*"I think you need a certain amount of stressors and a tolerance for that to be able to get out there and try to do what you need to do." (E17)*

In cases where stress was perceived as beneficial, its presence was desired.

Additionally, the absence of stress (and therefore the absence of the [potential] benefit) was considered by some participants to be of concern. As one participant noted:

*"If you're not stressed you're probably not paying attention or focusing enough and that's when you relax and possibly miss opportunities." (E2)*

Appraisal was also seen as a skill that could be leveraged by the entrepreneur to influence strain outcomes. For example:

*"If you can manage your reaction to [stressors] then it's a great coping mechanism." (E1)*

*"If you embrace [a potential stressor] as a motivator and a driving force, then it can be a wonderful thing." (E11)*

The above respondent (E11) had earlier in his interview described stress as "a killer" and something that could "take your life". Therefore, it might be concluded that even when stressor levels are extreme (i.e., life threatening), the entrepreneur felt they were able to control the outcome of stress based on their ability to appraise the stressor positively.

The way in which stressors are appraised also appears to have a relationship to the time perspective with which they are viewed. As one participant indicated, it was difficult to pragmatically appraise stressors at a time when the individual was under considerable strain:

*"It's like asking a soldier who's in the middle of combat to reflect. It doesn't happen at the time, you feel like you're throwing up and you wish it'd go away. You can't believe you're facing these sort of issues." (E4)*

At the point where stressors were no longer perceived as positively contributing to the entrepreneur's life (or business), they were seen as negative and appraised as a threat. As such, while stress can be viewed as a motivator, and in some cases actively sought, it appears to only be adaptive to a certain level (consistent with the Yerkes–Dodson's law).

*"[Stress] is a bit like salt in a dish. Enough salt to give it a bit of taste, but if you have too much it's inedible. It's the same thing with stress, you need a little bit, and whatever that level, some people love lots of salt, and some people only like a little bit... it's a very personal thing... I think if it's not salted enough or it's too salty, then you don't enjoy it and that's the worst thing." (E17)*

#### 4.4.3 Appraisal – considered as a skill to be mastered

Several participants appeared to view appraisal as something that is largely self-determined. Appraisal was seen as a tool, and the management of stress as a skill. Analysis of the interview data indicated that participants perceived strain outcomes to result from the participant's inadequacy to regulate their own perception of stress and subsequent emotional responses. Generally, there appeared to be an assumption by participants that stress is influenced by appraisal as are strain outcomes: that the stress-coping-strain process is determined by the individual, as consistent with Lazarus and Folkman's (1984) transactional model.

*"I'm consciously going to get less stressed about situations." (E1)*

*"It annoys me when I'm stressed, it's like it's so stupid, I shouldn't be stressing about this stuff." (E13)*

*"For me I've come to realise that most stress is self-inflicted." (E22)*

#### 4.4.4 Summary of findings related to appraisal

Analysis of the data relating to how participants appraise stressors showed evidence to suggest that entrepreneurs may fall within one of three categories with respect to the way they appraise stressors. These three categories are as follows:

- Entrepreneurs who appraise stressors as:
  - a. exclusively resulting in negative outcomes;
  - b. exclusively resulting in positive outcomes; or,
  - c. resulting in either positive or negative outcomes (i.e., mixed forms of appraisal).

The next section addresses the third aim for Phase One of the current research. Namely, whether recognised coping typologies capture dimensions of coping that may be relevant when investigating coping strategy effectiveness in entrepreneurs.

### 4.5 Considering the Relevance of Recognised Coping Typologies in an Entrepreneurship Context

Each of the functional coping strategies described as being used by participants, as outlined in Section 4.3, were considered in relation to how they might 'fit' within popular typologies of coping (as introduced in Section 2.5). The coping typologies considered in the current research (which focus on function as a key dimension of coping) included: problem- versus emotion-focused coping, approach versus avoidance coping, and form by direction. Findings relating to this analysis are outlined below.

The first classification system considered was emotion- and problem-focused coping, which was introduced in Section 2.5.1. Within this system, a functional coping strategy may be classified within one of two higher order coping categories, including:

- Emotion-focused: "coping that is directed at regulating emotional responses to the problem" (Lazarus & Folkman, 1984 p.150)

- Problem-focused: “coping that is aimed at managing or altering the problem causing the distress” (Lazarus & Folkman, 1984 p.150)

Attempts were made to situate participants’ descriptions of coping strategy use within emotion- and problem-focused coping categories. Several issues arose. Firstly, mapping functional coping strategies to either an emotion- or problem-focused category proved difficult given that functional coping strategies appeared, at times, to fit dually within both problem- and emotion-focused categories. This is illustrated in the example below (taken from Section 4.3.2), whereby coping appears to be described both in terms of ‘altering the problem’ and as a way of ‘regulating emotional responses’ so as not to exacerbate stress levels.

*"Unless you've got other people to call on and ask advice from it's just so much harder. It's harder to deal with the problems and the stress builds because of that." (E6)*

As noted by Carver and Connor-Smith (2010), the use of emotion-focused coping strategies may facilitate the use of problem-focused coping strategies. This was most evident when Self-Distraction coping strategies were described as being used by participants, which was presented in Section 4.3.6. Entrepreneurs appeared to engage in ‘distracting’ activities e.g., spending time participating in a hobby, so that they might ‘recharge their batteries’ and subsequently be better placed to implement problem-focused strategies thereafter. As such, it appears that at times, the boundary line between emotion- and problem-focused coping categories blurred. Lack of clear distinction between higher order categories of coping may lead to issues for researchers wishing to draw conclusions as to the efficacy of coping at a typological level, for example, it might not be clear to which category coping efficacy may be attributed. Given these limitations, the emotion- and problem-focused coping classification system appears too simple to capture the nature of coping in entrepreneurs.

The second classification system considered was ‘approach’ versus ‘avoidance’, which was outlined in Section 2.5.2. According to Carver and Connor-Smith (2010 p.685), approach-focused coping is defined as “coping aimed at dealing with the stressor or the

resulting distress emotions”, and avoidance-focused coping is defined as “coping aimed at escaping from dealing with the stressor or the resulting distress emotions”. Within each category, coping strategies are further classified according to whether they are emotion- or problem-focused. This results in functional coping strategies being classified within one of four higher order categories (as outlined below):

- Approach – emotion-focused
- Approach – problem-focused
- Avoidance – emotion-focused
- Avoidance – problem-focused

Attempts to map the functional coping strategies cited as being used by participants to the above categories showed that this means of categorisation was less ambiguous than the use of problem- and emotion-focused categories, and provided greater insight as to the nature of the functional coping strategies that lie within each higher-order category than did the use of emotion- and problem-focused coping categories alone. This classification system also captured cognitive strategies that were more difficult to classify. Yet, as is presented next, the approach and avoidance classification system was still somewhat lacking in nuance compared to the last classification system considered next.

The last classification system considered in this section is Begley’s (1998) 3x3 matrix, which was introduced in Section 2.5.3. The nine higher-order categories provided by Begley’s classification matrix are reiterated below:

- Change stressor – Behavioural
- Change stressor – Affective
- Change stressor – Cognitive
- Adapt to stressor – Behavioural
- Adapt to stressor – Affective
- Adapt to stressor – Cognitive
- Disengage – Behavioural
- Disengage – Affective
- Disengage - Cognitive



The functional coping strategies cited by participants in Phase One were mapped against these categories. In reference to the ‘direction’ dimension of the classification system, data indicated:

- Clear evidence as to the use of coping strategies directed at *changing a stressor* was observed in the data. All participants appeared to describe using these coping strategies. The functional strategies that could be classified within this category included: Active Coping, Planning, Venting, Positive Reframing
- Coping strategies used to *adapt one’s self to a stressors* were cited in the data of all participants. Functional strategies within this category included: Using Instrumental Support, Using Emotional Support, and Acceptance.
- Functional coping strategies aimed at *disengaging from a stressor* were present in all participants’ data, and include the use of Self-Distraction as well as lesser-used strategies such as Substance Use and Religion.

While Begley’s (1998) coping classification matrix provides the greatest detail as to the nature of coping owing to its nine higher order categories (i.e., change a stressor, adapt to a stressor, disengage from a stressor, behavioural, affective, and cognitive), it is perhaps limited in that it provides no information as to whether coping strategies are reactive or anticipatory. This omission is noteworthy, as analysis of the data appeared to show that some entrepreneurs use functional coping strategies in reaction to stressors, whilst others use these strategies in anticipation of stressors. The temporal dimension of coping (i.e., reactive or anticipatory coping) may have implications in terms of strain outcomes. Categories arising from the temporal orientation of functional strategies as used by entrepreneurs in the current study to cope with stress are outlined overleaf in Table 8.

*Table 8: Considering Time Orientation as a Dimension of Coping Strategy Classification*

Category of Coping	Functional Coping Strategy	Temporal Orientation with which Coping Appeared to be Enacted
Change a Stressor – Behavioural	Active Coping	Present / Future
	Planning	Present / Future
Change a Stressor – Affective	Venting	Present
Change a Stressor – Cognitive	Positive Reframing	Present
Adapt to Stressor – Behavioural	Using Instrumental Support	Present / Future
Adapt to Stressor – Affective	Using Emotional Support	Present
Adapt to Stressor – Cognitive	Acceptance	Present
Disengage – Behavioural	NA	NA
Disengage – Affective	Substance Use	Present
	Religion	Present
Disengage – Cognitive	Self-Distraction	Present

In summary, analysis of the data indicated that functional coping strategies classified within ‘change a stressor – behavioural’ and ‘adapt to stressor – behavioural’ categories (cf. Begley, 1998) contain a temporal dimension. That is, strategies in these categories are used in both a reactive and anticipatory manner. Functional coping strategies that were used solely in a reactive manner were classified according to ‘disengage from a stressor – affective and cognitive’, ‘adapt to a stressor – affective and cognitive’, and ‘change a stressor – affective and cognitive’. Implications of these findings for Phase Two of the current research are discussed in Chapter Five.

#### 4.6 Chapter Summary

In summary, this chapter presented findings obtained in Phase One regarding the nature of coping strategies used by entrepreneurs. Findings addressed functional and temporal dimensions of entrepreneurs’ coping. A thematic analysis of data gained from semi-structured interviews showed that participants used the following functional coping strategies (cf. Carver, 1997) when coping with stressors: Using Instrumental Support,

Active Coping, Positive Reframing, Planning, Self-Distraction, Using Emotional Support, Acceptance, Substance Use, Venting and Religion. When these functional strategies were categorised according to higher-order dimensions of coping within Begley's (1998) framework, it appeared that all classifications of coping contained a present oriented dimension, whilst only some classifications could be described as containing a future-oriented dimension (e.g., change a stressor – behavioural, and adapt to stressor – behavioural). It was further found that some participants appraised stressors exclusively in a negative light, others in an exclusively positive light, while some entrepreneurs used a combination of negative and positive appraisal. This may have implications for the type of future-oriented coping (i.e., preventative or proactive) used by entrepreneurs. The next chapter discusses findings from Phase One and their implications for the design of Phase Two.

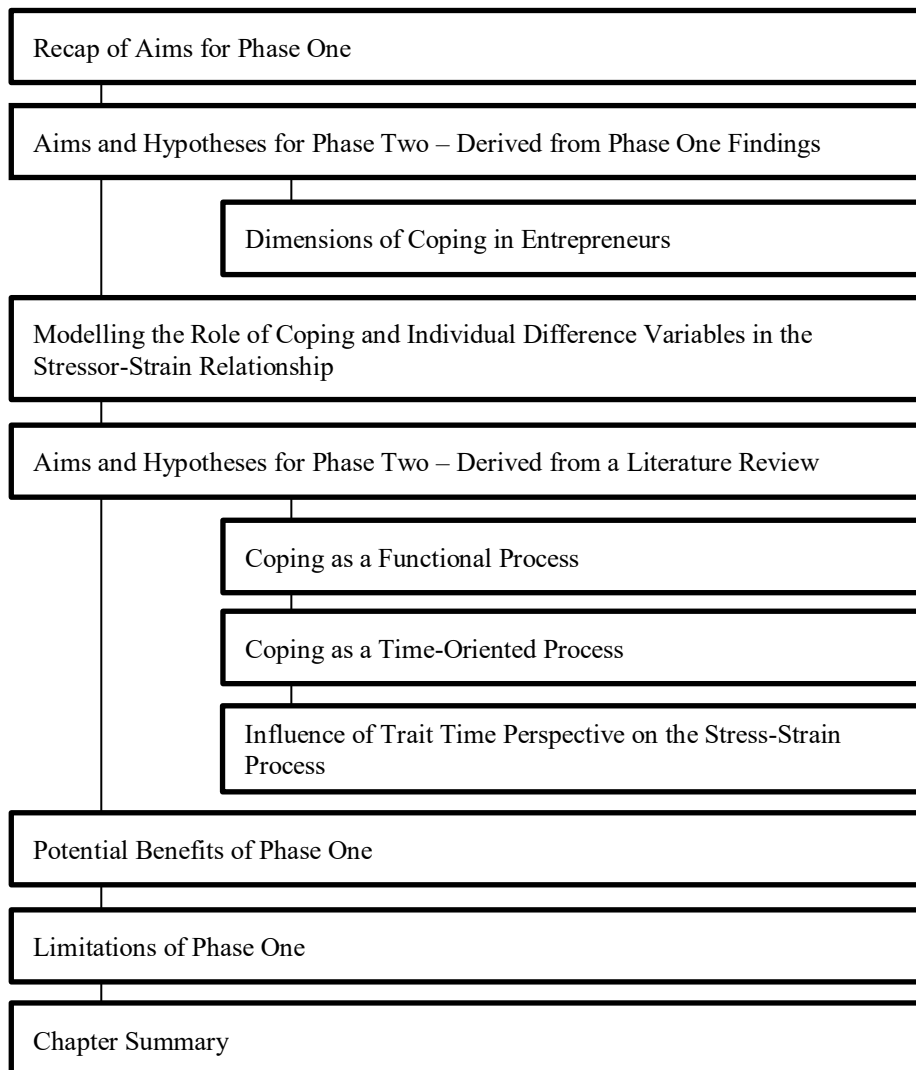
## CHAPTER 5: DISCUSSION OF PHASE ONE FINDINGS & AIMS AND HYPOTHESES FOR PHASE TWO

### 5.1 Chapter Introduction

This chapter describes the intersection of the two phases of the current research. In what follows, Section 5.2 provides a recap of aims for Phase One. Section 5.3 discusses Phase One findings related to the dimensions of coping in entrepreneurs. Section 5.4 introduces models used to investigate the role of individual difference variables in the stress-strain process. Subsequently, Sections 5.5 and 5.6 present aims and hypotheses for Phase Two (previously unexplored in Phase One) that were derived from a review of scholarly literature relating to the influence of coping and trait time perspective on the stress-strain process. Furthermore, Sections 5.7 and 5.8 respectively focus on the potential benefits and limitations of the research program thus far. Section 5.9 concludes this chapter with a summary. The structure outlined above is summarised overleaf in Figure 11.

### 5.2 Recap of Aims of Phase One

A review of the stress and coping literature, as presented in Part I, highlighted several key findings that provided a conceptual foundation for the current research. The review showed that understanding of how entrepreneurs cope with stress is somewhat lacking, and prior research has tended to investigate coping among entrepreneurs as a reactive process, consistent with The Transactional Model of Stress and Coping (Lazarus & Folkman, 1984) (as presented in Section 2.4). This approach to investigating coping in entrepreneurs was proposed by the researcher as potentially problematic owing to entrepreneurs being attributed with anticipatory traits that may generate anticipatory coping responses. It was argued that when investigating taxonomies of coping in entrepreneurs, it might be necessary to consider taxonomies that incorporate time (specifically, an orientation towards the future) as a key dimension of coping.



*Figure 11: Chapter Five Overview*

The review motivated the researcher to consider the conceptual nature of coping in entrepreneurs (Phase One) before investigating coping and trait time perspective as influencing variables in the stress-strain process (Phase Two). The aims guiding Phase One, which were developed in Chapters One and Two (as reiterated below), were to:

1. Explore the coping strategies entrepreneurs use to cope with stress.
2. Determine whether time orientation might be a relevant dimension of coping in entrepreneurs.
3. Investigate whether recognised coping typologies (as described in seminal work in the stress and coping literature) appear to capture the dimensions of coping

that may be relevant when investigating coping strategy effectiveness in entrepreneurs.

The next section discusses Phase One's findings in relation to functional and temporal dimensions of coping, and presents the first aim for Phase Two.

### **5.3 Discussion of Phase One Findings – Dimensions of Coping in Entrepreneurs**

The first aim of Phase One was to explore which coping strategies entrepreneurs use to cope with stress. To address this aim, the current research classified qualitative interview data (i.e., descriptions of coping) obtained from interviews with entrepreneurs according to functional coping strategies in the Brief COPE (Carver, 1997), a widely adopted quantitative measure of coping responses. The 14 functional coping responses in the Brief COPE include: Active Coping, Planning, Positive Reframing, Acceptance, Humour, Religion, Using Emotional Support, Using Instrumental Support, Self-Distraction, Denial, Venting, Substance Use, Behavioural Disengagement, and Self-Blame. Analysis of participants' descriptions of coping suggested that the Brief COPE adequately captured the scope of functional coping strategies as described by Phase One participants. As such, the Brief COPE appeared to be a suitable measure with which to explore coping in entrepreneurs in Phase Two. However, a caveat to this conclusion is that although the scope of coping appeared to be adequately captured by the Brief COPE, several subscales were not present in the context of Phase One data. For example, participants did not appear to cope with stress using Behavioural Disengagement, Self-Blame, Denial, or Humour. Absence of several subscales may hence suggest that some Brief COPE subscales are more meaningful than others in capturing the nature of coping in entrepreneurs. Nonetheless, given the small sample size in Phase One ( $N = 22$ ), these subscales were retained for further investigation in Phase Two.

Phase One also aimed to investigate whether recognised coping typologies appear to capture the functional dimensions of coping that may be relevant when investigating coping strategy effectiveness in entrepreneurs. To achieve this, the researcher first assigned participants' descriptions of coping to functional categories (in the Brief COPE

cf. Carver, 1997) as described above, then considered functional categories according to their categorisation within recognised typologies of coping as presented in the stress and coping literature (Carver & Connor-Smith, 2010). Results of this analysis were presented in Section 4.5. Findings indicated that Begley's (1998) coping taxonomy sufficiently encompassed the scope of coping as described by the sample of entrepreneurs in Phase One. A limitation of using this approach in Phase Two is that grouping of Brief COPE items within Begley's taxonomy (as described in Section 2.5.3) has not been validated in scholarly literature.

Phase One further aimed to investigate time orientation as a relevant dimension of coping in entrepreneurs. As outlined in the literature review presented in Part I, existing understanding of how entrepreneurs cope with stress primarily extends from studies that have adopted a theoretical framework provided by Lazarus and Folkman's Transactional Model of Stress and Coping (1984). Consequently, previous studies investigating stress and coping in entrepreneurs have tended to conceptualise coping as a reactive process. Given that proactivity (i.e., a forward-looking perspective) has been identified as a key trait in entrepreneurs (Becherer & Maurer, 1999; Bolton & Lane, 2012; Crant, 1996; Prabhu et al., 2012), Phase One aimed to explore whether, in addition to coping reactively, some entrepreneurs may also cope using anticipatory strategies (cf. Greenglass et al., 1999).

In achieving this aim, participants' descriptions of coping that were classified according to functional coping strategies in the Brief COPE (Carver, 1997) were further considered in relation to time i.e., whether coping was described as enacted in reaction to or anticipation of a stressor. Where coping was classified as anticipatory, it was categorised according to preventative and proactive coping typologies (cf. Greenglass et al., 1999). Preventative coping is defined as "an effort to build up general resistance resources that reduce the severity of the consequences of stress, should it occur, and lessen the likelihood of the onset of stressful events in the first place" (Greenglass, 2002 p.6). Proactive coping is defined as "an effort to build up general resources that facilitate promotion toward challenging goals and personal growth" (Schwarzer & Taubert, 2002 p.9). Stressor appraisal was also considered owing to it representing a differentiator of preventative and proactive coping: preventative coping being prefaced

by negative appraisal, and proactive coping by positive appraisal. Analysis of the data revealed that where coping appeared to be described as anticipatory, some participants seemed to use preventative coping, some used proactive coping, while others used a combination of both. Given these findings, it appears time orientation as a dimension of coping is relevant for entrepreneurs, and hence, this was investigated in Phase Two.

To move towards a better understanding of a parsimonious set of coping dimensions with which to explore coping in entrepreneurs, further investigation was required. The first aim of Phase Two was therefore established:

**AIM 1.** Explore the factor structure of functional coping in the current sample of entrepreneurs.

Prior to presenting additional aims and hypotheses for Phase Two (see Sections 5.5 and 5.6), the next section outlines models which were used to investigate the role of individual difference variables in the stressor-strain relationship in entrepreneurs.

#### **5.4 Modelling the Role of Coping and Personality Traits in the Stressor-Strain Relationship**

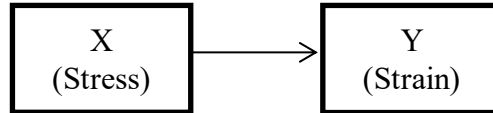
Individual difference variables such as coping and personality traits have a long history in the occupational stress literature as having an influencing role in the stress-strain process (for an historical overview see Suls, David, & Harvey, 1996). Specifically, individual difference variables are shown to play a role in the process by which stressors influence strain (Parkes, 1994). This section presents three models used in the current research to explore the role of individual difference variables on the stressor-strain relationship in an entrepreneurship context: Direct Effect (or Additive) Model, Moderated Effect (or Interactive) Model, and the Mediated Effect Model. Each is outlined below and illustrated overleaf in Figure 12 (based on Baron & Kenny, 1986).

In the Direct Effect (or Additive) Model (illustrated in Figure 12a), a predictor variable ( $X$ ) is directly related to an outcome variable ( $Y$ ), and uniquely contributes to the explained variance (Parkes, 1994). Previous investigation of the direct effect of stress on strain in entrepreneurs (see e.g., Rahim, 1996) finds stress to positively relate to strain ( $r = .43, p < .05$ ). In Rahim's study, stress was measured using the Occupational

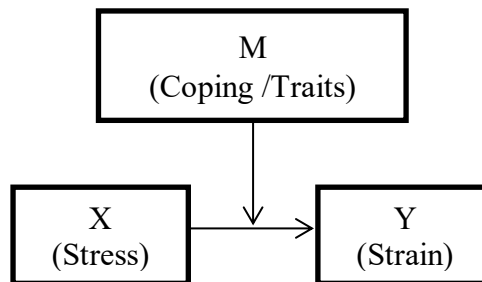


Stress Inventory (Osipow & Spokane, 1983) and strain was measured using the Psychiatric Symptoms Index (Ilfeld, 1976).

a) *Direct Effect Model*



b) *Moderated Effect (or Interactive) Model*



c) *Mediated Effect Model*

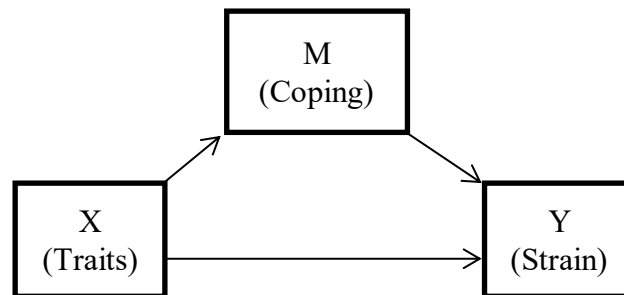


Figure 12: Modelling the Role of Individual Difference Variables in the Stress-strain process

In the Moderated Effect (or Interactive) Model (illustrated above in Figure 12b), the relationship between two variables (X and Y) changes as a function of a moderator variable (M). ‘Moderator’ refers to the interaction effect of M with X on the prediction of Y above and beyond the main effects of X and M (Baron & Kenny, 1986; Hayes, 2013). Here, the magnitude and/or direction of the effect of X on Y is dependent upon the level of M (Parkes, 1994). It has long been established in the wider coping literature that individual difference variables may buffer the effect of stress on strain (Cohen & Wills, 1985; Weibe & Smith, 1997). Use of moderation analysis to investigate the buffering effect of coping on the stressor-strain relationship is largely absent from the

entrepreneurship literature, perhaps due to stress and coping research being relatively new to the field of entrepreneurship. Patzelt and Shepherd (2011) have used moderation analysis to investigate whether problem-focus coping moderates the relationship between self-employment and negative emotions. They found that self-employment is associated with lower negative emotions (compared to employees), and that this relationship is enhanced as problem-focused coping increases. More recently, Fernet et al. (2016) found support for Entrepreneurial Orientation (EO) (Covin & Slevin, 1989) – which includes items capturing proactive behaviours – moderating the relationship between occupational loneliness and burnout. In their study, burnout was measured using the Burnout Measure, Short Version (Malach-Pines, 2005), which captures emotional, mental, and physical exhaustion. Moderation analysis, as used in the current study, is further discussed in Chapter Seven (Section 7.8.2).

A Mediated Effect Model is illustrated above in Figure 12c. In this model, a predictive variable (X) exerts influence (i.e., has an indirect effect) on an outcome variable (Y) via a mediator variable (M). In entrepreneurship research, mediation analysis has been used to investigate the indirect effect of personality on business idea generation via entrepreneurial human and social capital (Obschonka et al., 2012). Additionally, Schmitt-Rodermund (2004) used mediation analysis and found that the relationship between personality and career is partially mediated by an entrepreneurs' assessment of their skills and interests. Both studies find evidence to support further investigation of the indirect effect of personality traits via mediator variables on entrepreneurial outcomes.

The current research program aimed to investigate potential direct, moderated, and mediated effects of individual difference variables in the stressor-strain relationship in an entrepreneurship context. In the sections that follow, associated aims and hypotheses are presented, based on a review of relevant literature.

### **5.5 Aims and Hypotheses for Phase Two Related to Functional and Time-Oriented Coping**

In this section, aims and hypotheses for Phase Two are developed by drawing both on Phase One findings and a review of literature (in addition to the review presented in Part

I). Aims and hypotheses relate to investigating influencing variables in the stressor-strain relationship.

#### *5.5.1 Role of functional coping in the stressor-strain relationship*

In accordance with the qualitative analysis technique used in Phase One i.e., thematic analysis (cf. Braun & Clarke, 2006), the frequency with which a theme is cited in the data does not imply its relative importance. Consequently, coping strategies that were frequently cited in the data (e.g., Using Instrumental Support) may not be more effective in buffering the effect of stress on strain than coping strategies that were described minimally (e.g., Religion). Despite this, considering the data through an empiricist lens may lead to the conclusion that entrepreneurs use some coping strategies more than others due to these strategies having reduced strain outcomes in the past. While insight into the efficacy of coping in buffering the effect of stress on strain in entrepreneurs was beyond the ambit of Phase One, it was investigated in Phase Two. The second aim of Phase Two was therefore to determine which functional aspects of coping buffer the effect of stress on strain (operationalised as burnout) in entrepreneurs.

**AIM 2.** Explore which functional aspects of coping buffer the effect of stress on burnout in entrepreneurs.

#### *5.5.2 Role of time-oriented coping in the stressor-strain relationship*

Outside of the entrepreneurship literature, benefits are associated with time-oriented coping. For example, Zambianchi and Ricci Bitti (2014) found individual well-being to positively correlate with proactive coping ( $r = 0.42, p < .001, N = 232$ ), although not significantly with preventative coping. Holman and Silver's (2005) three-year longitudinal study of mental and physical health of individuals following the September 11 attacks, found that individuals who had a positive future-oriented coping style (i.e., set goals and planned for their futures akin to proactive coping) showed lower psychological distress. Gan et al. (2007) found preventative and proactive coping negatively correlated with strain (operationalised as depression), and that this relationship was significantly higher for proactive than preventative coping. Greenglass (2002) found proactive coping negatively correlated with burnout. By contrast,

Stiglbauer and Batinic (2015) note that proactive behaviours may be associated with higher levels of exhaustion, because acting in anticipation of the future requires an investment of current resources (e.g., energy), which may contribute to greater levels of strain (further discussed below in Section 5.6).

Additionally, and as mentioned in Section 2.3.3, a meta-analytic review by Alarcon et al. (2009) of personality variables and burnout in employees, found proactivity to relate to all three burnout dimensions: exhaustion, cynicism, and professional efficacy. Alarcon et al. found proactive personality to negatively correlate with emotional exhaustion ( $p = -.21, k = 7, N = 1697$ ), and depersonalisation (also referred to as cynicism) ( $p = -.25, k = 4, N = 980$ ), and to positively correlate with personal accomplishment (also referred to as professional efficacy) ( $p = .38, k = 4, N = 980$ ).

Whether or not the benefits of coping in anticipation of the future (as cited above) extend to entrepreneurs remains largely unexplored in the entrepreneurship coping literature. However, it is plausible that similar benefits exist in an entrepreneurship context given that future-oriented behaviours are shown to positively influence the entrepreneurship process e.g., acting in anticipation of the future positively influences new venture creation through goal setting (Bird, 1992). The aims and hypotheses for Phase Two, as derived from Phase One findings and a review of relevant literature, are summarised below.

**AIM 3:** Investigate the size and direction of the relationship between future-oriented coping (Preventative and Proactive Coping) and dimensions of burnout (Exhaustion, Cynicism, and Professional Efficacy)

**H1.** Proactive Coping will be negatively related to an entrepreneur's propensity for burnout.

**H2.** Preventative Coping will be negatively related to an entrepreneur's propensity for burnout, however, to a lesser degree than Proactive Coping.

**AIM 4.** Determine the buffering effect of time-oriented coping on the stressor-strain relationship.

**H3.** The relationship between stress and burnout in entrepreneurs will be moderated by time-oriented coping, such that:

**H3a.** Preventative Coping strategies weaken the effect of stress on burnout

**H3b.** Proactive Coping strategies weaken the effect of stress on burnout, and to a greater degree than preventative coping strategies.

The next section presents additional aims and hypotheses for Phase Two that were derived from a review of relevant scholarly literature. These relate to trait time perspective, as distinct from time oriented coping, as an influential individual difference variable in the stress-strain process.

### **5.6 Aims and Hypotheses for Phase Two Related to Trait Time Perspective as an Influencing Variable in the Stress-Strain Process**

This section draws on prior scholarly work (rather than findings from Phase One) to form aims and hypotheses for Phase Two that relate to the influence of individual difference variables, other than coping, on the stress-strain process.

The individual difference variable considered herein is ‘trait time perspective’, which is defined as the “often non-conscious process whereby the continual flows of personal and social experiences are assigned to temporal categories, or time frames, that help to give order, coherence, and meaning to those events” (Zimbardo & Boyd, 1999 p.1271). As introduced in Section 1.6, time is shown to be an important construct in entrepreneurship (Bird, 1992) and a variable influencing entrepreneurs’ behaviours (Bluedorn & Martin, 2008; Shipp et al., 2009).

The current research investigated the influence of three trait time perspectives on the stressor-strain relationship. These include: Present Fatalism, Present Hedonism, and Future.

Present fatalism is generally linked to poor health outcomes (Guthrie et al., 2009; Hall & Fong, 2003). This is perhaps due to present fatalistic individuals being more likely to engage in health-risk behaviours (e.g., Substance Use), and less likely to engage in health-benefiting behaviours (e.g., exercise) than are low present fatalistic individuals (Guthrie et al., 2009). High present fatalism is also associated with higher levels of

depression, anxiety, and other stress-related problems (Zimbardo & Boyd, 1999), and correlates negatively with subjective happiness (Drake et al., 2008). In entrepreneurship research, present fatalism has been negatively correlated with startup intentions, the level of effort the entrepreneur puts into running their business, and also with an entrepreneur's perception of success (Przepiorka, 2015; Zaleski & Przepiorka, 2015). Given that present fatalism is linked to decreased perceptions of success (i.e., professional efficacy – a dimension of burnout) it may be the case that entrepreneurs with high present fatalism have an increased propensity for burnout.

Present hedonism has been linked to riskier behaviours e.g., reckless driving, illegal substance use, gambling (Henson et al., 2006). It has also been linked to advantages such as increased likelihood of engaging in health protective behaviours such as exercise (Guthrie et al., 2009), and increased likelihood of seeking solutions to immediate problems (Epel et al., 1999).

A high future time perspective has been linked with positive outcomes outside the entrepreneurship literature. For example, trait future time perspective is positively related to mental and physical health (Boyd & Zimbardo, 2005; Hall & Fong, 2003; Henson et al., 2006; Zimbardo & Boyd, 1999), and to an individual's likelihood of setting and achieving goals (Keough et al., 1999). Individuals with high positive future time perspective are said to experience lower levels of psychological distress (Holman & Silver, 2005).

In contrast to the positive associations attributed to future time perspective as noted above, a study by Tata, Martinez, and Brusoni (2015), which investigated the relationship between startup performance and temporal orientation, found *low* future focus to be associated with business success. Furthermore, Boniwell and Zimbardo (2003) highlight that focusing too heavily on the future may reduce the level of satisfaction one may draw from the present. Cangiano and Parker (2016) draw attention to the investment (i.e., depletion) of resources that is required in order to act in anticipation of the future, and note that a 'reasonable' level of resources is likely required to effectively engage in proactivity. By extension, it is likely that resource-rich entrepreneurs benefit from high trait future time perspective, whereas entrepreneurs

with fewer resources may benefit from limiting their future focus. Whether a high trait future time perspective is beneficial for entrepreneurs may also be task dependent. For example, it is likely that in a high trait future time perspective would be beneficial for business expansion and customer acquisition, yet detrimental if the entrepreneur focuses too heavily on the future and overlooks the immediate needs of customers.

Lack of clarity as to the role of trait time perspective in the stress-strain process, particularly in an entrepreneurship context, prompted the current study to use a predominantly exploratory approach.

In summary, Phase Two investigated whether an entrepreneur's trait time perspective (e.g., low or high present time perspective, and/or low or high future time perspective) has implications for strain outcomes. Associated aims and hypotheses were:

**AIM 5.** Investigate the relationship between trait time perspective and an entrepreneur's propensity for burnout.

**H4.** Present Fatalism will be positively related to an entrepreneur's propensity for burnout.

**H5.** Present Hedonism will be positively related to an entrepreneur's propensity for burnout, but to a lesser degree than Present Fatalism.

**H6.** Future time perspective will be negatively related to an entrepreneur's propensity for burnout.

**AIM 6.** Investigate whether trait time perspective affects strain outcomes via coping responses.

**AIM 7.** Explore the proportion of variance in dimensions of burnout that can be accounted for by coping and trait time perspective.

A summary of all aims and hypotheses for Phase Two is provided overleaf in Table 9.

*Table 9: Summary of Aims and Hypotheses for Phase Two*


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Research Aims and Hypotheses Addressed in Phase Two of the Current Research

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EXPLORING FUNCTION-ORIENTED COPING TYPOLOGIES

**AIM 1.** Explore the factor structure of functional coping in the current sample of entrepreneurs.

**AIM 2.** Explore which functional aspects of coping buffer the effect of stress on burnout in entrepreneurs.

INVESTIGATING TIME-ORIENTED COPING TYPOLOGIES

**AIM 3.** Investigate the size and direction of the relationship between future-oriented coping (Preventative and Proactive Coping) and dimensions of burnout (Exhaustion, Cynicism, and Professional Efficacy).

**H1.** Proactive Coping will be negatively related to an entrepreneur's propensity for burnout.

**H2.** Preventative Coping will be negatively related to an entrepreneur's propensity for burnout, however, to a lesser degree than Proactive Coping.

**AIM 4.** Determine the buffering effect of time-oriented coping on the stressor-strain relationship.

**H3.** The relationship between stress and burnout in entrepreneurs will be moderated by time-oriented coping, such that:

**H3a.** Preventative Coping strategies weaken the effect of stress on burnout.

**H3b.** Proactive Coping strategies weaken the effect of stress on burnout, and to a greater degree than preventative coping strategies.

ROLE OF TRAIT TIME PERSPECTIVE IN THE STRESS-STRAIN PROCESS

**AIM 5.** Investigate the relationship between trait time perspective and an entrepreneur's propensity for burnout.

**H4.** Present Fatalism will be positively related to an entrepreneur's propensity for burnout.

**H5.** Present Hedonism will be positively related to an entrepreneur's propensity for burnout, but to a lesser degree than Present Fatalism.

**H6.** Future time perspective will be negatively related to an entrepreneur's propensity for burnout.

**AIM 6.** Investigate whether trait time perspective affects implications for strain outcomes via coping responses.

PREDICTORS OF BURNOUT

**AIM 7.** Explore the proportion of variance in dimensions of burnout that can be accounted for by coping and trait time perspective.

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### **5.7 Potential Benefits of Phase One**

The potential benefits of the overall research program are detailed in Chapter Eight, however several key contributions of Phase One are highlighted here. Firstly, Phase One represented an area of research previously unexplored in the entrepreneurship literature. The knowledge gained from Phase One related to how entrepreneurs cope with stress in functional and temporal ways. This knowledge adds to the emergent body of knowledge regarding coping in entrepreneurs, and may assist researchers in making more informed decisions as to the dimensions of coping to use when investigating coping efficacy in entrepreneurs.

Additionally, a better understanding of coping in entrepreneurs may aid scholarly efforts to measure coping and its relationship to stress and health outcomes. Findings from Phase One – which suggest future-oriented coping to be a relevant construct in entrepreneurs – may also benefit future scholarly work through future research adopting a wider temporal lens through which to investigate coping in entrepreneurs.

While Phase One represents a unique contribution to the entrepreneurship scholarly domain, it is not without limitations. These are discussed below in Section 5.8.

### **5.8 Limitations of Phase One**

Several limitations of Phase One were outlined in Chapter Three. For example, it was acknowledged that Phase One findings are limited in their ability to achieve representational or inferential generalisation. (see Section 3.4.1). Chapter Three also addressed sample size (see Section 3.4.3) and sampling techniques (see Section 3.6.2). In addition to these, other limitations of Phase One are outlined below.

One limitation relates to the number of men (15) relative to women (7) who participated in the research. It is possible that this imbalance may have influenced results through the analysis of data rendering a masculine view of how entrepreneurs cope with stress. For instance, Sevä, Vinberg, Nordenmark, and Strandh (2016) draw attention to women generally having greater social networks than men, an implication of which may be that women are more likely (and perhaps better able) to cope using strategies that draw on

their networks (e.g., Using Instrumental Support or Using Emotional Support). Future studies may wish to systematically explore whether gender influences coping.

Another limitation is that data collection relied on participants' self-report of coping behaviours. It is not unlikely that the entrepreneurs interviewed in Phase One underreported the use of coping strategies that may be perceived as socially undesirable in order to project a favourable image to the researcher. Suggestion that this might occur is observable in the low frequency of descriptions of functional coping strategies such as Substance Use. It is also plausible that when responding to questions, participants may have sought to project a favourable image of themselves in line with entrepreneur stereotypes e.g., as someone who is a 'doer and problem solver' (Uy et al., 2013) and who wears stress as a 'badge of honour' (Wessely, 1996). This is perhaps reflected in the high frequency of functional coping strategies cited in the data, such as Active Coping. Upon reflection, it would perhaps have been advantageous to also interview people close to the participant e.g., their spouse, co-founders, or employees. Data triangulation may have led to verifying whether reported behaviours were reflective of actual behaviours.

## **5.9 Chapter Summary**

In summary, this chapter described the intersection of Phase One and Phase Two of the current research program. Based on findings from Phase One, qualitative interviews, and a literature review, the overarching aims of Phase Two were to investigate coping as a function- and time-oriented process, and furthermore, to investigate trait time perspective as an influencing variable in the stress-strain process. The next chapter presents the methodology for Phase Two.

PART III

PHASE TWO – QUANTITATIVE STUDY

## CHAPTER 6: PHASE TWO RESEARCH METHODOLOGY

### 6.1 Chapter Introduction

This chapter presents the research methods for Phase Two – the second phase in a two-phased mixed methods research program. The chapter is structured as described next. Section 6.2 provides the background for Phase Two. Section 6.3 presents the ethical considerations. Section 6.4 discusses the advantages and limitations of adopting survey-based methods (as used in the current phase). Section 6.5 outlines the sampling framework. Section 6.6 presents the measures used in this phase (perceived stress, coping, trait time perspective, and burnout). Section 6.7 provides an overview of the procedure for Phase Two. This chapter concludes with a summary in Section 6.8. The structure of this chapter is summarised overleaf in Figure 13.

### 6.2 Background to Phase Two

As outlined in Section 3.2, the overall research program adopted an exploratory sequential research design (cf. Creswell & Plano Clark, 2011). Adopting this design allowed the researcher to first explore coping in entrepreneurs qualitatively before applying quantitative measures of coping to examine its effects on the relationship between stressors and strain. Phase Two further aimed to investigate trait time perspective as an influencing variable in the stress-strain process in a sample of entrepreneurs.

The aims and hypotheses investigated in Phase Two were developed in the previous chapter, and focused on the following four themes:

- Dimensions of function-oriented coping typologies, and the buffering effect of functional coping in the stress-burnout relationship in entrepreneurs;
- The relationship between time-oriented coping and burnout dimensions, and the buffering effect of time-oriented coping on the stress-burnout relationship in entrepreneurs;
- The role of trait time perspective in the stress-burnout process; and
- Predictors of burnout.

A summary of all aims and hypotheses for the current phase of the research program was presented previously in Table 9.

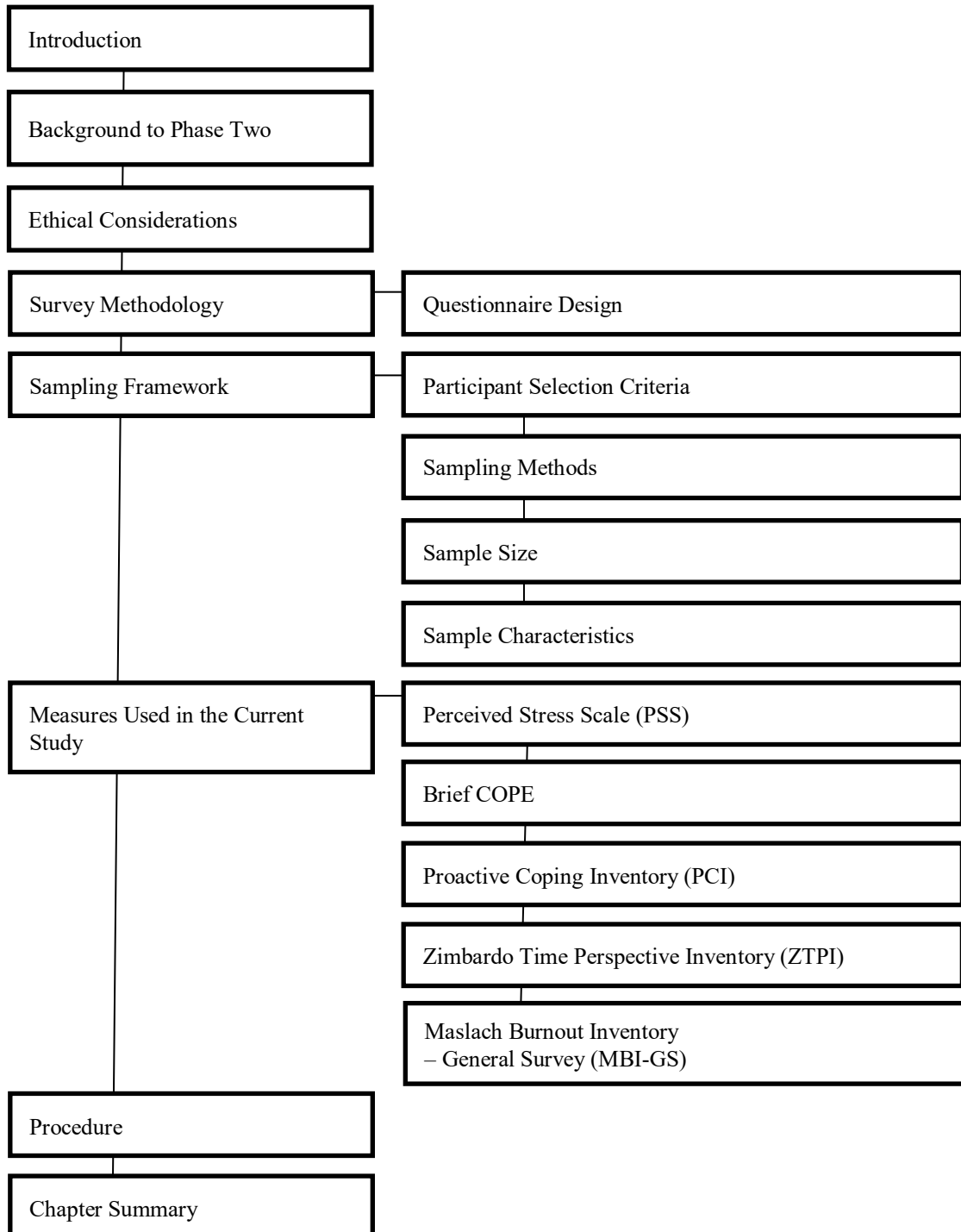


Figure 13: Chapter Six Overview

### 6.3 Ethical Considerations

Prior to the Phase Two research being carried out, ethical approval was obtained from Swinburne University Human Research Ethics Committee (SUHREC) (refer to Appendix H). As per the conditions of ethical approval, the aims of the project were clearly described and explained to potential participants prior to their commencement of the questionnaire. This was achieved via the Participant Consent Information Statement (Appendix I), which appeared at the start of the questionnaire. Details included: (a) participation in the research is voluntary; (b) individuals are free to withdraw from the study at any time without question or explanation, and (c) participants are free to omit any questions they do not wish to answer. No risks to participants were anticipated. However, it was acknowledged that questions about stress and coping may evoke feelings of distress in some participants. As such, efforts were made to reduce any discomfort associated with participating in the research project by informing participants about what they could expect (in the questionnaire) prior to commencement. This was done through the Participation Consent Information Statement providing details of the Swinburne Psychology Clinic, a low-cost counselling service, and Lifeline (Australian and International contact details), which participants could utilise should they wish to discuss any issues raised by the research project. Additionally, information regarding privacy specified that only the named researchers would have access to the data and that the data would not be given to any other individuals or organisations. Privacy statements for Qualtrics ([www.qualtrics.com](http://www.qualtrics.com)) – the company hosting the questionnaire – were provided. A debriefing statement was included at the conclusion of the questionnaire directing participants to counselling services should they wish to access support (refer to Appendix J).

### 6.4 Survey Methodology

‘Survey’ refers to a research strategy wherein data are collected in a structured manner from a defined segment of the population. One instrument for collecting data in survey-based research is a questionnaire, which asks all respondents to answer the same set of questions in a predetermined order (Bethlehem, 2009; Saunders et al., 2011). Data collection was achieved in Phase Two by using a self-administered online questionnaire

comprising self-report measures. Self-report measures adopted in the current study are presented in Section 6.6. A copy of the questionnaire is given in Appendix K. In the current phase, data were collected from participants at one point in time, and therefore the research was cross-sectional by design. A cross-sectional research design was deemed as appropriate given that the current study aimed to draw inferences as to association between variables. Data obtained from the questionnaire were analysed using an exploratory factor analysis (further explained in Section 7.8.1) and correlational research analysis (see Section 6.4.3). This design allowed the researcher to explore, measure and describe the relationship between variables.

As with any form of data collection and analysis, strengths and weaknesses are associated with the use of survey based research and correlational analysis. Those relevant to the current study are outlined below.

#### *6.4.1 Advantages of using a questionnaire for data collection in the current study*

In a recent review of data collection methods in entrepreneurship research, McDonald et al. (2015) reported that two-thirds of research published in top entrepreneurship journals (e.g., *Journal of Business Venturing*) adopts surveys/questionnaires in research design. Use of questionnaires in Phase Two of the current study therefore aligns the data collection method with that typically adopted in entrepreneurship research. This differs from the qualitative approach taken in Phase One, which, by contrast tends to be utilised to a lesser degree by entrepreneurship scholars, but was valuable for the current research because information which was previously unknown was generated about a phenomenon.

One reason for the dominance of questionnaires in entrepreneurship research is that (in general) they afford the researcher an efficient means of collecting data (Dillman, 2014; Jones, Fernyhough, De-Wit, & Meins, 2008). This is especially true when the researcher wishes to obtain data from a large number of respondents in a geographically diverse population (Sue & Ritter, 2011), as was the case in the current study.

Questionnaires may take different forms including paper-based, verbal, and Internet-mediated (Saunders et al., 2011). An Internet-mediated (i.e., online) form was used in

the current study. Completing a questionnaire online may be more convenient for respondents (than face-to-face or telephone-based questionnaires) as the questionnaire can be completed at a time and location that suits the respondent (Dillman, 2014). Respondents are likely to answer online questionnaires more honestly than they might with other forms of data collection owing to the absence of influence by the researcher's physical presence when the questionnaire is being completed, which allows for anonymity. Adopting an online questionnaire also ensures against data entry errors made by the researcher e.g., when manually entering data from hard copies into a spreadsheet (Evans & Mathur, 2005).

The empirical quality of self-report data collected from self-selected samples using Internet-based questionnaires has been shown to be consistent with 'traditional' paper-and-pen based methods (Gosling, Vazire, Srivastava, & John, 2004; Jones et al., 2008; Ritter, Lorig, Laurent, & Matthews, 2004). It is unlikely that 'undercoverage', defined as the underrepresentation of the target population, occurred due to lack of Internet access by potential participants. Australian business owners are noted as 'Internet savvy' (Davidsson, Steffens, & Gordon, 2011), and it is reported that approximately 94% of Australian businesses are connected to the Internet (Australian Bureau of Statistics, 2015).

Despite the advantages noted above, questionnaires as a method of data collection have limitations. Error can be expected, and is defined as the difference between the estimates produced through measuring variables in a sample and the true value of the variables within the population (Dillman, 2014). The next section acknowledges areas where error may occur in survey-based research and discusses research design considerations that were adopted to minimise the impact of error in the current study.

#### *6.4.2 Limitations of using a questionnaire in the current study*

One factor influencing whether or not a potential participant responds to a questionnaire is the topic of the questionnaire: where an individual deems the topic as salient, they are more likely to participate (Dillman, 2014; Fan & Yan, 2010). Given this, an entrepreneur experiencing stress is perhaps more likely to respond to the current questionnaire than individuals who are not experiencing stress. One implication of this



in the context of the current research is that responses are likely biased in favour of entrepreneurs with higher stress levels. However, it is also likely that entrepreneurs who are experiencing high levels of stress are less willing to participate in surveys (due to other demands) than those experiencing low levels of stress.

A limitation of online questionnaires is their characteristically low response rate (Dillman, 2014). Response rate is somewhat determined by questionnaire length, such that questionnaire completion rate decreases as survey duration increases. An expected completion time of thirteen minutes or less is considered ideal (Fan & Yan, 2010). The current questionnaire was unavoidably longer than this recommended time owing to the number of variables included to address the aims of the current study. Initially, the Consent Information Statement suggested a completion time of 40 minutes (calculated based on aggregating the suggested times of each included measure as specified by the scale authors). The estimated (and relatively lengthy) completion time was deemed by the researcher as a likely deterrent to entrepreneurs participating in the current research. Analysis of the first 26 responses showed that the median time to complete the survey was 16 minutes. This time was considerably less than suggested by the Participant Consent Statement (Appendix I). Therefore, an amendment was made to the Consent Information Statement to reflect a more realistic suggested completion time of 20 minutes. Approval of this amendment was granted by Swinburne University Human Research Ethics Committee, a copy of which is provided in Appendix L.

Another limitation of self-administered online questionnaires is that the researcher may have little to no knowledge of the characteristics of 'non-respondents' (Saunders et al., 2011), defined as members of the target population who did not answer the questionnaire. In order to limit non-response bias, Dillman (2014) suggests varying the method of contact with potential participants. Variation in contact method was achieved in the current study by, for example, sharing links to the survey across multiple social media sites (e.g., LinkedIn and Twitter), publicising the questionnaire to Swinburne University of Technology Alumni of the Masters of Entrepreneurship and Innovation program, contacting participants from the researcher's network, and using a panel recruitment service (as discussed in Section 6.5.2). Sample social media posts are provided in Appendix F.

### 6.4.3 *Strengths and limitations of correlational analysis*

The current study used a correlational analysis to analyse data. This allowed the researcher to determine the form and strength of relationships between variables and whether these relationships may be positive or negative. Correlational research is thought ideal when the area of investigation is relatively unexplored (Gravetter & Forzano, 2012). Such an approach appears fitting in the current research given the infancy of stress and coping research in entrepreneurs (as outlined in Part I).

Instruments used to measure variables in the current study are outlined in Section 6.6.

Correlational design enables predictions to be made, however, it does not enable the researcher to draw conclusions as to causal relationships (i.e., that A causes B) (Babbie, 2007; Bryman, 2008; Gravetter & Forzano, 2012). A further limitation of correlational design is that the relationship between two variables may be explained by a third variable (which may not be measured in the current study). As it is not known which variable is the cause and which is the effect, variables are referred to in the current phase as ‘predictor variables’ (rather than ‘independent variables’) or ‘outcome variables’ (rather than ‘dependent variables’) (cf. Field, 2013).

Exclusive use of questionnaires in the current study may induce bias e.g., under/over inflation of correlations. This is known as ‘common method variance’. Where this occurs, variance may be attributed to the measurement method (i.e., the questionnaire) rather to the measures themselves (e.g., measure of perceived stress) (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Two method effects, which may have arisen in the current research, include ‘consistency motive’ and ‘social desirability’. When consistency motive occurs, participants aim to respond to questions in a consistent manner, despite misalignment between a participant’s response and what they do in practice. As such, conclusions drawn from the data may not reflect relationships between variables as they occur in real-life. The second, social desirability, refers to participants responding to questions in a manner they deem socially desirable (Ganster, Hennessey, & Luthans, 1983). When this occurs, socially undesirable traits are underreported e.g., underreporting Substance Use as a coping strategy. As such, predictions arising from data analyses were interpreted with caution.

## 6.5 Sampling Framework

### 6.5.1 Participant selection criteria

To be eligible to partake in the current research, an individual needed to identify as an entrepreneur (defined as ‘active-owner manager’; cf. Gartner, 1990), reside in Australia, and be aged 18 years or over.

### 6.5.2 Sampling methods

As outlined in Section 1.3, identifying a sampling frame for the current research is somewhat challenging given that no homogenised definition of ‘entrepreneur’ exists within the scholarly community. Identifying entrepreneurs is inherently challenging in research conducted in countries such as Australia, where no population register exists that may provide access to a sampling frame (Groves et al., 2013). Initial data collection efforts used purposeful and self-selection sampling as outlined in Section 3.6. However, this was complemented with an additional sampling method, whereby the researcher contracted the process of participant recruitment to a third-party company that specialises in Internet-based survey research. This dual data collection process was prompted by the need to obtain a large enough sample for meaningful analysis.

Qualtrics, a company specialising in Internet-based survey research was contracted by the researcher to recruit participants into the study. Qualtrics’ Panel Management Service was used (see [www.qualtrics.com/online-sample](http://www.qualtrics.com/online-sample)). Data collected by Qualtrics Panel Management Service is referred to at times in this thesis as ‘contracted data’. During this stage of data collection, a volunteer opt-in panel sampling technique was used, whereby individuals (meeting participant sampling criteria) who had volunteered to participate in other surveys hosted by Qualtrics were invited to participate in the research (Sue & Ritter, 2011). Completion of the survey was rewarded with ‘points’ that could be redeemed by the participant in exchange for gift cards from companies such as Amazon ([www.amazon.com](http://www.amazon.com)) or the retail merchant Target. Incentives such as these have been shown to be effective when recruiting participants into long duration questionnaires (Deutskens, De Ruyter, Wetzels, & Oosterveld, 2004; Goritz, 2004), like the questionnaire used in the current research.

To ensure high quality data, Qualtrics screen out hastily completed responses (referred to as ‘speeders’), partial completions, and protect against multiple responses from individual participants through preventing the survey being taken more than once from the same IP address. A validation question further screened participants to determine whether they were owner-managers of businesses (i.e., the target demographic). Checks such as those outlined above are in line with recommendations for maximising quality of responses when collecting data using panels in business related research (Schoenherr, Ellram, & Tate, 2015). Previous research endorses the use of Qualtrics’ online recruitment service in business related research (for a review see Brandon, Long, Loraas, Mueller-Phillips, & Vansant, 2014), with panel recruitment strategies resulting in usable responses in academic research (see Ashworth & McShane, 2012; Gligor, Holcomb, & Stank, 2013; McBride, Carter, & Warkentin, 2012; Rosoff, John, & Prager, 2012). A limitation inherent in using panel management companies such as Qualtrics is that the number of individuals invited to participate in the survey is unknown to the researcher. Qualtrics provided an estimated response rate of ten per cent.

The online survey was delivered by Qualtrics’ platform to potential participants in both stages of data collection (i.e., data collected directly by the researcher and data collected by Qualtrics). Therefore, the survey’s visual design (i.e., graphical layout) was the same for both samples. Analysis of data collected for the two samples is presented in Chapter Seven.

### 6.5.3 *Sample size*

The number of usable responses in the current study was 180 (34 cases were from data collected by the researcher and 146 were from the data collected by Qualtrics). A sample of this size ( $N = 180$ ) is deemed suitable for correlational and regression analysis of data from populations where outliers may be common (Field, 2013). Similar sample sizes can be observed in previous entrepreneurship stress and coping studies that used similar methods of analysis to the current study (i.e., correlational and/or regression analysis) (see e.g., Baron et al., 2016; Jenkins et al., 2014; Oren, 2012; Örtqvist et al., 2007).

#### 6.5.4 *Sample characteristics – personal and venture*

Parameters for Qualtrics' Panel selection were presented in Section 6.5.1. For the purpose of sample description, participants were asked to provide basic demographic information. Twelve questions were included, consisting of single-response (selection via a radio button or drop down menu), or by way of a brief written response if the 'other' category was selected for a question (e.g., Marital Status, and Level of Education). A copy of the questionnaire is given in Appendix K. The demographic background of the sample is presented overleaf in Table 10. Analysis of sample characteristics, and comparison of demographic variables between contracted and non-contracted data, is presented in Chapter Seven (Section 7.3), and key characteristics of the entire sample are outlined below.

Participants were asked questions related to age, gender, and highest level of education. As the online questionnaire was not geographically limited to Australia (due to the global nature of the Internet), one question related to country of residence. The total sample of 180 participants consisted of 102 (56.7%) men and 76 (42.2%) women. One respondent identified as transgender, and one participant did not provide a response to the gender question. The mean age of the sample was 43.45 years ( $SD = 11.99$ ).

Overall, high levels of education were recorded. For example, over 50% of the sample reported having obtained a Bachelor or Postgraduate degree, and only two participants (1.1%) reported having no formal education. Participants were also asked a question relating to entrepreneur type and previous business experience. Entrepreneur type was determined via a single response question wherein participants were asked 'which of the following descriptions of entrepreneurs do you best identify with?' Response options (which included definitions of terms used) were as follows: 'Nascent entrepreneur' i.e., actively involved in setting up a business you will own or co- own; 'Startup entrepreneur' i.e., in the early stages of running your business; 'Small business owner'; 'Serial entrepreneur' i.e., multiple ventures operated one after another; 'Parallel entrepreneur' i.e., multiple ventures operated at the same time; and 'Other'. Previous entrepreneurship experience was determined by questions relating to the number of businesses currently and previously operated by the participant. Questions related to venture information included the size of the participant's venture (e.g., number of

employees, organisational income) and the number of sites at which their venture(s) operate.

*Table 10: Demographic Background of the Sample (Phase Two)*

Demographic variable	Category	Frequency	Valid percentage
Gender	Male	102	56.7%
	Female	76	42.2%
	Other	1	0.6%
	No response	1	
Entrepreneur type	Nascent entrepreneur	25	13.9%
	Startup entrepreneur	33	18.3%
	Small business owner	97	53.9%
	Serial entrepreneur	10	5.6%
	Parallel entrepreneur	15	8.3%
Number of businesses currently operated	0	1	0.6%
	1	148	82.2%
	2	19	10.6%
	3	4	2.2%
	4	6	3.3%
	5+	2	1.1%
Number of sites at which business operates	1	131	72.8%
	2	22	12.2%
	3	6	3.3%
	4	3	1.7%
	5	1	0.6%
	6	2	1.1%
	10+	14	7.8%
	No response	1	
Number previous businesses (not run at this time)	0	95	52.8%
	1	45	25.0%
	2	17	9.4%
	3	12	6.7%
	4	3	1.7%
	5+	7	3.9%
Highest level of education	No response	1	
	No formal education	2	1.1%
	High school	25	13.9%
	Vocational Education/TAFE certificate	51	28.3%
	Bachelor degree	55	30.6%
	Postgraduate degree	42	23.3%
Marital status	Other	5	2.8%
	Single	50	27.8%
	De facto	27	15.0%
	Married	92	51.1%
	Divorced	3	1.7%
	Other	1	0.6%
	No response	7	

One hundred and sixty-four participants recorded a response to the ‘annual organisational income’ question. Histograms were plotted and a positively skewed distribution was observed. The mean organisational income (in Australian dollars) was \$1,363,143 (95% CI \$504,886 to \$2,221,401). Several influential outliers were present in the data: five participants reported organisational income as \$12,000,000 or greater. Calculating the 5% trimmed mean (i.e., mean calculated after removal of the lowest and highest 5% of cases in the data) yielded an average organisational income of \$385,878.

Statistics on entrepreneur type showed that approximately 14% of the sample identified as a nascent entrepreneur. As outlined above, ‘nascent entrepreneur’ refers to being in the process of starting a business that the participant will run in the future. However, of these 14%, 22 participants reported operating one venture, and two participants indicated that they operated two or more ventures. With regard to the other response categories, just over half the sample identified as small business owners (53.9%), and approximately 14% identified as serial or parallel entrepreneurs. Just over 17% of the sample operated multiple businesses, and approximately 12% of the sample had previously run three or more ventures. For a predominant number of the sample, the current business was the first they had operated.

In addition to capturing demographic information for the purpose of sample description, the current research adopted measures of perceived stress, coping, trait time perspective and strain in order to investigate the effect of trait time perspective on coping, and potential buffering effects of coping strategies on the stressor-strain relationship in entrepreneurs. The next section presents each of these measures.

## 6.6 Measures

In the current study, stress was measured using the Perceived Stress Scale (PSS) (Cohen & Williamson, 1988). Coping was measured using the Brief COPE (Carver, 1997) as well as two scales in the Proactive Coping Inventory (PCI) (Greenglass et al., 1999): Proactive Coping and Preventative Coping. Three scales from the Zimbardo Time Perspective Inventory (ZTPI) (Zimbardo & Boyd, 1999) provided measures of trait future time perspective (Future scale) and trait present time perspective (inclusive of Present Fatalistic and Present Hedonistic scales). These research instruments are

discussed in turn in the proceeding sections, and summarised at the conclusion of this section in Table 12.

#### 6.6.1 *Perceived Stress Scale (PSS)*

The Perceived Stress Scale (PSS10) (Cohen & Williamson, 1988) was used to measure an individual's perception of stress, specifically "the perceived degree to which environmental demands exceed abilities to cope" (Cohen & Williamson, 1988 p.37). The measure comprises 10-items of the original 14-item measure developed by Cohen, Kamarck and Mermelstein (1983), and is accordingly referred to as the PSS10. The measure is included in Appendix K. The 10-item version was used with the aim of minimising response fatigue.

When completing the PSS10, participants are asked to rate how often they felt a certain way using a 5-point Likert scale ranging from 'never' to 'very often'. An example question includes: "In the last month, how often have you felt that you were unable to control the important things in your life?" When computing scores for this measure four items are reverse scored. An example of a reverse scored question is: "In the last month, how often have you felt that you were on top of things?"

Unlike earlier scales, such as the Social Rating Readjustment Scale (Holmes & Rahe, 1967), wherein questions prescribed and attributed weightings to potentially stressful events (e.g., 'death of a spouse', or 'fired at work'), the PSS asks general questions. Given this, Cohen and Williamson (1988) maintain that the PSS captures stress arising from both acute and chronic stressors, is not specific to any one sub-population (e.g., married and employed), and accounts for individual appraisal. The PSS is purported to be useful when investigating relationships between appraised stress and personality factors (Cohen et al., 1983; Cohen & Williamson, 1988). Furthermore, Cohen and Williams found PSS scores to be more predictive of physical symptomology than life-event scores (Cohen et al., 1983).

Cohen and Williams (1988) found the PSS10 to have good internal consistency reliability, with a Cronbach's alpha coefficient (Cronbach, 1951) ( $\alpha$ ) of .78. Reliability of the original PSS was shown to be greater than .80 (Cohen et al., 1983). Previous



adoption of the PSS10 in entrepreneurship research has revealed good internal consistency: Baron et al. (2016) reported  $\alpha = .84$ , and Kariv (2012) reported  $\alpha = .76$ . The reliability of the PSS in the current research is presented in Section 7.7.

### 6.6.2 *Brief COPE*

The Brief COPE (dispositional format) (Carver, 1997) was adopted to assess coping behaviours. The 28-item measure represents an abridged version of the 60-item COPE Inventory (Carver et al., 1989). The COPE Inventory is an established measure shown to have sound validity (Carver et al., 1989; Cook & Heppner, 1997). The Brief COPE, rather than the full COPE Inventory, was used in the current research in order to minimise participant response fatigue. A copy of the Brief COPE is provided in Appendix K.

The Brief COPE (Carver, 1997) measures coping behaviours according to the following 14 subscales (2-items per subscale): Active Coping (e.g., I concentrate my efforts on doing something about the situation I'm in), Planning (e.g., I try to come up with a strategy about what to do), Positive Reframing (e.g., I look for something good in what is happening), Acceptance (e.g., I accept the reality of the fact that it has happened), Humour (e.g., I make fun of the situation), Religion (e.g., I try to find comfort in my religion or spiritual beliefs), Using Emotional Support (e.g., I get comfort and understanding from someone), Using Instrumental Support (e.g., I try to get advice or help from other people about what to do), Self-Distraction (e.g., I turn to work or other activities to take my mind off things), Denial (e.g., I refuse to believe that it has happened), Venting (e.g., I say things to let my unpleasant feelings escape), Substance Use (e.g., I use alcohol or other drugs to make myself feel better), Behavioural Disengagement (e.g., I give up trying to deal with it) and Self-Blame (e.g., I blame myself for things that happen). A dispositional format (as used in the current research) is achieved by asking participants to respond to items according to what they *usually* do, rather than what they are currently doing. Respondents are required to rate each item on a 4-point scale, ranging from "I usually don't do this at all" to "I usually do this a lot".

Compared to the COPE Inventory, the Brief COPE omits two scales (Restraint Coping and Suppression of Competing Activities), Positive Reframing replaced Positive Reinterpretation and Growth, Venting replaced Focus on Venting of Emotions, and Self-Distraction was formerly titled Mental Disengagement. Self-Blame (not previously included in the COPE Inventory) was added to reflect the presence of self-blaming tendencies as used in practice.

Internal consistency reliability is reported by Carver (1997) as follows: Active Coping ( $\alpha = .68$ ), Planning ( $\alpha = .73$ ), Positive Reframing ( $\alpha = .64$ ), Acceptance ( $\alpha = .57$ ), Humour ( $\alpha = .73$ ), Religion ( $\alpha = .82$ ), Using Emotional Support ( $\alpha = .71$ ), Using Instrumental Support ( $\alpha = .64$ ), Self-Distraction ( $\alpha = .71$ ), Denial ( $\alpha = .54$ ), Venting ( $\alpha = .50$ ), Substance Use ( $\alpha = .90$ ), Behavioural Disengagement ( $\alpha = .65$ ), and Self-Blame ( $\alpha = .69$ ). Reliability of Brief COPE subscales for the current research is reported and further discussed in Section 7.7.

### 6.6.3 *Proactive Coping Inventory (PCI)*

Future-oriented coping behaviours were measured in the current study using two subscales from the Proactive Coping Inventory (PCI) (Greenglass et al., 1999): Preventative Coping and Proactive Coping. Preventative Coping measures coping behaviours enacted in anticipation of future stressors for the purpose of minimising potential negative outcomes. This scale is reflective of Aspinwall and Taylor's (1997) conceptualisation of anticipatory coping as discussed in Section 2.6.1. Proactive Coping measures anticipatory coping behaviours, which are prefaced by the expectation of a potentially positive outcome and reflective of Schwarzer and Taubert's (2002) definition of anticipatory coping (also discussed in Section 2.6.1). Both scales are presented in Appendix K.

When completing the Preventative Coping and Proactive Coping scales, participants are asked to respond to a number of statements according to how true each statement is for them. Responses are made using a 4-point scale ranging from "not at all true" to "completely true". The Preventative Coping scale comprises 10 items and the Proactive Coping scale comprises 14 items. Examples include: 'Rather than spending every cent I make, I like to save for a rainy day' (Preventative Coping), and 'I am a "take charge"

person' (Proactive Coping). Three items in the Proactive Coping scale are reverse scored (e.g., I try to let things work out on their own).

The full version of the Proactive Coping Inventory (PCI) (Greenglass et al., 1999) includes seven scales (total of 55 items). PCI scales not used in the current study include: Reflective Coping, Strategic Planning, Using Instrumental Support Seeking, Using Emotional Support Seeking, and Avoidance Coping. These scales were omitted from investigation as only the Preventative and Proactive Coping scales have shown adequate validity as future-oriented measures (see Gan et al., 2007).

Preventative Coping and Proactive Coping scales have been shown to have high internal consistency ( $\alpha > .80$ ) (Gan et al., 2007; Greenglass et al., 1999; Sohl & Moyer, 2009). Cronbach's alpha coefficients for the current study are reported in Section 7.7.

In relation to construct validity, the two scales (Preventative and Proactive Coping scales) were found to associate with other measures as expected. For example, Greenglass et al. (1999) report Preventative and Proactive Coping to positively correlate with Peacock and Wong's (1990) measure of Preventative Coping ( $r = .38$  and  $.53$  respectively). Proactive Coping was shown to positively correlate with measures of Proactive Attitude (Schwarzer, 1999) ( $r = .73$ ). Furthermore, Greenglass et al. reported correlation coefficients (at  $p < .001$ ) between the two PCI scales and several Brief COPE scales in a Canadian sample ( $N = 248$ ). Preventative Coping positively correlated with Active Coping and Planning ( $r = .30$  and  $.42$  respectively). Proactive Coping positively correlated with Active Coping, Positive Reframing, and Planning ( $r = .52$ ,  $.28$  and  $.42$  respectively). A negative correlation was found between Proactive Coping and two Brief COPE subscales: Denial and Behavioural Disengagement ( $r = -.31$  and  $-.42$  respectively). Other studies have shown Proactive Coping to negatively correlate with depression (Almássy, Pék, Papp, & Greenglass, 2014; Gan et al., 2007; Greenglass, Fiksenbaum, & Eaton, 2006) and positively correlate with psychological well-being (Greenglass et al., 2006; Greenglass & Fiksenbaum, 2009; Sohl & Moyer, 2009; Uskul & Greenglass, 2005). To a lesser degree, Preventative Coping has also been shown to negatively correlate with depression (Gan et al., 2007). Gan et al. (2007) found Proactive Coping to fully mediate the relationship between stress and engagement.

#### 6.6.4 *Zimbardo Time Perspective Inventory (ZTPI)*

To measure an individual's trait time perspective, three scales in the Zimbardo Time Perspective Inventory (ZTPI) (Zimbardo & Boyd, 1999) were used: Present Hedonistic i.e., a risk taking, hedonistic approach to time and life; Present Fatalistic i.e., a hopeless view of the future and life; and Future i.e., an orientation towards the future. The items in these three scales cumulatively represent 37 of the 56 items comprising the full version of the ZTPI. The full version of the ZTPI includes two additional scales: Past Negative and Past Positive. The decision to omit these two scales from the current research was made in light of these having a past orientation; the current study is focused on investigating coping as a reactive i.e., present-oriented and anticipatory i.e., future-oriented process.

When completing the three scales (Present Hedonistic, Present Fatalistic and Future) in the ZTPI, participants were asked "How characteristic or true is this of me?" and responded to each item using a 5-point Likert scale (1 = very uncharacteristic, 5 = very characteristic). Example items include: "I do things impulsively" (Present Hedonistic), "Since whatever will be will be, it doesn't really matter what I do" (Present Fatalistic), and "When I want to achieve something, I set goals and consider specific means for reaching those goals" (Future). Three items in the Future scale were reverse scored (e.g., If things don't get done on time, I don't worry about it).

Zimbardo and Boyd (1999) reported Cronbach's alpha coefficients of .79 (Present Hedonistic), .74 (Present Fatalistic), and .80 (Future). When the ZTPI has been used in entrepreneurship research, similar Cronbach's alpha coefficients have been reported, for example .81 (Present Hedonistic), .72 (Present Fatalistic), and .76 (Future) (Przepiorka, 2015).

The ZTPI (Zimbardo & Boyd, 1999) has been shown to correlate in an expected manner with the Consideration of Future Consequences Scale, which measures "the extent to which people consider distant versus immediate consequences" (Strathman et al., 1994 p.742). Consideration of Future Consequences correlated positively with Future ( $r = .52, p < .001$ ), and negatively with Present Hedonistic ( $r = -.31, p < .001$ ) and Present Fatalistic ( $r = -.55, p < .01$ ).

### 6.6.5 Maslach Burnout Inventory – General Survey (MBI-GS)

Strain was operationalised in the current research as ‘burnout’ (as discussed in Section 2.3) and measured using the Maslach Burnout Inventory – General Survey (MBI-GS) (Schaufeli et al., 1996). The MBI-GS measures an individual’s propensity to burnout along an engagement-burnout continuum, and contains three scales: Exhaustion, Cynicism, and Professional Efficacy. The three scales represent the following continuums: exhaustion–energy, cynicism–involvement, and inefficacy–efficacy. The MBI-GS charts an individual’s position along these three continuums, rendering a three-dimensional perspective of one’s strain relationship with their work.

Participants are provided with statements and asked to decide if, and how frequently, they feel the way described in relation to their job. Examples of statements include: ‘I feel used up at the end of the workday’ (Exhaustion), ‘I have become less enthusiastic about my work’ (Cynicism), and ‘I have accomplished many worthwhile things in this job’ (Professional Efficacy). Responses are made using a 7-point Likert scale, ranging from ‘never’ (1) to ‘every day’ (7). The 16-item measure comprises; five items for Exhaustion, five items for Cynicism, and six items from Professional Efficacy. Scores may be interpreted as indicated in Table 11.

*Table 11: Recommended Interpretation of the MBI-GS (Maslach et al., 2010)*

Scale	Low	Medium	High
Exhaustion	0-7	8-15	16 or over
Cynicism	0-5	6-12	13 or over
Professional Efficacy	0-23	24-29	30 or over

Maslach et al. (2010) reported that the MBI-GS has good internal consistency reliability, with Cronbach’s alpha coefficients of .89 for Emotional Exhaustion, .80 for Cynicism, and .76 for Professional Efficacy. The handful of studies that have used the MBI-GS in entrepreneurship research (e.g., Rubino, Luksyte, Perry, & Volpone, 2009; Shepherd et al., 2010) also report good reliability ( $\alpha > .70$ ). Additionally, Wei et al. (2015) found good reliability across the three scales ( $\alpha > .82$ ) when they adopted a

modified version of the MBI-GS which replaced general descriptions with language specific to entrepreneurs e.g., ‘I get frustrated when I can’t achieve my *entrepreneurial* goals’. Cronbach’s alpha coefficients for the current research are reported in Section 7.7. A summary of measures for the current phase of the research program is shown overleaf in Table 12.

In summary, the variables of interest were measured in the current research using established measures. An individual’s perception of stress was measured using the Perceived Stress Scale (Cohen & Williamson, 1988). Functional coping was measured using the Brief COPE (Carver, 1997). Future-oriented coping was measured using two scales in the Proactive Coping Inventory (Greenglass et al., 1999): Preventative Coping and Proactive Coping. Trait time perspective was measured using three scales in the Zimbardo Time Perspective Inventory (Zimbardo & Boyd, 1999): Present Hedonistic, Present Fatalistic, and Future. Burnout was measured using the Maslach Burnout Inventory – General Survey (Maslach et al., 2010). In addition to using these established measures, demographic data was collected using locally developed measures relating to entrepreneurs personal and venture characteristics. The next section provides an overview of procedure for Phase Two.

### **6.7 Overview of Procedure for Phase Two**

Data collection commenced after ethical approval was obtained from Swinburne University Human Research Ethics Committee (SUHREC). Approval and amendment confirmation documentation (for addition of Qualtrics panel surveys) from SUHREC can be found in Appendix M.

The questionnaire was hosted on Qualtrics’ online survey platform, via a user license from Swinburne University of Technology’s Faculty of Health, Arts, and Design. The survey was created in November 2015, and was accessible by potential participants from late November 2014 through to June 2015.

*Table 12: Summary of Measures for the Current Phase*

Measure	Number of items	Range
Perceived Stress Scale (PSS10) (Cohen & Williams 1988)	10	0-4 (never to very often)
Brief COPE (Carver 1997)		1-4 (I haven't been doing this at all to I've been doing this a lot)
Self-Distraction	2	
Active coping	2	
Denial	2	
Substance Use	2	
Using Emotional Support	2	
Using Instrumental Support	2	
Behavioural Disengagement	2	
Venting	2	
Positive Reframing	2	
Planning	2	
Humour	2	
Acceptance	2	
Religion	2	
Self-Blame	2	
Proactive Coping Inventory (PCI) (Greenglass et al., 1999)		1-4 (not at all true to completely true)
Proactive Coping	14	
Preventative Coping	10	
Zimbardo Time Perspective Inventory (ZTPI) (Zimbardo & Boyd 1999)		1-5 (very uncharacteristic to very characteristic)
Future	13	
Present Hedonistic	15	
Present Fatalistic	9	
Maslach Burnout Inventory – General Survey (MBI-GS) (Schaufeli et al., 1996)		0-6 (never to every day)
Exhaustion	5	
Cynicism	5	
Professional Efficacy	6	

The questionnaire commenced with the Participant Consent Information Statement (see Appendix I). To continue to the main questionnaire, participants were asked to indicate that they had read the information in the Participant Consent Statement and agreed to continue with the questionnaire. Participants who selected 'No, I don't agree' were presented with the last page of the survey containing the debriefing statement and subsequently exited the questionnaire. Participants who selected 'Yes, I agree' were permitted to continue the questionnaire. Questions relating to the following themes were displayed in the same order to all participants as follows: demographic information (Section 6.5.4), perceived stress (Section 6.6.1), functional coping (Section 6.6.2), future-oriented coping (Section 6.6.3), trait time perspective (Section 6.6.4), and burnout (Section 6.6.5). A copy of the questionnaire is provided in Appendix K.

As outlined in Section 6.5.2, data were collected from two samples: Sample 1 (non-contracted) and Sample 2 (contracted). For data collected for Sample 1, participants were recruited from the researcher's professional network. Individuals were approached (online or via the telephone) and provided with an explanation of the research. Those wishing to participate were electronically sent a link to the online questionnaire, which included the Participant Consent Information Statement (refer to Appendix I). The researcher knew some participants, however, the questionnaire was anonymous and emphasised that participation was voluntary. At no point in the questionnaire was the participant asked to disclose their identity e.g., name, email address or other identifying information. Where self-selective sampling was used, links to the questionnaire were posted on the personal profile of the researcher on social media sites (e.g., Facebook, Twitter and LinkedIn). Posts describing the questionnaire included a brief description of the research project and a link to the online questionnaire (refer to Appendix F). Individuals who saw these posts could click on a link to the questionnaire to learn more (by reading the Participation Consent Information) and the individual could then self-select into the questionnaire if they desired.

Data collection for Sample 2 was contracted to Qualtrics' Panel Management Service (as outlined in Section 6.5.2). Over a seven-day period, Qualtrics' panel management service invited potential participants (meeting the sampling criteria) who were registered on the company's database as being interested in completing survey-based



research, to take part in the study. As surveys were completed, data became accessible to the researcher, allowing her to monitor responses throughout the data collection process.

Upon an adequate (researcher specified) number of responses being obtained by Qualtrics' Panel Management Service (see Section 6.5.3), the survey was closed. The raw survey data was then downloaded as a *.sav* file, allowing for analysis of the data using IBM SPSS Statistics Version 23.

## **6.8 Chapter Summary**

In summary, this chapter outlined the research methodology informing Phase Two of the current research. Phase Two was quantitative in nature. A self-administered online questionnaire was used for data collection. In addition to demographic questions, the questionnaire included established measures of perceived stress, coping, time orientation and burnout. One hundred and eighty usable responses were collected. The next chapter presents the results obtained from analysis of these data.

## CHAPTER 7: PHASE TWO ANALYSIS AND RESULTS

## 7.1 Chapter Introduction

This chapter presents the analyses and results for Phase Two of the current research. Section 7.2 provides an overview of data analyses, Section 7.3 outlines the data screening process, Section 7.4 presents a comparison of data obtained from the two sampling techniques used (outlined in Chapter Six), and Section 7.5 reports an analysis of missing values. The distribution of data for the complete data set and reliability of scale measures used in the current study are reported in Sections 7.6 and 7.7 respectively. The main analyses that addressed the research aims and hypotheses for Phase Two are reported in Section 7.8 and are ordered according to four themes: (a) exploring function-oriented coping typologies, (b) investigating time-oriented coping typologies, (c) the role of trait time perspective in the stress-strain process, and (d) predictors of burnout. The structure of this chapter is outlined in Figure 14.

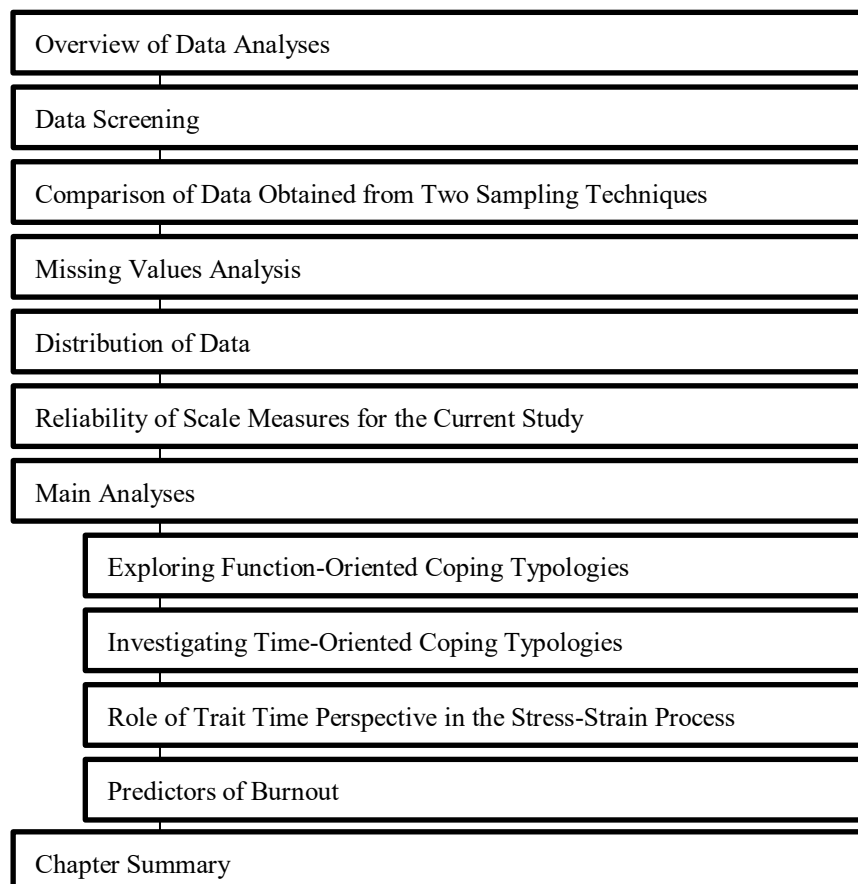


Figure 14: Chapter Seven Overview

## 7.2 Overview of Data Analyses

As presented in Chapter Five, the overarching aims of Phase Two were (a) to investigate coping as a function- and time-oriented process, and (b) to investigate trait time perspective as an influencing variable in the stress-strain process. The specific aims and hypotheses for Phase Two were outlined in Table 13. As outlined in Chapter Six, data was obtained from a sample of 180 entrepreneurs, who participated in a self-administered online questionnaire. Data were analysed using several data analysis techniques, including: exploratory factor analysis, and regression analysis. Each is outlined below.

### 7.2.1 *Exploratory Factor Analysis*

Exploratory factor analysis is a suitable technique when the researcher wishes to determine underlying structure (i.e., factors of a construct) and/or theoretical development (Tabachnick & Fidell, 2013). In the current research, exploratory factor analysis was used to investigate functional coping at a typological level; data collected using a measure of functional coping (Brief COPE Carver, 1997) was assessed to determine underlying constructs (that were not measured directly) in the current sample of entrepreneurs. The method used to conduct an exploratory factor analysis is detailed in Section 7.8.1.

### 7.2.2 *Regression analyses*

Moderated regression analysis was used to investigate whether functional aspects of coping increase or decrease (i.e., moderate) the effect of stress on burnout in the current sample of entrepreneurs. In moderated regression analysis, a moderation effect is found when there is a change in the relationship between two variables (X and Y) as a function of another variable (M) (Baron & Kenny, 1986). In the current study, investigation proceeded using combinations of Perceived Stress as the predictor variable, the three dimensions of burnout (Exhaustion, Cynicism, and Professional Efficacy) as the outcome variable, and dimensions of coping (functional and time-oriented) as the moderator variable. Moderated regression analysis, as used in the current study, is detailed in Section 7.8.2.

Mediated regression analysis was used to investigate whether a predictor variable (X) had an indirect effect on an outcome variable (Y) through a mediator variable (M) (Preacher & Hayes, 2004, 2008). In the current study, coping (functional and time-oriented) represented the predictor variable, dimensions of burnout represented the outcome variable, and trait time perspective represented the mediator variable. The method of mediated regression analysis is detailed in Section 7.8.6.

Data analysis was carried out using IBM SPSS Statistics Version 23. Prior to the main analyses (presented in Section 7.8) a data screening process was undertaken, as described next.

### **7.3 Data Screening**

The final data set consisted of 180 usable cases. Of these, 34 cases were from the data collected by the researcher (i.e., non-contracted data), and 146 were from the data collected by Qualtrics (i.e., contracted data). The sampling framework for this phase of the research was outlined in Section 6.5.

Unusable cases, that did not form part of the final data set, were excluded via a data screening process as described next. Firstly, two cases were excluded due to the participant selecting 'no' when asked to confirm they had read and agreed to the Consent Information Statement (Appendix D) at the beginning of the questionnaire. Despite selecting 'no', these participants completed the questionnaire. Secondly, four cases were excluded due to participants indicating that they did not reside in Australia. A further four cases were excluded due to not specifying 'Entrepreneur type'. Where no category of entrepreneur type was selected, the researcher concluded that these participants were not entrepreneurs. Lastly, four cases were deemed by the researcher to be 'patterned', e.g., all responses recorded in the third response category column, and were therefore removed.

In summary, after excluding ineligible cases, data collection efforts yielded 180 usable responses. Statistical analysis proceeded using only these cases, is described below in Section 7.4.

#### 7.4 Comparison of Demographic Variables: Contracted and Non-Contracted Data

This section presents the statistical analyses that were carried out to determine whether data collected by the researcher (i.e., non-contracted data,  $N = 34$ ) and data collected by Qualtrics (i.e., contracted data,  $N = 146$ ) could be considered a single sample and therefore aggregated, prior to conducting the main analyses (presented in Section 7.8). The chi-square test of independence was used to test whether there were statistically significant differences in the categorical variables for the two data collection modes. The Mann-Whitney  $U$  test was used to test whether there were statistically significant differences in the numeric variables for the two data collection modes. Results of these analyses are reported below.

The chi-square test of independence (with  $\alpha = .05$ ) was not significant for Gender. However, it was significant for Marital Status  $\chi^2(4, N = 173) = 14.278, p = .006$ , Entrepreneur Type  $\chi^2(4, N = 180) = 39.655, p < .001$ , and Highest Level of Education  $\chi^2(5, N = 180) = 28.00, p < .001$ . Results are summarised in Table 13.

Table 13: Comparison of demographic variables - Chi-Square test results

Variable	$n$	$df$	$\chi^2$	Significance
Gender <sup>a</sup>	178	1	.916	.338
Marital Status	173	4	14.278	.006
Entrepreneur Type	180	4	39.655	$p < .001$
Highest Level of Education	180	5	28.00	$p < .001$

<sup>a</sup> Note. As only one participant identified their gender as 'other', this case was excluded from analysis.

Notable differences between groups are as follows. Firstly, a greater percentage of participants in the contracted data set identified as 'single' (33.1%) compared to participants in the non-contracted sample (11.8%). Secondly, participants in the non-contracted sample were more likely to report having run multiple ventures i.e., identified as serial or parallel entrepreneurs (44.1% compared to 6.9%). Participants in the contracted sample set were also more likely to identify as small business owners (63% compared to 14.7%). Lastly, participants recruited by the researcher reported

significantly higher levels of education (i.e., were more likely to have a postgraduate degree) than participants in the contracted sample.

A Mann-Whitney  $U$  test was used to investigate group differences in the following demographic variables: Age, Number of Businesses Operated, Number of Employees, and Number of Previous Businesses. Results were not significant for the following variables: Age, Number of Employees, and Number of Previous Businesses. The Mann-Whitney  $U$  test indicated that the Number of Businesses Operated was significantly higher in non-contracted data ( $Mean Rank = 100, N = 34$ ) than in the contracted data ( $Mean Rank = 73.20, N = 123$ ),  $U = 1377, z = -4.331$  (corrected for ties),  $p < .001$ , two tailed. Results are summarised in Table 14.

Table 14: Group Comparison of Demographic Variables - Mann-Whitney  $U$  Test Results

Variable	Data Collection Group	$N$	Mean Rank	Mann-Whitney $U$	Z Score	Significance (two-tailed)
Age	Non-Contracted	34	79.60	2111.500	-1.355	.176
	Contracted	146	93.04			
Number of Businesses Operated	Non-Contracted	34	100	1377.000	-4.331	$p < .001$
	Contracted	123	73.20			
Number of Employees	Non-Contracted	33	85.70	2267.000	-.541	.589
	Contracted	146	90.97			
Number of Previous Businesses	Non-Contracted	33	76.09	1950.000	-1.870	.061
	Contracted	146	93.14			

In summary, significant differences existed between contracted and non-contracted data for the following variables: Marital Status, Entrepreneur Type, Highest Level of Education, and Number of Businesses Operated. Given that an individual's level of education is related to their temporal profile (Zimbardo & Boyd, 1999), which is a key variable in the current study, the samples were not combined.

While acknowledging that a significant difference existed between the demographic profiles of the contracted and non-contracted data sets, further investigation was carried out to determine whether combining the samples might be justified on the grounds that an aggregated data set would be more representative of Australia's entrepreneurship population than either sample alone. To create a benchmark to which demographic

variables in the current study could be compared, the researcher attempted to collate sample statistics from industry reports and entrepreneurship stress and coping studies (see e.g., Clark, Eaton, Meek, Pye, & Tuhin, 2012; Davidsson et al., 2011; Rola-Rubzen, 2011). Findings from this investigation were largely inconclusive due, in part, to a lack of available studies of Australian entrepreneurs. The researcher was therefore unable to make a meaningful comparison and this line of enquiry was abandoned.

In conclusion, given the results of the chi-square and Mann-Whitney *U* tests, data collected from the two sampling modes could not be considered to represent a single sample. The samples were therefore not combined. An a priori power analysis (Gpower: Faul, Erdfelder, Lang, & Buchner, 2007) indicated that a sample size of 34 was not sufficient to obtain a desired level of statistical power (0.80, as per Cohen, 1992) to detect significant interaction effects in later analysis. The data from the non-contracted sample was therefore excluded from further analyses, resulting in a final sample of 146 cases, which was considered adequate for the planned analyses (Mundfrom, Shaw, & Ke, 2005).

### 7.5 Missing Value Analysis

Missing data in questionnaire-based research is considered common, and is attributed, in part, to participants accidentally missing questions or consciously choosing not to answer them (Field, 2013; Pallant, 2013). Bias due to missing data can be determined by considering the degree to which data is missing, and whether this missing data is 'patterned' i.e., not missing at random (Byrne, 2001). An analysis of missing data using SPSS, as conducted in the current research, is outlined below.

A Missing Values Analysis (MVA) was conducted to determine the amount of missing data in scale items. This occurred after items were reverse scored as required (refer to Appendix K). Results of the MVA showed all cases to have missing data of less than or equal to 5.2%. This is considered minimal and is unlikely to be problematic when interpreting results (Cohen & Cohen, 1983; Field, 2013; Tabachnick & Fidell, 2013). Based on the outcome of conducting Little's MCAR test (summarised overleaf in Table 15), it could be inferred that data was missing completely at random for the following scales/subscales: Perceived Stress Scale (PSS), Brief COPE subscales, Zimbardo Time

Perspective Inventory (ZTPI) subscales, Preventative Coping, Cynicism and Professional Efficacy. A non-significant result was obtained for these measures, indicating that data was missing completely at random and therefore the missing data did not represent an identifiable pattern. A significant result for Little's MCAR test was observed for Proactive Coping and Exhaustion, indicating that missing data for these measures was not missing completely at random. The percentage of missing data at item level for Proactive Coping and Exhaustion did not exceed 2.1%, and no cases had missing data greater than 5.2%.

*Table 15: Results of Little's MCAR Test for Measures Containing Missing Variables*

Scale	Chi-Square	df	Significance (two-tailed)
<b>PSS</b>	13.107	27	.989
<b>Brief COPE</b>			
Self-Distraction	.160	1	.689
Active Coping	.055	1	.814
Using Emotional Support	.107	1	.744
Using Instrumental Support	.058	1	.809
Positive Reframing	2.794	1	.095
Planning	1.108	2	.575
Acceptance	.461	1	.497
Religion	.048	1	.827
Self-Blame	1.327	1	.249
<b>PCI</b>			
Preventative Coping	35.334	36	.500
Proactive Coping	127.028	61	$p < .001$
<b>ZTPI</b>			
Present Hedonism	13.503	14	.487
Present Fatalistic	5.035	8	.754
Future	43.086	48	.674
<b>MBI-GS</b>			
Exhaustion	14.982	7	.036
Cynicism	1.795	4	.773
Professional Efficacy	7.772	10	.651

Expectation Maximisation (EM) method was considered a suitable method to use to input missing values in order to create a complete data set, owing to the pattern and percentage of missing data reported above (see Roth, 1994; Schlomer, Bauman, & Card,



2010). Methodological assessments of imputation techniques in health-based research (e.g., Pigott, 2001; Schafer & Graham, 2002; Shrive, Stuart, Quan, & Ghali, 2006) have shown EM to limit potential bias, when compared to techniques such as single-value imputation (e.g., mean substitution). EM was preferred, compared to techniques such as list-wise or pair-wise deletion, as it allows the maximum number of cases to be retained for analysis (Tabachnick & Fidell, 2013). With the exception of the PSS (which is a single scale measure) EM was conducted at subscale level with all predictor and outcome variables in the current study.

In summary, the percentage of missing data across the data set was considered minimal. EM was used to construct a ‘complete’ data set allowing for further analysis to take place.

## 7.6 Distribution of Data

Preliminary analyses of data were undertaken to assess whether statistical assumptions of linear regression (e.g., normality, linearity) were met in order to conduct further analysis (Field, 2013). Prior to these analyses being conducted, scale and subscale items were computed as recommended by the scale authors (refer to Appendix K).

### 7.6.1 *Univariate outliers*

It was not expected that univariate outliers (i.e., data points distant from other data points) due to data entry error would be present at item level as the data were collected electronically i.e., participants completed Likert-type scales using an online survey interface, and indicated their responses by clicking a radio button and data were subsequently imported into SPSS.

To identify potential univariate outliers at a variable level, histograms and boxplots were generated for all numeric outcome (e.g., Exhaustion, Cynicism, and Professional Efficacy) and predictor variables (e.g., Perceived Stress, Brief COPE subscales, Proactive Coping Inventory subscales, and Zimbardo Time Perspective Inventory subscales – Future, Present Fatalism, and Present Hedonism). Inspection of histograms and boxplots showed an absence of univariate outliers at subscale level for all variables

except Denial, Substance Use, Behavioural Disengagement, Proactive Coping, Preventative Coping, Present Hedonistic, Present Fatalistic, Future, and Professional Efficacy. Potential outliers in these variables occurred minimally (e.g., one or two outliers per subscale). Three cases contained potential outliers for three or more variables. Data pertaining to these cases was checked to ensure meaningful participant responses e.g., whether responses were similar across similar items (e.g., ‘I feel emotionally drained from my work’ and ‘I feel burned out from my work’). Inspection of these cases revealed problematic responses (i.e., inconsistent answering) for two participants. These two cases were subsequently removed.

The presence of univariate outliers was also examined at variable level by converting scores for each variable to z-scores, then checking for ‘extremes’ i.e., z-scores in excess of  $\pm 3.29$  ( $p < .001$ , two-tailed test) (Tabachnick & Fidell, 2013). Inspection of z-scores showed the presence of four potential outliers. These were identified in the following variables: Denial, Substance Use, Proactive Coping, and Present Hedonistic. The value of identified z-scores ranged between -3.74 and 3.38 and therefore could be considered to minimally exceed the suggested range of -3.29 to 3.29. Comparing the means and 5% trimmed means of these variables suggested minimal impact of potential outliers on means. The presence of some outliers in larger data sets is expected, and removal of potential outliers may reduce the ‘richness’ of data by removing valid opinions of respondents (Tabachnick & Fidell, 2013). As such, no additional cases were removed from the data set.

### 7.6.2 *Normality of the data*

The influence of outliers on the distribution of data for predictor and outcome variables was assessed through examining ‘symmetry’ i.e., skewness, and ‘peakedness’ i.e., kurtosis (Field, 2013). Skewness and kurtosis were assessed using visual and statistical tests. Visual tests were conducted through inspection of histograms, boxplots, and normal probability plots. Statistical tests included calculating values for skewness and kurtosis. Visual inspection of histograms showed that the majority of study variables were approximately normally distributed. Exceptions were as follows. A positive skew was observed in data for Denial, Substance Use, Behavioural Disengagement, and

Religion. A negative skew was observed in the data for Preventative Coping, and Professional Efficacy. These findings were confirmed by statistical tests. Standardised values of skewness and kurtosis were calculated for predictor and outcome variables by dividing the variables' skewness and kurtosis statistics by their respective standard error. For distribution to be considered normal, standardised values for skewness and kurtosis should be between -2.59 and +2.59 ( $p < .001$ ) (Tabachnick & Fidell, 2013). According to these conditions, skewness for all variables fell within a normal range except for the following: Religion, Denial Substance Use and Behavioural Disengagement were positively skewed, whilst Professional Efficacy, Preventative Coping, and Present Hedonistic were negatively skewed. Kurtosis was within a normal range for all variables except: Behavioural Disengagement and Present Hedonistic.

Summary statistics for skewness and kurtosis for predictor and outcome variables are provided overleaf in Table 16. Transforming positively and negatively skewed variables did not improve normality, and as such, variables remained untransformed for later analysis.

Departures from normality in data for the aforementioned variables were expected. For example, it was expected that participants would score high for Professional Efficacy due to entrepreneurs tending to have a strong belief in their vocational abilities (Chen, Greene, & Crick, 1998). Furthermore, positively skewed data for socially undesirable traits (e.g., Substance Use) was expected due to systematic underreporting of such traits in survey-based research (Dillman, 2014; Groves et al., 2013) (see Section 6.4). Lastly, a positive skew for Religion is congruent with previous research (see for example: Grant & Langan-Fox, 2006; O'Connor & O'Connor, 2003). Inspection of normal probability plots indicated no major deviations from normality, as determined by the presence of a reasonably straight line (Field, 2013; Pallant, 2013). Results of this visual test suggest an approximated normal distribution. The statistical tests performed are generally robust to minor departures from normality.

Table 16: Means, Standard Errors, Standard Deviations, Skewness and Kurtosis Statistics for Predictor and Outcome Variables

	Statistic	Mean Std. Error	Std. Deviation Statistic	Skewness Statistic	Kurtosis Statistic
<b>PSS</b>	16.380	0.567	6.799	-0.127	-0.313
<b>Brief COPE</b>					
Self-Distraction	4.815	0.136	1.629	0.039	-0.679
Active	5.639	0.132	1.589	-0.152	-0.684
Denial	3.160	0.122	1.461	1.041	0.055
Substance Use	2.917	0.125	1.503	1.472	1.009
Using Emotional Support	4.470	0.131	1.576	0.346	-0.355
Using Instrumental Support	4.459	0.136	1.629	0.339	-0.371
Behavioural Disengagement	3.201	0.121	1.456	1.215	1.105
Venting	4.382	0.122	1.463	0.413	-0.379
Positive Reframing	5.214	0.135	1.624	-0.013	-0.608
Planning	5.710	0.131	1.576	0.016	-0.962
Humour	4.604	0.136	1.627	0.335	-0.574
Acceptance	5.787	0.127	1.526	-0.273	-0.411
Religion	3.591	0.151	1.807	0.933	-0.080
Self-Blame	4.365	0.145	1.744	0.513	-0.433
<b>PCI</b>					
Proactive Coping	41.013	0.557	6.685	-0.294	0.714
Preventative Coping	30.145	0.474	5.690	-0.560	0.531
<b>ZTPI</b>					
Present Hedonistic	3.243	0.050	0.598	-0.511	1.505
Present Fatalistic	2.817	0.060	0.714	-0.119	-0.219
Future	3.637	0.044	0.523	0.012	-0.125
<b>MBI-GS</b>					
Exhaustion	13.253	0.683	8.197	0.293	-0.875
Cynicism	11.068	0.629	7.553	0.441	-0.570
Professional Efficacy	27.929	0.580	6.964	-0.888	0.190

Note.  $N = 144$ .

In summary, results of visual and statistical tests indicated that the data for the majority of study variables were relatively normally distributed, however, the assumption of linearity was not met. Given this, in the main analyses (Section 7.8) Spearman's rho was used to assess the size and direction of the relationship between variables of interest. Additionally, deviations from normality were not considered problematic in

relation to the planned factor analysis due to its robust nature (Allen, Bennett, & Heritage, 2014). The next section presents an investigation of the reliability of measures used in the current study.

### 7.7 Reliability of Scale Measures for the Current Study

Internal consistency reliability of scale measures used in Phase Two of the current research was determined by calculating Cronbach's alpha coefficients ( $\alpha$ ). Findings are presented below, and summarised overleaf in Table 17.

For the current data set ( $N = 144$ ), internal consistency reliability for the Perceived Stress Scale was found to be high ( $\alpha = .87$ ). This is consistent with previously research, as outlined in Section 6.6.1. Cronbach's alpha coefficients for Brief COPE subscales ranged from .52 to .94. Venting showed low reliability (.52) consistent with previously reported levels (e.g., .50 Carver, 1997). Self-Distraction showed lower reliability (.56) than previously reported (e.g., .71 Carver, 1997), however Cronbach's alpha coefficients for this subscale were consistent with occupational stress and coping research (see e.g., Grant & Langan-Fox, 2006). All other subscales exceeded .65 indicating good reliability, a finding which resembles Cronbach's alpha coefficients as reported in the COPE Inventory (Carver et al., 1989). Alpha coefficients for the Proactive Coping Inventory (PCI) were .90 for Preventative Coping and .87 for Proactive Coping. This is consistent with earlier research indicating high internal consistency for this scale, as discussed in Section 6.6.3. The three subscales of the Zimbardo Time Perspective Inventory used in the current study were also shown to have high internal reliability consistency. In the current study, Cronbach's alpha coefficients were: Present Hedonistic = .86, Present Fatalistic = .84, and Future = .82. Cronbach's alpha coefficients for the three dimensions of burnout were also high: Exhaustion  $\alpha = .94$ , Cynicism  $\alpha = .87$ , and Professional Efficacy  $\alpha = .88$ .

*Table 17: Cronbach's Alpha Coefficients for Scale Measures in the Current Study*

Measure	Cronbach's alpha coefficient
<b>PSS</b>	.87
<b>Brief COPE</b>	
Self-Distraction	.56
Active coping	.76
Denial	.73
Substance Use	.94
Using Emotional Support	.82
Using Instrumental Support	.81
Behavioural Disengagement	.79
Venting	.52
Positive Reframing	.81
Planning	.79
Humour	.79
Acceptance	.65
Religion	.89
Self-Blame	.81
<b>PCI</b>	
Proactive Coping	.87
Preventative Coping	.90
<b>ZTPI</b>	
Future	.82
Present Hedonistic	.86
Present Fatalistic	.84
<b>MBI-GS</b>	
Exhaustion	.94
Cynicism	.87
Professional Efficacy	.88

*Note.*  $N = 144$

In summary, results indicated sufficient reliability for all scales and subscales, with the exception of Venting and Self-Distraction. These scales were retained at this stage of analysis due to further investigation of the relevance of Brief COPE subscales for entrepreneurs, as presented in the main analysis (Section 7.8).

Thus far, this chapter has explained data screening procedures, presented a statistical comparison of data collected from the two sampling modes, explained the method used to input missing data, and explored the distribution of data. Additionally, it has presented an investigation of the reliability of scale measures used in the current research. The next section presents the main analyses, which address the research aims and hypotheses for Phase Two.

## **7.8 Main Analyses: Addressing the Research Aims and Hypotheses for Phase Two**

This section presents the main analyses for Phase Two, and is ordered as follows. Sections 7.8.1 and 7.8.2 present findings related to exploring function-oriented coping typologies, respectively exploring the factor structure of functional coping, and the functional aspects of coping that buffer the effect of stress on burnout in the current sample of entrepreneurs. Sections 7.8.3 and 7.8.4 present findings related to an investigation of time-oriented coping typologies, specifically, findings obtained from an investigation of (a) the size and direction of the relationship between future-oriented coping and dimensions of burnout, and (b) the buffering effect of future-oriented coping on the relationship between stress and strain. Sections 7.8.5 and 7.8.6 report findings related to the role of trait time perspective in the stress-strain process, and whether an entrepreneur's time perspective has implications for stress resistance by virtue of its effect on coping responses. Lastly, in Section 7.8.7, variables of interest in the current study are investigated as predictors of the three dimensions of burnout.

### *7.8.1 Addressing Research Aim 1: Exploring the factor structure of function-oriented coping typologies in a sample of entrepreneurs*

Exploratory factor analysis was used to assess the dimensionality of functional coping (cf. Brief COPE Carver, 1997) in the current data set. Prior to factor analyses, Mahalanobis distance statistics were computed for Brief COPE subscales. This was done for the purpose of detecting potential outliers, which might adversely influence regression estimates. All Brief COPE subscales were inputted as predictor variables, and Participant ID was used as a dummy outcome variable. Based on a criterion of  $\alpha = .001$  (Tabachnick & Fidell, 2013), two multivariate outliers were detected. To determine

whether these outliers would influence the final factor solution, two exploratory factor analyses were conducted: once with, and once without, the cases containing outliers. Owing to the outliers influencing the final factor solution these cases were excluded from further analysis, resulting in a data set of 142 cases.

As detailed in Section 6.6.2, the Brief COPE (Carver, 1997) measures functional coping behaviours according to 14 subscales: Active Coping, Planning, Positive Reframing, Acceptance, Humour, Religion, Using Emotional Support, Using Instrumental Support, Self-Distraction, Denial, Venting, Substance Use, Behavioural Disengagement, and Self-Blame. Subscale scores were the unit of analysis (Carver, 1997). After cases containing multivariate outliers were removed from the data set, inter-item correlations were examined to determine if any Brief COPE subscales were highly correlated. Correlations above .80 are deemed problematic (Tabachnick & Fidell, 2013). As shown overleaf in Table 18, no items correlated greater than .80. Several correlations in the correlation matrix were above .30, indicating suitability for factor analysis (Allen et al., 2014).

To ensure factorability of the dataset, the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity were conducted. The Kaiser-Meyer-Olkin value was .802, and a statistically significant result was observed for Bartlett's test of sphericity ( $p < .001$ ). These findings support the factorability of the dataset (Tabachnick & Fidell, 2013). The sample to item ratio was approximately 10:1.

Maximum likelihood was the method of extraction (as per 'best practice' approach recommendations of Costello & Osborne, 2005). Oblique rotation (direct oblimin) was the method of rotation, as is recommended for use with correlated psychological constructs (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Field, 2013).

Dimensionality was assessed through interpreting the output of the pattern matrix.

Taking sample size ( $N = 142$ ) into consideration, the factor loading criterion was set at  $\geq .40$  (Stevens, 2012), which is somewhat more conservative than the criterion suggested by Tabachnik and Fidell (2013) (i.e.,  $> .32$ ). Subsequently, one Brief COPE subscale (Humour) was eliminated from the initial solution due to low loading.



Table 18: Correlation Matrix of Brief COPE Subscales for the Current Data Set

Brief COPE Subscale	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 Self-Distraction	1													
2 Active Coping	<b>.34</b>	1												
3 Denial	<b>.25</b>	.01	1											
4 Substance Use	<b>.24</b>	.00	<b>.47</b>	1										
5 Using Emotional Support	<b>.34</b>	<b>.50</b>	.12	-.02	1									
6 Using Instrumental Support	<b>.38</b>	<b>.53</b>	<b>.23</b>	.11	<b>.74</b>	1								
7 Behavioural Disengagement	<b>.27</b>	<b>-.22</b>	<b>.58</b>	<b>.47</b>	.11	.11	1							
8 Venting	<b>.38</b>	<b>.21</b>	<b>.41</b>	<b>.27</b>	<b>.34</b>	<b>.39</b>	<b>.40</b>	1						
9 Positive Reframing	<b>.50</b>	<b>.58</b>	.12	.10	<b>.55</b>	<b>.56</b>	-.05	<b>.27</b>	1					
10 Planning	<b>.40</b>	<b>.77</b>	.00	-.06	<b>.37</b>	<b>.47</b>	-.18	<b>.27</b>	<b>.60</b>	1				
11 Humour	<b>.40</b>	<b>.36</b>	<b>.17</b>	<b>.17</b>	<b>.39</b>	<b>.43</b>	.10	<b>.25</b>	<b>.41</b>	<b>.28</b>	1			
12 Acceptance	<b>.31</b>	<b>.48</b>	-.14	.03	<b>.32</b>	<b>.28</b>	-.07	<b>.17</b>	<b>.46</b>	<b>.57</b>	<b>.23</b>	1		
13 Religion	<b>.27</b>	.14	<b>.18</b>	.11	<b>.44</b>	<b>.44</b>	<b>.22</b>	<b>.18</b>	<b>.39</b>	.16	<b>.28</b>	.15	1	
14 Self-Blame	<b>.42</b>	.08	<b>.36</b>	<b>.29</b>	<b>.18</b>	.14	<b>.44</b>	<b>.57</b>	<b>.21</b>	<b>.22</b>	<b>.20</b>	.16	.15	1

Note.  $N = 142$ .  $|r| \geq .17$  indicates  $p < .05$ ;  $|r| \geq .22$  indicates  $p < .01$ ;  $|r| \geq .29$  indicates  $p < .001$  and are bolded

In the refined factor solution, three factors were retained based on the following criteria. Firstly, examination of the scree plot (see Figure 15) showed clear departure after the third component, indicating a three-factor solution.

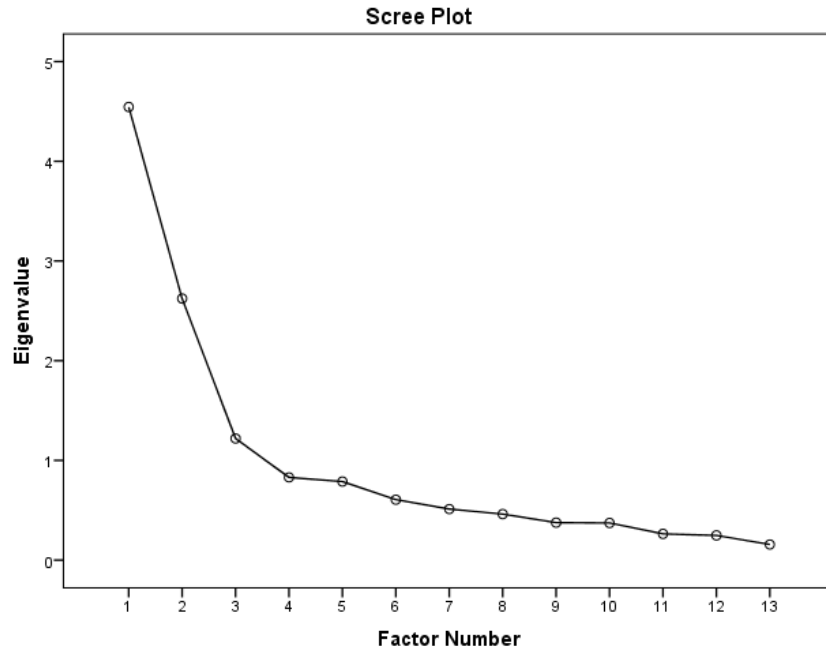


Figure 15: Scree Plot of Final Factor Solution of Functional Coping in the Current Study

Secondly, results of the factor analysis revealed the presence of three components with Eigenvalues greater than one (4.544, 2.623 and 1.220). Lastly, examination of the pattern matrix showed a three-factor structure based on the factor loading criterion of  $\geq .40$ . As outlined overleaf in Table 19, factor loadings ranged between .40 and .97 and the three factors explained 64.52% of the total variance: 34.96%, 20.18%, and 9.38% respectively.

Table 19: Rotated Factor (Simple) Structure of Brief COPE Subscales in the Current Sample of Entrepreneurs

Subscale	Loadings		
	Factor 1 <sup>a</sup>	Factor 2 <sup>b</sup>	Factor 3 <sup>c</sup>
Planning	.97		
Active Coping	.75		
Acceptance	.59		
Positive Reframing	.50		
Behavioural Disengagement		.77	
Denial		.67	
Self-Blame		.65	
Substance Use		.60	
Venting		.55	
Self-Distracton		.40	
Using Emotional Support			-.90
Using Instrumental Support			-.74
Religion			-.53
Percentage of Variance Explained	34.96%	20.18%	9.38%

Note. <sup>a</sup> = “External Coping”; <sup>b</sup> = “Internal Coping”; <sup>c</sup> = “Relational Coping”. Factor loadings < .4 have been suppressed.

All but one subscale (Self-Distracton) had primary loadings of .50 or greater. No subscale had cross-loadings greater than .40. Extracted communalities of the three-factor solution were greater than .20, indicating adequate conceptual fit (see Table 20).

Table 20: Communalities from Exploratory Factor Analysis with Direct Oblimin Rotation for a Three-Factor Structure of Coping in the Current Sample of Entrepreneurs

Subscale	Initial	Extraction
Self-Distracton	.409	.399
Active Coping	.694	.718
Denial	.484	.479
Substance Use	.334	.332
Using Emotional Support	.646	.796
Using Instrumental Support	.657	.711
Behavioural Disengagement	.571	.690
Venting	.466	.458
Positive Reframing	.584	.560
Planning	.713	.884
Acceptance	.416	.368
Religion	.311	.291
Self-Blame	.457	.442

Note. Extraction Method: Maximum Likelihood

The final factor solution resulted in thirteen (of the original fourteen) Brief COPE subscales loading on three factors. Four Brief COPE subscales loaded on factor one: Planning (.97), Active Coping (.75), Acceptance (.59), and Positive Reframing (.50). Six subscales loaded on factor two: Behavioural Disengagement (.77), Denial (.67), Self-Blame (.65), Substance Use (.60), Venting (.55), and Self-Distraction (.40). The remaining three subscales loaded on factor three: Using Emotional Support (-.90), Using Instrumental Support (-.74), and Religion (-.53). Correlations among factors are presented in Table 21.

*Table 21: Correlations Among Factors - Exploratory Factor Analysis with Direct Oblimin Rotation for a Three-Factor Structure of Coping in Entrepreneurs*

Factor	1	2	3
1	1.000		
2	.083	1.00	
3	-.485	-.317	1.00

*Note.* Extraction Method: Maximum Likelihood. Rotation Method: Oblimin with Kaiser Normalization.

The three final factors were labelled “External Coping”, “Internal Coping”, and “Relational Coping”. The first two factor labels are chosen in reference to the direction coping is oriented i.e., at the stressor to instigate change (external) or at one’s self to alleviate emotional distress (internal). “Relational” refers to interactions with other individuals (i.e., interpersonal) or things (e.g., a religious symbol) in response to a stressor.

To investigate the distribution of data in the final three factors, composite scores were calculated for each factor by summing scores for inclusive Brief COPE subscales: External Coping ( $M = 22.28$ ,  $SD = 5.20$ ), Internal Coping ( $M = 22.71$ ,  $SD = 6.37$ ), and Relational Coping ( $M = 12.49$ ,  $SD = 4.13$ ). Visual inspection of histograms generated for each factor indicated that the sample data were approximately normally distributed. Dividing skewness and kurtosis statistics by their respective standard error statistic revealed z-scores to fall within a range of  $\pm 3.29$ , indicating a reasonably normal distribution. Inspection of Normal Q-Q Plots further showed data points to cluster tightly around the diagonal line, thus confirming that the sample data for each factor were relatively normally distributed.

Internal reliability consistency for the three factors was determined by calculating Cronbach's alpha coefficients ( $\alpha$ ). Results of this analysis showed  $\alpha = .85$  for External Coping (4 subscales),  $\alpha = .79$  for Internal Coping (6 subscales) and,  $\alpha = .78$  for Relational Coping (3 subscales). Descriptive statistics for the three factors are presented in Table 22.

Table 22: Descriptive Statistics for the Three-Factor Structure of Coping in Entrepreneurs in the Current Study

Factor	Subscales	Mean	SD	Skewness		Kurtosis		$\alpha$
				Statistic	SD	Statistic	SD	
External Coping	4	22.28	5.20	-.081	.203	-.277	.404	.85
Internal Coping	6	22.71	6.37	.579	.203	.083	.404	.79
Relational Coping	3	12.49	4.13	.335	.203	-.406	.404	.78

Note.  $N = 142$

Once the three-factor structure of coping in the current sample of entrepreneurs was identified, correlation analysis was then used to investigate whether a significant relationship existed between functional coping strategies (External Coping, Internal Coping, Relational Coping) and (a) stress (Perceived Stress), and (b) burnout (Exhaustion, Cynicism, and Professional Efficacy).

Spearman's rho was used to assess the size and direction of the relationship between variables of interest owing to assumption of linearity not being met (see Section 7.6.2). Spearman's rho indicated External Coping to negatively correlate with Cynicism ( $r = -.24, p < .01$ ), and to positively correlate with Professional Efficacy ( $r = .43, p < .001$ ). External Coping failed to correlate significantly with Perceived Stress or Exhaustion. Internal Coping was found to positively correlate with Perceived Stress ( $r = .64, p < .001$ ), Exhaustion ( $r = .51, p < .001$ ), and Cynicism ( $r = .43, p < .001$ ) and negatively with Professional Efficacy ( $r = -.23, p < .01$ ). Relational Coping was shown to positively correlate with Perceived Stress ( $r = .17, p < .05$ ) and Exhaustion ( $r = .17, p < .05$ ), however this relationship was weak. Relational Coping did not correlate significantly with Cynicism ( $r = .08, p = .35$ ) or Professional Efficacy ( $r = -.01, p = .88$ ). Additionally, Perceived Stress was found to positively correlate with Exhaustion ( $r = .66, p < .001$ ) and Cynicism ( $r = .47, p < .001$ ), and negatively correlate with

Professional Efficacy ( $r = -.41, p < .001$ ). Results are summarised in Table 23, and further discussed in Chapter Eight.

*Table 23: Bivariate Relationship Between External Coping, Internal Coping, and Relational Coping and (a) Stress, (b) Exhaustion, (c) Cynicism, and (d) Professional Efficacy*

<i>Variable</i>	<i>External Coping</i>	<i>Internal Coping</i>	<i>Relational Coping</i>
Stress (PSS)	-.10	<b>.64</b>	<b>.17</b>
Exhaustion	-.12	<b>.51</b>	<b>.17</b>
Cynicism	<b>-.24</b>	<b>.43</b>	.08
Professional Efficacy	<b>.43</b>	<b>-.23</b>	-.01

*Note.*  $N = 142$ .  $|r| \geq .17$  indicates  $p < .05$ ;  $|r| \geq .23$  indicates  $p < .01$ ;  $|r| \geq .43$  indicates  $p < .001$  and are bolded

In summary, results of an exploratory factor analysis indicated a three-factor solution of coping in entrepreneurs for the current data set. The three factors were: External Coping (Planning, Active Coping, Acceptance, and Positive Reframing), Internal Coping (Behavioural Disengagement, Denial, Self-Blame, Substance Use, Venting, and Self-Distracted), and Relational Coping (Using Emotional Support, Using Instrumental Support, and Religion). Results of this analysis are discussed in Chapter Eight. In the next section, the above dimensions of functional coping (External Coping, Internal Coping, and Relational Coping) are used to address the second aim of the current research: to explore whether functional aspects of coping buffer the effect of stress on burnout.

*7.8.2 Addressing Research Aim 2: Exploring which functional aspects of coping buffer the effect of stress on burnout*

The second aim of Phase Two was to explore whether functional aspects of coping moderate (i.e., increase or decrease) the effect of stress on burnout in the current sample of entrepreneurs. This was investigated using moderated regression analysis.

‘Moderation’ refers to a change in the relationship between two variables (X and Y) as a function of another (i.e., moderator) variable (M) (Baron & Kenny, 1986). This relationship is illustrated overleaf in Figure 16, where X = predictor variable, M = moderator variable and Y = outcome variable.

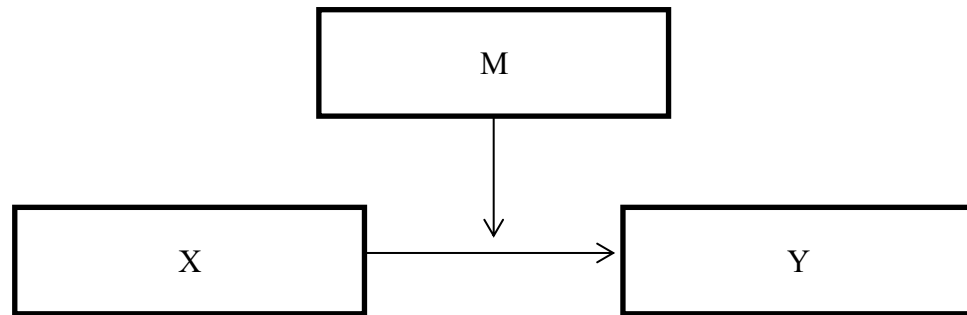


Figure 16: Conceptual Model of Moderation. Adapted from Hayes (2013)

In the current research, nine moderated regression analyses were conducted using combinations of the following variables:

- The predictor variable was (in all analyses) Perceived Stress
- Three potential moderator variables representing functional coping included External Coping, Internal Coping, and Relational Coping (as outlined in Section 7.8.1)
- Three outcome variables representing dimensions of burnout (Exhaustion, Cynicism, and Professional Efficacy)

Three separate analyses were conducted per outcome variable (in preference of including all moderators in one regression) due to low power. A summary of planned analyses is presented in Table 24.

Table 24: Summary of Planned Moderation Analyses

Predictor Variable	Moderator Variable	Outcome Variable
Perceived Stress	External Coping	Exhaustion
Perceived Stress	External Coping	Cynicism
Perceived Stress	External Coping	Professional Efficacy
Perceived Stress	Internal Coping	Exhaustion
Perceived Stress	Internal Coping	Cynicism
Perceived Stress	Internal Coping	Professional Efficacy
Perceived Stress	Relational Coping	Exhaustion
Perceived Stress	Relational Coping	Cynicism
Perceived Stress	Relational Coping	Professional Efficacy

As recommended by Cohen, Cohen, West, and Aiken (2013), prior to analyses, predictor and moderator variables were mean-centred to alleviate the problem of

multicollinearity and interaction terms (for functional coping and perceived stress) were calculated by multiplying the respective mean-centred values. XM represents the interaction effect, and is the part of the predictor variable (X) and moderator variable (M) that is independent of the main effects of X and M (see Hayes, 2013).

Moderated regression analyses were conducted such that:

- Model 1 included X and M as predictor variables and Y as the outcome variable, and
- Model 2 included X, M and XM as predictor variables and Y as the outcome variable.

A moderation effect was supported when a significant  $p$ -value was obtained for the interaction term (Model 2), and the value of Akaike's information criteria (AIC) decreased from Model 1 to Model 2 indicating improved model fit (Field, 2013). Where a moderation effect was supported a simple slopes analysis was conducted using the SPSS PROCESS macro (Preacher & Hayes, 2008) to determine the nature of the interaction (Aiken, West, & Reno, 1991).

#### *7.8.2.1 Investigating External Coping as a moderator of the stressor-strain relationship*

This section presents findings related to an investigation of External Coping as a moderator of the stressor-strain relationship. Three separate moderation analyses were conducted interchanging the three dimensions of burnout as the outcome variable. In all analyses, Perceived Stress represented the predictor variable, and External Coping represented the moderator variable.

#### ***External Coping, Perceived Stress and Exhaustion***

To test whether External Coping moderated the relationship between Perceived Stress and Exhaustion, External Coping and Perceived Stress were entered as predictor variables in Model 1, and External Coping, Perceived Stress and External Coping x Perceived Stress were entered as predictor variables in Model 2. Exhaustion was the outcome variable in both models. The interaction term was not significant ( $p = .598$ ), thus no support was found for a moderation effect. Results are summarised overleaf in Table 25.



Table 25: Summary of Regression Analysis for External Coping, Perceived Stress, and Exhaustion

	B(SE)	$\beta$	T	<i>p</i>	F	R <sup>2</sup>	Adj. R <sup>2</sup>	AIC
Model 1								
External Coping	-.04(.10)	-.02	-.38	.708				
Perceived Stress	.805(.08)	.65	10.11	<.001				
					51.93**	.43	.42	968.53
Model 2								
External Coping	-.05(.100)	-.03	-.45	.652				
Perceived Stress	.806(.08)	.65	10.10	<.001				
External Coping x Perceived Stress	-.25(.48)	-.03	-.53	.598				
					34.53**	.43	.42	909.00

Note. SE = Standard Error. \*\* *p* < .01

**External Coping, Perceived Stress and Cynicism**

Results of a moderated regression analysis investigating the potential moderating effect of External Coping on the relationship between Perceived Stress and Cynicism are summarised in Table 26. Results indicate support for a moderation effect, as the interaction term (External Coping x Perceived Stress) was significant (*p* = .019), and the AIC value decreased from Model 1 to Model 2.

Table 26: Summary of Regression Analysis for External Coping, Perceived Stress, and Cynicism

	B(SE)	$\beta$	T	<i>p</i>	F	R <sup>2</sup>	Adj. R <sup>2</sup>	AIC
Model 1								
External Coping	-.21(.10)	-.15	-2.03	.045				
Perceived Stress	.53(.08)	.47	6.41	<.001				
					23.94**	.26	.25	935.56
Model 2								
External Coping	-.25(.10)	-.18	-2.41	.018				
Perceived Stress	.53(.08)	.48	6.59	<.001				
External Coping x Perceived Stress	-1.15(.49)	-.17	-2.38	.019				
					18.38**	.29	.27	931.86

Note. SE = Standard Error. \*\* *p* < .01; \* *p* < .05

A simple slopes analysis was conducted to determine the nature of the interaction. Results are presented below and summarised in Figure 17. ‘Low’ refers to one standard deviation below the mean, ‘average’ refers to the mean, and ‘high’ indicates one standard deviation above the mean.

When External Coping is low, there is a significant positive relationship between Perceived Stress and Cynicism,  $b = 0.710$ , 95% CI [0.503, 0.916],  $t = 6.80$ ,  $p < .001$ . At the mean value of External Coping, there is a significant positive relationship between Perceived Stress and Cynicism,  $b = 0.534$ , 95% CI [0.387, 0.681],  $t = 7.19$ ,  $p < .001$ . When External Coping is high, there is a significant positive relationship between Perceived Stress and Cynicism,  $b = 0.359$ , 95% CI [0.169, 0.548],  $t = 3.74$ ,  $p < .001$ .

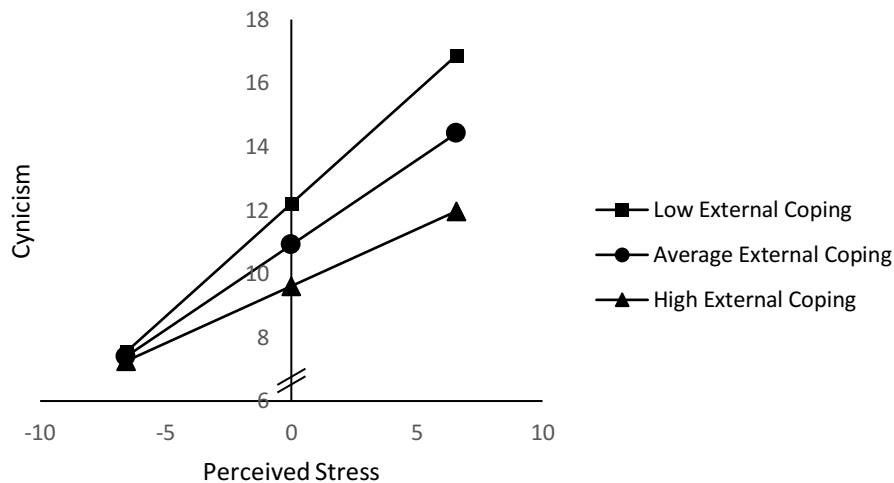


Figure 17: Simple slopes for predicting Cynicism at low (-1SD), medium, and high (+1SD) levels of Perceived Stress and External Coping

**External Coping, Perceived Stress and Professional Efficacy**

To investigate whether External Coping moderated the relationship between Perceived Stress and Professional Efficacy, Perceived Stress and External Coping were entered as predictor variables in Model 1, and Perceived Stress, External Coping, and Perceived Stress x External Coping were entered as predictor variables in Model 2. The interaction term (Perceived Stress x External Coping) was found to be significant ( $p = .002$ ), and the AIC value for Model 2 was less than for Model 1. Hence, support was found for a moderation effect. Results are summarised in Table 27.

Table 27: Summary of Regression Analysis for External Coping, Perceived Stress, and Professional Efficacy

	B(SE)	$\beta$	T	<i>p</i>	F	R <sup>2</sup>	Adj. R <sup>2</sup>	AIC
Model 1								
External Coping	.47(.09)	.36	5.02	<.001				
Perceived Stress	-.38(.07)	-.37	-5.17	<.001				
					28.41**	.29	.28	902.80
Model 2								
External Coping	.51(.09)	.40	5.62	<.001				
Perceived Stress	-.39(.07)	-.38	-5.42	<.001				
External Coping x Perceived Stress	1.36(.43)	.22	3.19	.002				
					23.57**	.34	.32	894.71

Note. SE = Standard Error. \*\* *p* < .01

The simple slopes analysis indicated a moderating effect of External Coping on the relationship between Perceived Stress and Professional Efficacy. Results are presented below and summarised in Figure 18. When External Coping is low, there is a significant negative relationship between Perceived Stress and Professional Efficacy,  $b = -0.592$ , 95% CI [-0.791, -0.393],  $t = -5.87$ ,  $p < .001$ . At the mean value of External Coping, there is a significant negative relationship between Perceived Stress and Professional Efficacy,  $b = -0.385$ , 95% CI [-0.503, -0.267],  $t = -6.46$ ,  $p < .001$ . When External Coping is high, there is a significant negative relationship between Perceived Stress and Professional Efficacy,  $b = -0.179$ , 95% CI [-0.314, -0.045],  $t = -2.63$ ,  $p = .010$ .

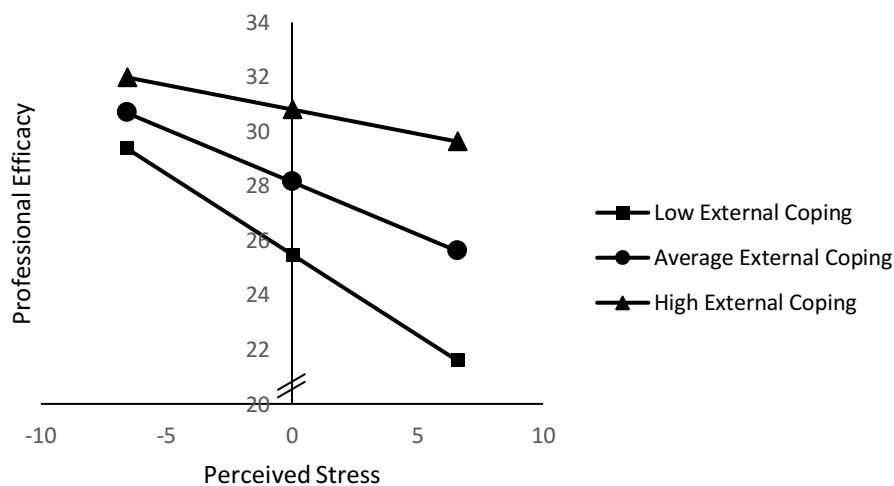


Figure 18: Simple slopes for predicting Professional Efficacy at low (-1SD), medium, and high (+1SD) levels of Perceived Stress and External Coping

In summary, the simple slopes analysis indicated External Coping to buffer the effect of Perceived Stress on burnout, such that (a) average and higher levels of External Coping were associated with lower levels of Cynicism (i.e., lower burnout) at average and high levels of Perceived stress, and Cynicism remained relatively stable for those who remained low on Perceived Stress, and (b) higher levels of External Coping were associated with higher levels of Professional Efficacy (i.e., lower burnout) at low, average and high levels of Perceived Stress.

#### 7.8.2.2 Investigating Internal Coping as a moderator of the stressor-strain relationship

This section presents findings obtained from an investigation of Internal Coping as a moderator of the stressor-strain relationship. Perceived Stress and Internal Coping were entered as predictor variables in Model 1, and Perceived Stress, Internal Coping and Perceived Stress x Internal Coping were entered as predictor variables in Model 2. Three separate moderated regression analyses were conducted with each of the dimensions of burnout interchanging as the outcome variable.

For Exhaustion, the interaction term was not significant ( $p = .565$ ). Similarly, no support was found to indicate that Internal Coping moderates the relationship between Perceived Stress and Cynicism (interaction term:  $p = .754$ ), nor the relationship between Perceived Stress and Professional Efficacy (interaction term:  $p = .714$ ). Results are summarised overleaf in Table 28.

Table 28: Summary of Regression Analysis for Internal Coping, Perceived Stress, and Burnout Dimensions

	B(SE)	$\beta$	T	<i>p</i>	F	R <sup>2</sup>	Adj. R <sup>2</sup>	AIC
<b>Internal Coping, Perceived Stress, and Exhaustion</b>								
Model 1								
Internal Coping	.22(.10)	.17	2.14	.034				
Perceived Stress	.67(.10)	.56	6.72	<.001				
					55.80**	.45	.44	958.71
Model 2								
Internal Coping	.24(.11)	.19	2.21	.029				
Perceived Stress	.66(.10)	.53	6.31	<.001				
Internal Coping x	-.31(.53)	-.04	-.58	.565				
					37.13**	.45	.44	761.10
<b>Internal Coping, Perceived Stress, and Cynicism</b>								
Model 1								
Internal Coping	.29(.11)	.25	2.70	.008				
Perceived Stress	.37(.10)	.33	3.53	.001				
					25.99**	.27	.26	974.92
Model 2								
Internal Coping	.30(.11)	.26	2.66	.009				
Perceived Stress	.36(.11)	.32	3.31	.001				
Internal Coping x	-.17(.55)	-.02	-.31	.754				
					17.25**	.27	.26	888.89
<b>Internal Coping, Perceived Stress, and Professional Efficacy</b>								
Model 1								
Internal Coping	.06(.11)	.06	.58	.560				
Perceived Stress	-.45(.10)	-.44	-4.40	<.001				
					13.58**	.16	.15	928.07
Model 2								
Internal Coping	.05(.11)	.05	.45	.651				
Perceived Stress	-.44(.11)	-.43	-4.13	<.001				
Internal Coping x	.20(.54)	.03	.37	.714				
					9.04**	.16	.15	824.43

Note. SE = standard error. \*\* *p* < .001

7.8.2.3 Investigating Relational Coping as a moderator of the stressor-strain relationship

No support was found for Relational Coping moderating the relationship between Perceived Stress and Exhaustion, nor that between Perceived Stress and Cynicism. In both instances, the interaction term (Perceived Stress x Relational Coping) was not significant.

Support was found for a moderation effect of Relational Coping on the relationship between Perceived Stress and Professional Efficacy: a significant result was obtained for the interaction term ( $p = .033$ ) and the AIC value for Model 2 was less than for Model 1. A summary of this analysis is shown overleaf in Table 29.

Simple slopes analysis (see Figure 19) indicated a moderating effect of Relational Coping on the relationship between Perceived Stress and Professional Efficacy. When Relational Coping is low, there is a significant negative relationship between Perceived Stress and Professional Efficacy,  $b = -0.586$ , 95% CI [-0.770, -0.401],  $t = -6.26$ ,  $p < .001$ . At the mean value of Relational Coping, there is a significant negative relationship between Perceived Stress and Professional Efficacy,  $b = -0.408$ , 95% CI [-0.541, -0.274],  $t = -6.03$ ,  $p < .001$ . When Relational Coping is high, there is a significant negative relationship between Perceived Stress and Professional Efficacy,  $b = -0.230$ , 95% CI [-0.442, -0.018],  $t = -2.14$ ,  $p = .034$ .

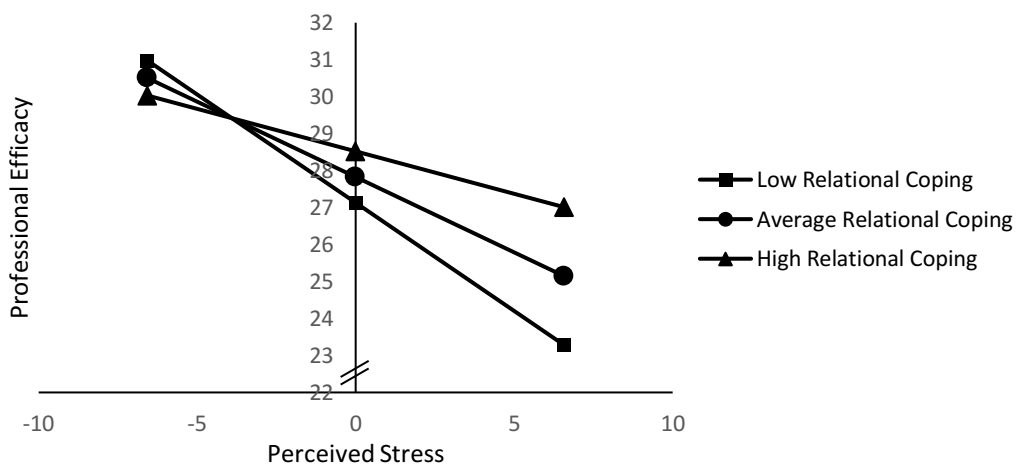


Figure 19: Simple slopes for predicting Professional Efficacy at low (-1SD), medium, and high (+1SD) levels of Perceived Stress and Relational Coping

Table 29: Summary of Regression Analysis for Relational Coping, Perceived Stress, and Burnout Dimensions

	B(SE)	$\beta$	T	<i>p</i>	F	R <sup>2</sup>	Adj. R <sup>2</sup>	AIC
<b>Relational Coping, Perceived Stress, and Exhaustion</b>								
Model 1								
Relational Coping	.80(.08)	.65	9.92	.467				
Perceived Stress	.09(.13)	.05	.73	<.001				
					52.27**	.43	.42	966.38
Model 2								
Relational Coping	.09(.13)	.05	.71	.478				
Perceived Stress	.79(.08)	.64	9.71	<.001				
Internal Coping x Perceived Stress	-.62(.55)	-.07	-1.12	.263				
					35.33**	.43	.42	895.98
<b>Relational Coping, Perceived Stress, and Cynicism</b>								
Model 1								
Relational Coping	.03(.14)	.02	.21	.834				
Perceived Stress	.54(.09)	.48	6.39	<.001				
					21.29**	.23	.22	987.85
Model 2								
Relational Coping	.03(.14)	.02	.20	.845				
Perceived Stress	.53(.090)	.47	6.23	<.001				
Internal Coping x Perceived Stress	-.50(.58)	-.06	-.86	.393				
					14.41**	.24	.22	954.85
<b>Relational Coping, Perceived Stress, and Professional Efficacy</b>								
Model 1								
Relational Coping	.17(.13)	.10	1.28	.202				
Perceived Stress	-.43(.08)	-.42	-5.35	<.001				
					14.35**	.17	.16	933.38
Model 2								
Internal Coping	.17(.13)	.10	1.33	.184				
Perceived Stress	-.41(.08)	-.40	-5.11	<.001				
Internal Coping x Perceived Stress	1.17(.54)	.17	2.15	.033				
					11.36**	.20	.18	927.60

Note. SE = standard error. \*\* *p* < .01; \* *p* < .05

In summary, moderated regression analysis was used to examine functional coping as a moderator of the relationship between stress and strain in the current data set. Results indicated that External Coping moderated the relationship between Perceived Stress and Cynicism, and also between Perceived Stress and Professional Efficacy. In both cases, higher levels of coping were associated with lower levels of burnout, regardless of the level of Perceived Stress. No support was found for External Coping as a moderator of the relationship between Perceived Stress and Exhaustion. Similarly, no support was found for Internal Coping as a moderator of the relationship between Perceived Stress and dimensions of burnout. Results further indicated that Relational Coping moderated the relationship between Perceived Stress and Professional Efficacy, such that (a) average and high levels of Relational Coping diminished the effect of Perceived Stress on Professional Efficacy (i.e., lower burnout), and (b) when Relational Coping was low the effect of Perceived Stress on Professional Efficacy was enhanced (i.e., burnout increased). Relational Coping was not found to moderate the relationship between Perceived Stress and both Exhaustion and Cynicism. Findings from the above analyses are further discussed in Chapter Eight. The next section shifts the focus of the main analyses from an exploration of function-oriented coping typologies to an investigation of time-oriented coping typologies.

### *7.8.3 Addressing Research Aim 3: Investigating the size and direction of the relationship between future-oriented coping and burnout*

This section presents the findings from an investigation of the size and direction of the relationship between future-oriented coping and dimensions of burnout in the current sample of entrepreneurs ( $N = 142$ ). The specific aims and hypotheses addressed in this section are reiterated overleaf.



**AIM 3:** Investigate the size and direction of the relationship between future-oriented coping (Preventative and Proactive Coping) and dimensions of burnout (Exhaustion, Cynicism, and Professional Efficacy).

**H1.** Proactive Coping will be negatively related to an entrepreneur’s propensity for burnout.

**H2.** Preventative Coping will be negatively related to an entrepreneur’s propensity for burnout, however, to a lesser degree than Proactive Coping.

Spearman’s rho ( $\alpha = .05$ ) indicated the presence of a moderate positive correlation between Professional Efficacy and both Proactive Coping and Preventative Coping (both:  $r = .58, p < .001$ ). A weak negative correlation was found between Exhaustion and both Proactive Coping ( $r = -.31, p < .001$ ) and Preventative Coping ( $r = -.27, p < .01$ ). Furthermore, a weak negative correlation was found between Cynicism and both Proactive Coping ( $r = -.38, p < .001$ ) and Preventative Coping ( $r = -.41, p < .001$ ). Findings are summarised in Table 30.

*Table 30: Bivariate Relationship between Proactive Coping, Preventative Coping, and (a) Exhaustion, (b) Cynicism, and (c) Professional Efficacy*

<i>Variable</i>	<i>Proactive Coping</i>	<i>Preventative Coping</i>
Exhaustion	<b>-.31</b>	<b>-.27</b>
Cynicism	<b>-.38</b>	<b>-.41</b>
Professional Efficacy	<b>.58</b>	<b>.58</b>

*Note.*  $N = 142$ , two-tailed.  $|r| \geq .27$  indicates  $p < .01$ ;  $|r| \geq .31$  indicates  $p < .001$  and are bolded

Additionally, Spearman’s rho ( $\alpha = .05$ ) was used to investigate the relationship between future-oriented coping and stress. Findings from this analysis showed a significant ( $p < .01$ ) weak negative correlation between Perceived Stress and both Proactive Coping and Preventative Coping ( $r = -.26$  and  $r = -.30$  respectively).

In summary, support was found for H1: Proactive Coping was negatively related to an entrepreneur’s propensity for burnout. Partial support was found for H2: Preventative Coping was found to be negatively related to an entrepreneur’s propensity for burnout, however this relationship was *not* considered to be lesser than for Proactive Coping. Findings related to the size and direction of the relationship between future-oriented coping and burnout are further discussed in Chapter Eight. The next section presents

findings related to an investigation of Proactive Coping and Preventative Coping as potential moderators of the relationship between stress and strain.

#### 7.8.4 Addressing Research Aim 4: Determine the buffering effect of time-oriented coping on the stressor-strain relationship

This section addresses the fourth aim of Phase Two: to determine the buffering effect of time-oriented coping on the stressor-strain relationship. Moderation analyses were conducted in the manner explained in Section 7.8.2, and as such, a moderation effect was supported when a significant  $p$ -value was obtained for the interaction term (Model 2), and the value of Akaike's information criteria (AIC) decreased from Model 1 to Model 2 indicating improved model fit (Field, 2013). A conceptual diagram of future-oriented coping as a moderator of the relationship between stress and burnout is shown in Figure 20.

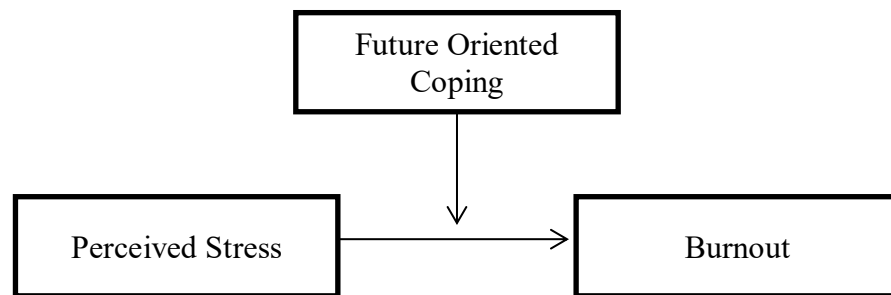


Figure 20: Conceptual Diagram of Future-Oriented Coping as a Moderator of the Relationship Between Stress and Burnout

The specific hypotheses addressed in this section are reiterated below:

**H3.** The relationship between stress and burnout in entrepreneurs will be moderated by time-oriented coping, such that:

**H3a.** Preventative Coping strategies weaken the effect of stress on burnout.

**H3b.** Proactive Coping strategies weaken the effect of stress on burnout, and to a greater degree than preventative coping strategies.

Interaction effects were investigated independently for Preventative Coping and Proactive Coping across the three outcome variables (Exhaustion, Cynicism, and Professional Efficacy), hence, six independent moderated regression analyses were conducted. Perceived Stress represented the predictor variable in all analyses.

As shown overleaf in Table 31, no support was found for Preventative Coping as a moderator of the relationship between stress and burnout; the interaction term (Proactive Coping x Perceived Stress) was not significant in relation to Exhaustion ( $p = .798$ ), Cynicism ( $p = .920$ ), or Professional Efficacy ( $p = .352$ ). As such, H3a was not supported.

Similarly, no support was found for a moderating effect of Proactive Coping on the relationship between stress and burnout. In all analyses, the interaction term (Proactive Coping x Perceived Stress) was not significant: Exhaustion ( $p = .585$ ), Cynicism ( $p = .190$ ), and Professional Efficacy ( $p = .665$ ). Thus, H3b was also not supported. Findings are summarised in Table 32.

In summary, no support was found for either H3a or H3b, suggesting that a moderation effect of future-oriented coping on the relationship between stress and burnout was not present in the data for the current sample. Results are further discussed in Chapter Eight. The next section presents findings related to the role of trait time perspective in the stress-strain process.

Table 31: Summary of Regression Analysis for Preventative Coping, Perceived Stress, and Burnout

	B(SE)	$\beta$	T	<i>p</i>	F	R <sup>2</sup>	Adj. R <sup>2</sup>	AIC
<b>Preventative Coping, Perceived Stress, and Exhaustion</b>								
Model 1								
Preventative Coping	-.02(.10)	-.02	-.24	.809				
Perceived Stress	.80(.08)	.65	9.94	<.001				
					51.86**	.43	.42	971.79
Model 2								
Preventative Coping	-.02(.10)	-.01	-.21	.833				
Perceived Stress	.81(.09)	.65	9.34	<.001				
Preventative Coping x Perceived Stress	-.14(.55)	-.02	-.26	.798				
					34.36**	.43	.42	874.00
<b>Preventative Coping, Perceived Stress, and Cynicism</b>								
Model 1								
Preventative Coping	-.34(.10)	-.26	-3.50	.001				
Perceived Stress	.46(.08)	.41	5.43	<.001				
					29.23**	.30	.29	979.82
Model 2								
<i>Preventative Coping</i>	-.34(.10)	-.26	-3.45	.001				
Perceived Stress	.46(.09)	.41	5.25	<.001				
<i>Preventative Coping</i> x Perceived Stress	-.06(.55)	-.01	-.10	.920				
					19.35**	.30	.28	914.30
<b>Preventative Coping, Perceived Stress, and Professional Efficacy</b>								
Model 1								
Preventative Coping	.59(.08)	.50	7.21	<.001				
Perceived Stress	-.26(.07)	-.25	-3.61	<.001				
					44.36**	.39	.38	875.18
Model 2								
Preventative Coping	.58(.08)	.50	7.06	<.001				
Perceived Stress	-.28(.07)	-.27	-3.73	<.001				
<i>Preventative Coping</i> x Perceived Stress	.43(.47)	.06	.96	.352				
					29.84**	.39	.38	748.99

Note. SE = standard error. \*\* *p* < .001

Table 32: Summary of Regression Analysis for Proactive Coping, Perceived Stress, and Burnout

	B(SE)	$\beta$	T	<i>p</i>	F	R <sup>2</sup>	Adj. R <sup>2</sup>	AIC
<b>Proactive Coping, Perceived Stress, and Exhaustion</b>								
Model 1								
Proactive Coping	-.14(.08)	-.11	-1.67	.097				
Perceived Stress	.77(.08)	.62	9.45	<.001				
					54.24**	.44	.43	955.56
Model 2								
Proactive Coping	-.15(.08)	-.12	-1.73	.086				
Perceived Stress	.76(.08)	.62	9.06	<.001				
Proactive Coping x Perceived Stress	.30(.55)	.04	.55	.585				
					36.08**	.44	.43	849.17
<b>Proactive Coping, Perceived Stress, and Cynicism</b>								
Model 1								
Proactive Coping	-.30(.08)	-.27	-3.61	<.001				
Perceived Stress	.46(.08)	.41	5.60	<.001				
					29.79**	.30	.29	969.19
Model 2								
Proactive Coping	-.29(.08)	-.25	-3.38	.001				
Perceived Stress	.49(.09)	.43	5.76	<.001				
Proactive Coping x Perceived Stress	-.72(.55)	-.10	-1.32	.190				
					20.54**	.31	.29	836.42
<b>Proactive Coping, Perceived Stress, and Professional Efficacy</b>								
Model 1								
Proactive Coping	.49(.07)	.47	6.75	<.001				
Perceived Stress	-.28(.07)	-.27	-3.92	<.001				
					40.55**	.37	.36	880.61
Model 2								
Proactive Coping	.48(.07)	.47	6.59	<.001				
Perceived Stress	-.29(.07)	-.28	-3.90	<.001				
Proactive Coping x Perceived Stress	.21(.48)	.03	.43	.665				
					26.94**	.37	.36	696.22

Note. SE = standard error. \*\* *p* < .01

7.8.5 *Addressing Research Aim 5: Investigate the relationship between time orientation and an entrepreneur's propensity for burnout*

This section presents the findings from an investigation of the size and direction of the relationship between time orientation and burnout. As presented in Section 6.6.4, time orientation was operationalised in the current research using three scales in the Zimbardo Time Perspective Inventory (ZTPI) (Zimbardo & Boyd, 1999): Present Hedonism i.e., a risk taking, hedonistic approach to time and life; Present Fatalism i.e., a hopeless view of the future and life; and Future i.e., an orientation towards the future. The specific hypotheses investigated in this section included:

**H4.** Present Fatalism will be positively related to an entrepreneur's propensity for burnout.

**H5.** Present Hedonism will be positively related to an entrepreneur's propensity for burnout, but to a lesser degree than Present Fatalism.

**H6.** Future time perspective will be negatively related to an entrepreneur's propensity for burnout.

Spearman's rho ( $\alpha = .05$ ) was used to assess the size and direction of the relationship between the three time orientations considered in this research (Present Fatalism, Present Hedonism, and Future) and the three dimensions of burnout (Exhaustion, Cynicism, and Professional Efficacy). Spearman's rho indicated the presence of a moderate positive correlation between Future and Professional Efficacy ( $r = .56, p < .001$ ), a weak negative correlation between Future and Cynicism ( $r = -.37, p < .001$ ), and a very weak negative correlation between Future and Exhaustion ( $r = -.17, p = .038$ ). Present Fatalism significantly correlated with all dimensions of burnout: a moderate positive relationship was found between Present Fatalism and both Exhaustion ( $r = .41, p < .001$ ) and Cynicism ( $r = .47, p < .001$ ), and a weak negative relationship was found between Present Fatalism and Professional Efficacy ( $r = -.34, p < .001$ ). A very weak positive correlation was observed between Present Hedonism and Professional Efficacy ( $r = .18, p = .034$ ), however Present Hedonism failed to significantly correlate with either Exhaustion ( $r = .13, p = .114$ ) or Cynicism ( $r = .05, p = .564$ ). Findings are summarised overleaf in Table 33.

Table 33: Bivariate Relationship between Present Hedonism, Present Fatalism, and Future and (a) Exhaustion, (b) Cynicism, and (c) Professional Efficacy

Variable	Present Fatalism	Present Hedonism	Future
Exhaustion	<b>.41</b>	.13	<b>-.17</b>
Cynicism	<b>.47</b>	.05	<b>-.37</b>
Professional Efficacy	<b>-.34</b>	<b>.18</b>	<b>.56</b>

Note.  $N = 142$ .  $|r| \geq .17$  indicates  $p < .05$ ;  $|r| \geq .34$  indicates  $p < .001$  and are bolded

Additional analysis was conducted to investigate the size and direction of the relationship between time orientation (Present Fatalism, Present Hedonism, and Future) and Perceived Stress. Spearman's rho ( $\alpha = .05$ ) indicated a significant weak correlation between Perceived Stress and both Present Fatalism ( $r = .31, p < .001$ ), and Future ( $r = -.28, p = .001$ ). Present Hedonism failed to significantly correlate with Perceived Stress ( $r = .05, p = .56$ ).

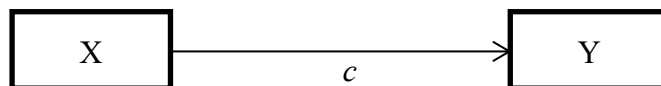
In summary, findings supported H4: Present Fatalism was found to be positively related to an entrepreneur's propensity to burnout (i.e., higher levels of Exhaustion and Cynicism, and lower levels of Professional Efficacy). However, the strength of these relationships could be considered weak-moderate. Furthermore, support was found for H6: Future orientation was negatively related to an entrepreneur's propensity for burnout (i.e., lower levels of Exhaustion and Cynicism, and higher levels of Professional Efficacy). Whilst the relationship between Future and Professional Efficacy was moderate, the relationship between Future and both Exhaustion and Cynicism was found to be weak. Additionally, findings may suggest that a Present Hedonism does not play a meaningful role in relation to burnout: Present Hedonism failed to significantly correlate with either Exhaustion or Cynicism, and the significant correlation between Present Hedonism and Professional Efficacy could be considered very weak. As such, H5 was only partially supported i.e., Present Hedonism was less related to burnout than Present Fatalism. The next section presents findings related to an investigation of whether an entrepreneur's orientation towards time may have implications for stress resistance by virtue of its effect on coping responses.

7.8.6 *Addressing Research Aim 6: Investigating whether time orientation affects strain outcomes via coping responses*

In the current study, mediation analysis was used to explore the indirect effect of time orientation on burnout via coping. Mediation analysis can be defined as “the search for intermediate causal variables” (Lockwood & MacKinnon, 1998 p.1).

The current research uses Preacher and Hayes’ (2004) approach to investigating a mediation effect. In reference to Figure 21, which depicts a simple mediation model (i.e., one mediator), Preacher and Hayes propose that evidence of a mediation effect is found when: (a) the predictor variable (X) affects the mediator (M) (path  $a$ ); (b) the mediator affects the outcome variable (Y) (path  $b$ ), and (c) the effect of X on Y reduces after M is introduced (i.e.,  $c' < c$ ). When these conditions are met, it is assumed that X has an indirect effect on Y through M. Complete mediation is said to occur when the path  $c'$  is equal to zero. Partial mediation occurs when path  $c'$  is greater than zero yet less than path  $c$ . Contrary to the approach taken by Baron and Kenny (1986), a significant effect of X on Y was not considered to be a necessary precursor for mediation analyses (Preacher & Hayes, 2004, 2008; Shrout & Bolger, 2002).

*Model 1: Direct effect of X on Y*



*Model 2: Indirect effect of X on Y through M*

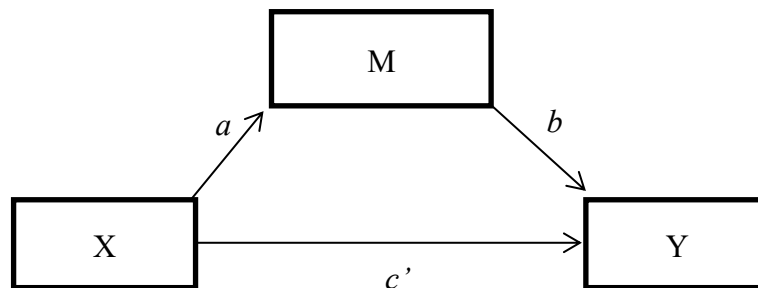


Figure 21: Mediation Model: Conceptual Diagram of the Indirect Effect of X on Y through M. Adapted from Preacher & Hayes (2008)



In the current study, indirect effects were investigated using *multiple mediation*, in which multiple mediators are simultaneously entered into the regression equation. This approach is recommended in order to limit parameter bias due to omitted variables (Preacher & Hayes, 2008).

In the current study, time perspectives (Future, Present Hedonism, and Present Fatalism) were investigated as predictor variables, coping variables (External Coping, Internal Coping, Relational Coping, Preventative Coping, and Proactive Coping) were investigated as mediators (M), and dimensions of burnout (Exhaustion, Cynicism, and Professional Efficacy) as outcome variables. Nine multiple mediation analyses were conducted using combinations of predictor, mediator, and outcome variables (i.e., analyses examined the indirect effect of three possible antecedent variables [time perspective] on the three dimensions of burnout via five different mediators).

Variables that significantly correlated with an outcome variable at bivariate level were controlled for in all analyses. Potential co-variables were first examined in all models, and included Perceived Stress, Age, and time orientations other than the time orientation IV of interest. Non-significant co-variables were subsequently removed and models re-run. Results are reported below for the final models (i.e., excluding non-significant co-variables). Mediated pathways meeting the assumptions for mediated regression and the structure of each regression model are shown overleaf in Table 34.

Multiple mediation analyses were conducted using the SPSS PROCESS macro (Preacher & Hayes, 2008). A nonparametric bias corrected bootstrapping procedure (specified sample of 5000) was used to test for the presence of a mediation effect. The bootstrapping procedure is recommended to assess a mediated effect when the sample size is low, and the data are not normally distributed (see Field, 2013; Lockwood & MacKinnon, 1998; Shrout & Bolger, 2002).

The mediation effect was considered significant if the 95% biased corrected confidence interval for the indirect effect of X on Y through multiple mediators did not include zero (Preacher & Hayes, 2008). A significant indirect effect of X on Y is not a necessary precursor for the *specific indirect effect* (i.e., indirect effect of X on Y through a specific mediator, when controlling for the other mediators in the model) to be significant

(Preacher & Hayes, 2008). Consistent with the bootstrapping method approach, results for the indirect effects are presented in reference to size and direction (Preacher & Hayes, 2008).

*Table 34: Planned Mediation Analyses: Investigating Coping as a Mediator of the Relationship Between Time Orientation and Burnout*

Predictor Variable	Possible Mediators	Outcome Variable	Co-variates
Future	External Coping Internal Coping Preventative Coping Proactive Coping	Exhaustion	Perceived Stress Age Present Fatalism
Future	External Coping Internal Coping Preventative Coping Proactive Coping	Cynicism	Perceived Stress Age Present Fatalism
Future	External Coping Internal Coping Preventative Coping Proactive Coping	Professional Efficacy	Perceived Stress Age Present Hedonism Present Fatalism
Present Hedonism	Internal Coping Relational Coping Preventative Coping Proactive Coping	Exhaustion	Perceived Stress Age Future Present Fatalism
Present Hedonism	External Coping Internal Coping Preventative Coping Proactive Coping	Cynicism	Perceived Stress Age Future Present Fatalism
Present Hedonism	External Coping Internal Coping Preventative Coping Proactive Coping	Professional Efficacy	Perceived Stress Age Future Present Fatalism
Present Fatalism	Internal Coping Preventative Coping Proactive Coping	Exhaustion	Perceived Stress Age Future
Present Fatalism	External Coping Internal Coping Preventative Coping Proactive Coping	Cynicism	Perceived Stress Age Future
Present Fatalism	External Coping Internal Coping Preventative Coping Proactive Coping	Professional Efficacy	Perceived Stress Age Future Present Hedonism

*7.8.6.1 Investigating coping as a mediator of the relationship between Future and burnout*

This section presents findings from an investigation of coping as a possible mediator of the relationship between Future time orientation and dimensions of burnout. In three

independent mediated regression analyses, Future and the mediators (External Coping, Internal Coping, Preventative Coping and Proactive Coping) were simultaneously regressed on (a) Exhaustion, (b) Cynicism, or (c) Professional Efficacy, whilst controlling for potential co-variates (see Table 34 above). Results are presented below for the final models, and summarised at the conclusion of this section in Table 35.

***Indirect effect of Future on Exhaustion through coping***

After controlling for Perceived Stress ( $b = 0.74$ ,  $SE = 0.08$ ,  $p < .001$ ) and Present Fatalism ( $b = 3.10$ ,  $SE = 0.77$ ,  $p < .001$ ), a non-significant result was obtained for the total effect of Future on Exhaustion i.e., the effect of future on exhaustion without the mediators ( $TE = 1.99$ ,  $SE = 1.02$ ,  $p = .053$ ). The direct effect of Future on Exhaustion (i.e., the effect of Future on Exhaustion controlling for the mediators) was found to be significant ( $DE = 3.27$ ,  $SE = 1.28$ ,  $p = .012$ ). The total indirect effect of Future on Exhaustion through all mediators was significant ( $IE = -2.04$ ,  $SE = 0.99$ , 95% CI [-4.000, -0.051]). Examination of the specific indirect effects for the mediator variables indicated a significant indirect effect of Future on Exhaustion via Internal Coping only ( $IE = -0.58$ ,  $SE = 0.40$ , 95% CI [-1.657, -0.055]), such that Future was associated with lower Internal Coping which was in turn associated with higher Exhaustion.

***Indirect effect of Future on Cynicism through coping***

Results indicated that after controlling for Perceived Stress ( $b = 0.39$ ,  $SE = 0.08$ ,  $p < .001$ ) and Present Fatalism ( $b = 3.31$ ,  $SE = 0.79$ ,  $p < .001$ ), there was a non-significant total effect ( $TE = -1.71$ ,  $SE = 1.04$ ,  $p = .102$ ), and a non-significant direct effect ( $DE = 0.63$ ,  $SE = 1.27$ ,  $p = .619$ ) of Future on Cynicism. The total indirect effect of Future on Cynicism through coping was significant ( $IE = -3.27$ ,  $SE = 1.00$ , 95% CI [-5.276, -1.322]). Results indicate that the effect of Future on Cynicism was mediated by coping. However, Internal Coping was the only mediator variable found to have a specific indirect effect on the relationship between Future and Cynicism ( $IE = -0.71$ ,  $SE = 0.45$ , 95% CI [-1.813, -0.060]). Future predicted lower Internal Coping which in turn predicted higher Cynicism.

***Indirect effect of Future on Professional Efficacy through coping***

After controlling for Perceived Stress ( $b = -0.23, SE = 0.07, p < .001$ ), Age ( $b = 0.15, SE = 0.04, p < .001$ ), and Present Hedonism ( $b = 3.00, SE = 0.68, p < .01$ ), results indicated Future to have a significant total effect ( $TE = 5.26, SE = 0.83, p < .001$ ), and a significant direct effect ( $DE = 2.99, SE = 1.08, p = .006$ ) on Professional Efficacy, suggesting partial mediation. A significant result was obtained for the total indirect effect of Future on Professional Efficacy via the mediator variables ( $IE = 2.49, SE = 0.91, 95\% CI [0.817, 4.387]$ ), however, a non-significant result was obtained for the specific indirect effect of all mediator variables.

*Table 35: Summary of Final Models of Coping as a Mediator between Future and (a) Exhaustion, (b) Cynicism, and (c) Professional Efficacy.*

IV	DV	Co-variates	Mediators	95% CI	Significance
Future	Exhaustion	Perceived Stress Age Present Fatalism	External Coping	[-1.547, 0.752]	no
			<b>Internal Coping</b>	<b>[-1.657, -0.055]</b>	<b>yes</b>
			Preventative Coping	[-1.725, 2.057]	no
			Proactive Coping	[-2.727, 0.059]	no
Future	Cynicism	Perceived Stress Age Present Fatalism	External Coping	[-1.575, 0.664]	no
			<b>Internal Coping</b>	<b>[-1.813, -0.060]</b>	<b>yes</b>
			Preventative Coping	[-3.155, 0.826]	no
			Proactive Coping	[-2.642, 0.441]	no
Future	Professional Efficacy	Perceived Stress Age Present Hedonism Present Fatalism	External Coping	[-0.276, 1.189]	no
			Internal Coping	[-0.346, 0.562]	no
			Preventative Coping	[-0.004, 2.466]	no
			Proactive Coping	[-0.093, 2.248]	no

*Note.* CI = confidence interval. Bold = significant.

***7.8.6.2 Investigating coping as a mediator of the relationship between Present Hedonism and burnout***

This section presents findings from an investigation of coping as a possible mediator of the relationship between Present Hedonistic time perspective and dimensions of burnout. Three independent mediated regression analyses were conducted, as outlined above in Table 34. Present Hedonism and the mediators (External Coping, Internal

Coping, Preventative Coping and Proactive Coping) were simultaneously regressed on (a) Exhaustion, (b) Cynicism, or (c) Professional Efficacy, whilst controlling for potential co-variates. Results are presented below for the final models, and summarised at the conclusion of this section in Table 36.

***Indirect effect of Present Hedonism on Exhaustion through coping***

After controlling for Perceived Stress ( $b = 0.71, SE = 0.08, p < .001$ ) and Present Fatalism ( $b = 2.72, SE = 0.84, p = .002$ ), a non-significant result was obtained for both the total effect and direct effect of Present Hedonism on Exhaustion ( $TE = -0.19, SE = 0.94, p = .837; DE = 0.168, SE = 1.15, p = .884$ ). A non-significant result was obtained for the total indirect effect of Present Hedonism through the mediators ( $IE = 0.067, SE = 0.57, 95\% CI [-1.098, 1.186]$ ), suggesting that the relationship between Present Hedonism and Exhaustion is not mediated by coping.

***Indirect effect of Present Hedonism on Cynicism through coping***

Results indicated that after controlling for Perceived Stress ( $b = 0.40, SE = 0.08, p < .001$ ) and Present Fatalism ( $b = 4.54, SE = 0.83, p < .001$ ), there was a significant total effect of Present Hedonism on Cynicism ( $TE = -2.04, SE = 0.93, p = .031$ ). A non-significant result was obtained for the direct effect of Present Hedonism on Cynicism indicating full mediation ( $DE = -0.84, SE = 1.12, p = .454$ ). The total indirect effect of Present Hedonism on Cynicism through all the mediators was not significant ( $IE = -0.29, SE = 0.60, 95\% CI [-1.582, 0.792]$ ). However, examination of the specific indirect effects for mediator variables indicated a significant effect for Internal Coping only ( $IE = 0.71, SE = 0.38, 95\% CI [0.132, 1.689]$ ). Present Hedonism was associated with higher Internal Coping which was in turn associated with higher Cynicism.

***Indirect effect of Present Hedonism on Professional Efficacy through coping***

After controlling for Perceived Stress ( $b = -0.23, SE = 0.07, p < .001$ ), Age ( $b = 0.15, SE = 0.04, p < .001$ ), and Future ( $b = 5.26, SE = 0.83, p < .001$ ), a significant result was obtained for the total effect and direct effect of Present Hedonism on Professional Efficacy ( $TE = 3.01, SE = 0.68, p < .001; DE = 1.72, SE = 0.78, p = .029$ ), suggesting partial mediation. A significant result was obtained for the total indirect effect of

Present Hedonism via all the mediators on Professional Efficacy ( $IE = 1.17, SE = 0.50, 95\% CI [0.335, 3.231]$ ). Examination of the specific indirect effects for mediator variables indicated a significant effect for Preventative Coping only ( $IE = 0.44, SE = 0.28, 95\% CI [0.013, 1.140]$ ). Present Hedonism predicted higher Preventative Coping which in turn predicted higher Professional Efficacy.

Table 36: Summary of Findings for Coping as a Mediator between Present Hedonism and (a) Exhaustion, (b) Cynicism, and (c) Professional Efficacy.

IV	DV	Co-variates	Mediators	95% CI	Significance
Present Hedonism	Exhaustion	Perceived Stress Present Fatalism	External Coping	[-0.613, 0.515]	no
			Internal Coping	[-0.023, 1.324]	no
			Preventative Coping	[-0.254, 1.343]	no
			Proactive Coping	[-1.990, 0.075]	no
Present Hedonism	Cynicism	Perceived Stress Present Fatalism	External Coping	[-0.809, 0.350]	no
			<b>Internal Coping</b>	<b>[0.132, 1.689]</b>	<b>yes</b>
			Preventative Coping	[-1.248, 0.328]	no
			Proactive Coping	[-1.818, 0.382]	no
Present Hedonism	Professional Efficacy	Perceived Stress Age Future	External Coping	[-0.115, 0.649]	no
			Internal Coping	[-0.492, 0.394]	no
			<b>Preventative Coping</b>	<b>[0.013, 1.140]</b>	<b>yes</b>
			Proactive Coping	[-0.067, 1.466]	no

Note. CI = confidence interval. Bold = significant.

### 7.8.6.3 Investigating coping as a mediator of the relationship between Present Fatalism and burnout

This section presents findings from an investigation of coping as a mediator of the relationship between Present Fatalistic time perspective and dimensions of burnout. In three independent mediated regression analyses, Present Fatalism and the mediators (External Coping, Internal Coping, Preventative Coping and Proactive Coping) were simultaneously regressed on (a) Exhaustion, (b) Cynicism, or (c) Professional Efficacy, whilst controlling for potential co-variates (see Table 34 above). Results are presented below for the final models, and summarised at the conclusion of this section in Table 37.

***Indirect effect of Present Fatalism on Exhaustion through coping***

After controlling for Perceived Stress ( $b = 0.71$ ,  $SE = 0.08$ ,  $p < .001$ ), a significant result was obtained for both the total effect and the direct effect of Present Fatalism on Exhaustion ( $TE = 2.64$ ,  $SE = 0.74$ ,  $p < .001$ ;  $DE = 2.15$ ,  $SE = 0.79$ ,  $p = .007$ ). A non-significant result was obtained for the total indirect effect of Present Fatalism on Exhaustion via all the coping mediators ( $IE = 0.83$ ,  $SE = 0.51$ , 95% CI [-0.086, 1.923], indicating that Present Fatalism does not influence Exhaustion via coping, but rather has a direct positive effect.

***Indirect effect of Present Fatalism on Cynicism through coping***

Results indicated, that after controlling for Perceived Stress ( $b = 0.41$ ,  $SE = 0.08$ ,  $p < .001$ ), there was a significant total effect and a significant direct effect of Present Fatalism on Cynicism ( $TE = 3.71$ ,  $SE = 0.75$ ,  $p < .001$ ;  $DE = 2.69$ ,  $SE = 0.77$ ,  $p < .001$ ). The total indirect effect of Present Fatalism on Cynicism through all the coping mediators was significant suggesting partial mediation ( $IE = 1.70$ ,  $SE = 0.63$ , 95% CI [0.580, 3.076]). Examination of the specific indirect effects for mediator variables indicated a significant effect for Internal Coping only ( $IE = 0.89$ ,  $SE = 0.43$ , 95% CI [0.175, 1.881]). Higher Present Fatalism predicted higher Internal Coping which in turn predicted higher Cynicism.

***Indirect effect of Present Fatalism on Professional Efficacy through coping***

After controlling for Perceived Stress ( $b = -0.17$ ,  $SE = 0.08$ ,  $p = .047$ ), Age ( $b = 0.14$ ,  $SE = 0.04$ ,  $p < .001$ ), and Future ( $b = 2.61$ ,  $SE = 1.07$ ,  $p < .016$ ), a non-significant result was obtained for both the total effect and the direct effect of Present Fatalism on Professional Efficacy ( $TE = 0.58$ ,  $SE = 0.69$ ,  $p = .401$ ;  $DE = 0.78$ ,  $SE = 0.66$ ,  $p = .241$ ).

A significant result was obtained for the total indirect effect of Present Fatalism on Professional Efficacy via the coping mediators ( $IE = -1.17$ ,  $SE = 0.53$ , 95% CI [-2.283, -0.170]). However, examination of the specific indirect effects for mediator variables indicated a significant effect for Preventative Coping ( $IE = -0.39$ ,  $SE = 0.24$ , 95% CI [-1.042, -0.038]) and Proactive Coping ( $IE = -0.57$ ,  $SE = 0.28$ , 95% CI [-1.267, -0.149]).

only. Present Fatalism was associated with both lower Preventative Coping and lower Proactive Coping, which were both in turn associated with lower Professional Efficacy.

Table 37: Summary of Findings for Coping as a Mediator between Present Hedonism and (a) Exhaustion, (b) Cynicism, and (c) Professional Efficacy.

IV	DV	Co-variates	Mediators	95% CI	Significance
Present Fatalism	Exhaustion	Perceived Stress	External Coping	[-0.402, 0.423]	no
			Internal Coping	[-0.025, 1.542]	no
			Preventative Coping	[-1.036, 0.162]	no
			Proactive Coping	[-0.019, 1.376]	no
Present Fatalism	Cynicism	Perceived Stress	External Coping	[-0.214, 0.641]	no
			<b>Internal Coping</b>	<b>[0.175, 1.881]</b>	<b>yes</b>
			Preventative Coping	[-0.229, 1.009]	no
			Proactive Coping	[-0.125, 1.396]	no
Present Fatalism	Professional Efficacy	Perceived Stress Age Future Present Hedonism	External Coping	[-0.574, 0.044]	no
			Internal Coping	[-0.587, 0.511]	no
			<b>Preventative Coping</b>	<b>[-1.042, -0.038]</b>	<b>yes</b>
			<b>Proactive Coping</b>	<b>[-1.267, -0.149]</b>	<b>yes</b>

Note. CI = confidence interval. Bold = significant.

Results of multiple mediation analysis are discussed in Chapter Eight. The next section presents findings related to the last research aim for Phase Two: investigating predictors of burnout.

### 7.8.7 Investigating predictors of burnout

A standard multiple regression analysis was performed to address Research Aim 7: to explore the proportion of variance in dimensions of burnout that can be accounted for by variables of interest in the current study (i.e., perceived stress, function- and time-oriented coping, and trait time perspective). Age was also considered as a predictor variable as it relates to an individual's temporal profile (Zimbardo & Boyd, 1999). Level of education was not investigated in this analysis as it did not significantly relate to Exhaustion, Cynicism, or Professional Efficacy at bivariate level. Results are presented below.



### 7.8.7.1 *Predictors of Exhaustion*

In the multiple regression for Exhaustion, eight predictor variables (Perceived Stress, Internal Coping, Relational Coping, Proactive Coping, Preventative Coping, Future, Present Fatalism, and Age) were entered into the regression model. External Coping and Present Hedonism were not entered, as these variables were not significantly related to Exhaustion at bivariate level. In combination, Perceived Stress, Internal Coping, Relational Coping, Proactive Coping, Preventative Coping, Future, Present Fatalism, and Age accounted for 52% of the variability in Exhaustion,  $R^2 = .52$ , adjusted  $R^2 = .49$ ,  $F(8, 133) = 17.95$ ,  $p < .001$ .

Perceived Stress was the strongest contributor to the prediction of Exhaustion (variance explained, 21%,  $\beta = .48$ ,  $p < .001$ ), followed by Present Fatalism (variance explained, 7%,  $\beta = .23$ ,  $p = .001$ ), Future (variance explained, 4%,  $\beta = .20$ ,  $p = .018$ ), and Proactive Coping (variance explained, 3%,  $\beta = -.18$ ,  $p = .037$ ). Internal Coping, Relational Coping, Preventative Coping, and Age failed to contribute uniquely to the model.

Unstandardised ( $B$ ) and standardised ( $\beta$ ) regression coefficients, and squared semi-partial correlations ( $sr^2$ ) for each predictor in the regression model are reported in Table 38. Results are discussed in Chapter Eight.

Table 38: Unstandardised ( $B$ ) and Standardised ( $\beta$ ) Regression Coefficients, and Squared Semi-Partial Correlations ( $sr^2$ ) for Each Predictor in a Regression Model Predicting Exhaustion

Variable	$B$ [95% CI]	$\beta$	$sr^2$	Sig
Perceived Stress	0.60 [0.40, -0.14]	.48	.21	$p < .001$
Internal Coping	0.20 [-0.01, 0.41]	.16	.03	.058
Relational Coping	0.05 [-0.22, 0.31]	.02	.00	.725
Proactive Coping	-0.22 [-0.43, -0.14]	-.18	.03	.037
Preventative Coping	-0.00 [-0.23, 0.26]	-.00	.00	.976
Future	3.03 [0.52, 5.53]	.20	.04	.018
Present Fatalism	2.63 [1.04, 4.22]	.23	.07	.001
Age	0.02 [-0.07, 0.10]	.03	.00	.714

Note.  $N = 142$ . CI = confidence interval.

7.8.7.2 *Predictors of Cynicism*

In the multiple regression equation for Cynicism, eight predictor variables were entered: Perceived Stress, External Coping, Internal Coping, Proactive Coping, Preventative Coping, Future, Present Fatalism, and Age. A significant regression equation was found,  $F(8, 133) = 12.70, p < .001$ , and in combination, the predictor variables accounted for 43% of the variability in Cynicism,  $R^2 = .43$ , adjusted  $R^2 = .40$ .

Present Fatalism was the strongest contributor to Cynicism (variance explained, 7%,  $\beta = .25, p = .001$ ), followed by Internal Coping (variance explained, 5%,  $\beta = .25, p = .009$ ) and Perceived Stress (variance explained, 2%,  $\beta = .15, p < .001$ ). External Coping, Proactive Coping, Preventative Coping, Future, and Age, failed to contribute uniquely to the prediction of Cynicism. Unstandardised ( $B$ ) and standardised ( $\beta$ ) regression coefficients, and squared semi-partial correlations ( $sr^2$ ) for each predictor in the regression model are reported in Table 39. Results are discussed in Chapter Eight.

Table 39: Unstandardised ( $B$ ) and Standardised ( $\beta$ ) Regression Coefficients, and Squared Semi-Partial Correlations ( $sr^2$ ) for Each Predictor in a Regression Model Predicting Cynicism

Variable	$B$ [95% CI]	$\beta$	$sr^2$	Sig
Perceived Stress	0.16 [-0.04, 0.37]	.15	.02	$p < .001$
External Coping	-0.09 [0.34, 0.15]	-.06	.00	.459
Internal Coping	0.29 [0.07, 0.51]	.25	.05	.009
Proactive Coping	-0.16 [-0.37, 0.05]	-.14	.02	.136
Preventative Coping	-0.18 [-0.43, 0.08]	-.14	.01	.172
Future	0.95 [-1.60, 3.50]	.07	.00	.461
Present Fatalism	2.59 [1.02, 4.16]	.25	.07	.001
Age	-0.06 [-0.14, 0.03]	-.10	.01	.175

Note.  $N = 142$ . CI = confidence interval.

7.8.7.3 *Predictors of Professional Efficacy*

Nine predictor variables (Perceived Stress, External Coping, Internal Coping, Proactive Coping, Preventative Coping, Future, Present Hedonism, Present Fatalism, and Age) were entered in the multiple regression equation for Professional Efficacy. The overall model was significant,  $R^2 = .54$ , adjusted  $R^2 = .51, F(9, 133) = 17.382, p < .001$ .

Age was the strongest contributor to the prediction of Professional Efficacy (variance explained, 11%,  $\beta = .27$ ,  $p < .001$ ), then Future (variance explained, 5%,  $\beta = .23$ ,  $p = .006$ ), followed by Perceived Stress (variance explained, 3%,  $\beta = -.16$ ,  $p = .047$ ). Unstandardised ( $B$ ) and standardised ( $\beta$ ) regression coefficients, and squared semi-partial correlations ( $sr^2$ ) for each predictor in the regression model are reported in Table 40. Results of this analysis are discussed in Chapter Eight.

Table 40: Unstandardised ( $B$ ) and Standardised ( $\beta$ ) Regression Coefficients, and Squared Semi-Partial Correlations ( $sr^2$ ) for Each Predictor in a Regression Model Predicting Professional Efficacy

Variable	$B$ [95% CI]	$\beta$	$sr^2$	$Sig$
Perceived Stress	-0.17	-.16	.03	.047
External Coping	0.09	.07	.01	.384
Internal Coping	-0.02	-.02	.00	.840
Proactive Coping	0.15	.14	.02	.124
Preventative Coping	0.17	.14	.02	.119
Future	2.99	.23	.05	.006
Present Hedonism	1.74	.16	.03	.066
Present Fatalism	-0.04	-.00	.00	.964
Age	0.14	.27	.11	$p < .001$

Note.  $N = 142$ . CI = confidence interval.

This concludes Section 7.8, which presented findings for Phase Two of the current research program. The next section provides a summary of the current chapter.

## 7.9 Chapter Summary

This chapter presented the analyses and results for Phase Two of the current research. The chapter began by outlining the data screening techniques that were carried out prior to the main analyses. A statistical comparison of data collected using two sampling techniques (i.e., contracted and non-contracted data – as outlined in Section 7.4) found that the two samples could not be considered to represent a single sample, and were therefore not combined. As such, only contracted data was henceforth considered. Descriptive statistics for predictor and outcome variables were then presented, followed by reliability of scales measures for the current study – based on this analysis all scales and subscales of interest were retained.

The main analyses (Section 7.8) presented findings related to the aims and hypotheses for Phase Two. Findings were presented according to the four overarching themes of Phase Two: dimensions of function-oriented coping typologies, and the buffering effect of functional coping in the stress-burnout relationship in entrepreneurs; the relationship between time-oriented coping and burnout dimensions, and the buffering effect of time-oriented coping on the stress-burnout relationship in entrepreneurs; the role of trait time perspective in the stress-burnout process; and predictors of burnout.

Exploratory factor analysis was used to assess the dimensionality of functional coping in the current data set. Results indicated a three-factor structure of coping in entrepreneurs (in the current study). Factors were labelled External Coping, Internal Coping, and Relational Coping. Using these three factors, moderated regression analyses were conducted to investigate whether functional aspects of coping buffer the effect of stress on dimensions of burnout (Exhaustion, Cynicism, and Professional Efficacy). Where a moderating effect was found to be present in the data, simple slopes analysis was then used to determine the nature of the interaction. External Coping was found to moderate the relationship between Perceived Stress and both Cynicism and Professional Efficacy. Simple slopes indicated that higher levels of External Coping were associated with lower burnout (i.e., lower Cynicism and higher Professional Efficacy) regardless of the level of Perceived Stress. Furthermore, Relational Coping was found to moderate the relationship between Perceived Stress and Professional Efficacy. At average and high levels of Perceived Stress, higher levels of Relational Coping were associated with higher levels of Professional Efficacy, whereas, at low levels of Perceived Stress lower levels of Relational Coping were associated with higher levels of Professional Efficacy.

Correlation analyses were conducted to assess the size and direction of the relationship between future-oriented coping and burnout dimensions. Preventative Coping and Proactive Coping were both found to correlate negatively with Exhaustion and Cynicism, and positively with Professional Efficacy.

Correlation analyses were also conducted to investigate the relationship between trait time perspective and an entrepreneur's propensity for burnout. Present Fatalism was

found to be positively related to burnout (i.e., associated with higher levels of Exhaustion and Cynicism, and lower levels of Professional Efficacy), whilst Future was found to be negatively related to burnout (i.e., associated with lower levels of Exhaustion and Cynicism, and higher levels of Professional Efficacy). Present Hedonism was not found to play a meaningful role in relation to burnout.

Multiple mediation analysis was used to explore whether trait time perspective affects strain outcomes via coping responses. Results indicated that the effect of Future on all dimensions of burnout was partially mediated by coping. Results further indicated that the effect of Present Hedonism on Cynicism was mediated by coping, whilst the effect of Present Hedonism on Professional Efficacy was partially mediated by coping. Lastly, coping was found to partially mediate the relationship between Present Fatalism and both Cynicism and Professional Efficacy.

Standard multiple regression analysis was used to investigate the direct effect of Perceived Stress, function and time-oriented coping, temporal orientation and age on dimensions of burnout. Findings indicate Exhaustion to be positively predicted by Perceived Stress, Present Fatalism, Future and Proactive Coping, in that order. Cynicism was positively influenced by Present Fatalism, Internal Coping and Perceived Stress, in that order. Age was found to positively influence Professional Efficacy, followed by Future, and Perceived Stress.

The next, and final, chapter concludes the current study. Results from Phase One and Phase Two are therein discussed in relation to the overarching aims of the current research program.

CHAPTER 8: OVERALL DISCUSSION AND CONCLUSION

**8.1 Chapter Introduction**

This chapter presents the overall discussion and conclusion for the current research program. The chapter is ordered as follows. Firstly, Section 8.2 provides an overview of the current research and reiterates the implications of Phase One findings for the design of Phase Two. Section 8.3 provides a discussion of Phase Two findings. Section 8.4 outlines key strengths and limitations of the research program and suggestions for future scholarship. Section 8.5 presents implications of findings and contributions to theory and practice and, lastly, Section 8.6 gives concluding thoughts. The structure of this chapter is summarised in Figure 22.

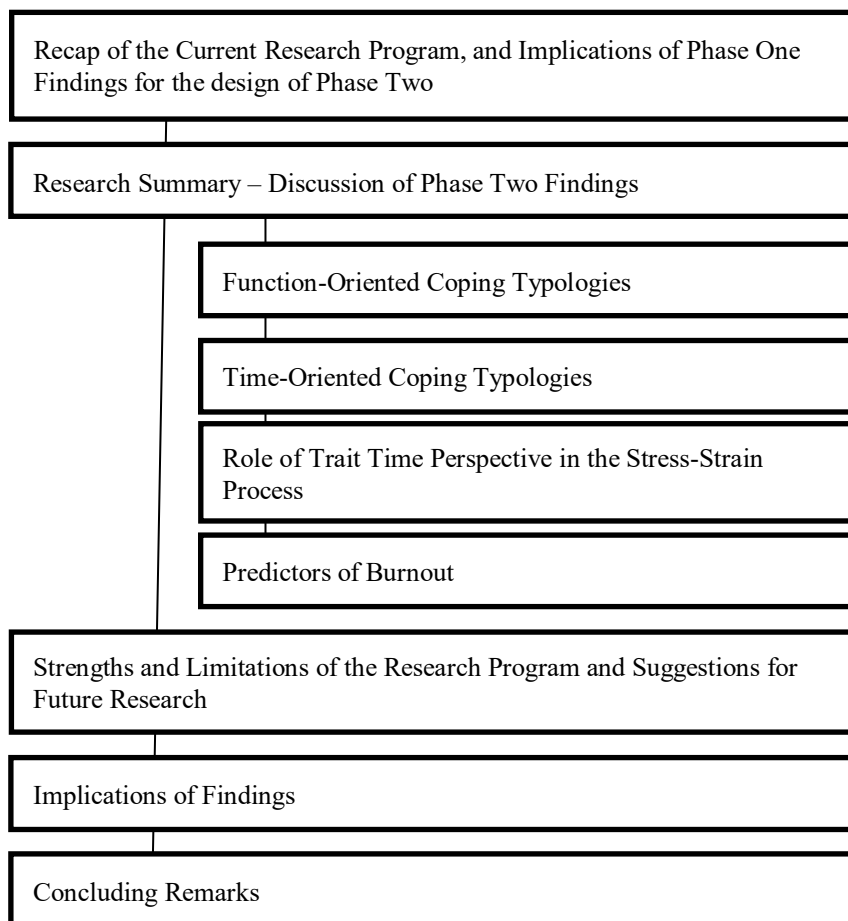


Figure 22: Chapter Eight Overview

## 8.2 Recap of the Current Research Program

The current research program investigated how entrepreneurs cope with stress, and the role of coping and trait time perspective in the stress-strain process. Specifically, the current research investigated whether coping responses and temporal perspectives influence burnout in entrepreneurs.

The research program was motivated by a review of the emergent body of entrepreneurship stress and coping literature. Exposure to chronic stressors (associated with entrepreneurial activity) can lead to strain, and in turn pose a serious threat not only to entrepreneurs themselves, but also to their ventures, and to society by placing employees' jobs at risk (Hendrickson et al., 2015) and reducing the contribution of firms to the economy (Ahmad & Xavier, 2010). The review further highlighted that some coping responses may diminish the effect of stress on strain (Carver & Connor-Smith, 2010), and that characteristics associated with entrepreneurship (e.g., proactivity) may afford an advantage for stress resilience.

Trait time perspective was investigated in the current research program owing to (a) entrepreneurs being attributed with future-oriented traits (e.g., proactivity) (see e.g., Bolton & Lane, 2012; Crant, 1996; Przepiorka, 2015; Rauch et al., 2009), and (b) future-oriented traits providing advantage for mental and physical health outcomes such as lower levels of depression and higher subjective wellbeing (see e.g., Boyd & Zimbardo, 2005; Hall & Fong, 2003; Henson et al., 2006; Zimbardo & Boyd, 1999). Given recent worldwide increases in entrepreneurial activity and a limited number of studies that have addressed stress and coping in entrepreneurs, the focus of the current research is timely. The literature review prompted a two-phased research program, which used an exploratory sequential research design (cf. Creswell & Plano Clark, 2011). The research program was conducted as described below.

Phase One used qualitative methods to explore the coping strategies entrepreneurs use to respond to stress. Phase One findings indicated that the Brief COPE (Carver, 1997) had adequate scope to capture the functional nature of coping responses in the entrepreneur sample. This measure was subsequently used to investigate functional coping in Phase Two. Function as a dimension captures the intended purpose of the

coping strategy e.g., Using Instrumental Support captures coping aimed at seeking advice from others. The second implication of the Phase One findings for the design of Phase Two related to coping as a temporal process. Findings supported investigation of time-orientation as a dimension of coping in entrepreneurs. Participants described coping in *reaction* and *anticipation* of actual and/or potential stressors. As such, in addition to assessment of the functional nature of coping responses via the Brief COPE (Carver, 1997), coping responses were also assessed using two scales from the Proactive Coping Inventory (Greenglass et al., 1999): Preventative Coping and Proactive Coping. Using these measures in combination allowed the researcher to investigate the impact of both functional and temporal elements of coping on burnout using quantitative methods in Phase Two.

This chapter focuses on presenting a discussion of *Phase Two findings*. Phase One findings were discussed in Chapter Five due to the sequential nature of the research design, with Phase One informing Phase Two.

### **8.3 Research Summary - Discussion of Phase Two Findings**

This section discusses the findings obtained in Phase Two, and is ordered per the overarching themes that guided the second phase of the research program:

- Dimensions of function-oriented coping typologies, and the influence of functional coping in the stress-burnout relationship in entrepreneurs;
- The relationship between time-oriented coping and burnout dimensions, and the influence of time-oriented coping on the stress-burnout relationship in entrepreneurs;
- The role of trait time perspective in the stress-burnout process; and
- Predictors of burnout.



### 8.3.1 *Dimensions of functional coping in entrepreneurs*

#### *Research Aim 1: Explore the factor structure of functional coping in the current sample of entrepreneurs*

Owing to a lack of prior research investigating the factor structure of functional coping in entrepreneurs, the first aim of Phase Two was to identify a parsimonious set of functional coping dimensions which could subsequently be used to investigate functional coping efficacy.

Results indicated a three-factor structure of functional coping in entrepreneurs. The three factors were labelled External Coping, Internal Coping, and Relational Coping. These labels were chosen in acknowledgement of the direction of the coping response. Externally-focused strategies aim to change the source of stress (e.g., Planning and Active Coping). Internally-focused strategies aim to alleviate an individuals' level of emotional distress (e.g., Behavioural Disengagement, Substance Use, and Venting). Relational Coping captures strategies that involve seeking support from others or 'things' (e.g., religious symbols).

External Coping and Internal Coping appear to conceptually align with problem-focused and emotion-focused categories (cf. Folkman et al., 1986). Functional coping strategies (cf. Carver 1997) which are widely considered to be problem-focused (e.g., Planning, and Active Coping) generally loaded on External Coping, while functional strategies that are widely considered to be emotion-focused (e.g., Substance Use, and Denial) tended to load on Internal Coping. These findings provide some support for using emotion- versus problem-focused coping taxonomies to inform the assessment of coping in entrepreneurship research. However, given that the current study also found Relational Coping to be a conceptually distinct dimension of coping in entrepreneurs, the findings further suggest that prior studies which have adopted a broad 'emotion- versus problem-focused' taxonomy (e.g., Drnovšek et al., 2010; Patzelt & Shepherd, 2011; Singh, Corner, & Pavlovich, 2007) might have masked the unique contribution of support seeking behaviours to coping in entrepreneurs.

The three-factor structure of coping in entrepreneurs differs from the other coping typologies considered in literature (i.e., approach versus avoidance, and form by direction). In relation to the approach versus avoidance typology (see Section 2.5.2), External-Coping shared conceptual overlap with approach coping, however functional strategies that loaded on Internal Coping could be classified according to both approach or avoidance categories. These findings indicate that approach and avoidance categories did not provide conceptually distinct higher order categories of coping in the current sample of entrepreneurs. The three-factor structure further differs from Begley's (1997) nine-category matrix system (outlined in Section 2.5.3) due to providing greater parsimony with regard to higher order dimensions of coping. To illustrate this point, consider the functional strategies that loaded on External Coping (i.e., Planning, Active Coping, Acceptance, and Positive Reframing). According to Begley's framework, these strategies find place within the Behavioural-Change, Cognitive-Change, and Cognitive-Adapt categories respectively.

In summary, findings from the current research supported a three-factor structure of coping in entrepreneurs in the present sample: External Coping, Internal Coping, and Relational Coping. The next section discusses the role each factor played in buffering the effect of stress on burnout in entrepreneurs.

*Research Aim 2: Explore which functional aspects of coping buffer the effect of stress on burnout in entrepreneurs*

The current research investigated which functional aspects of coping buffer the effect of stress on burnout (cynicism, professional efficacy, exhaustion) in entrepreneurs using the three dimensions of functional coping (External Coping, Internal Coping, and Relational Coping), identified in Research Aim 1. Results are discussed below.

### **External Coping**

Results suggested that External Coping diminishes the effect of Perceived Stress on Cynicism, at moderate to high levels of Perceived Stress. Additionally, higher levels of External Coping were associated with higher levels of Professional Efficacy regardless of the level of Perceived Stress.

Cynicism and (lack of) Professional Efficacy are characterised by negative emotions, in this case towards one's work and one's self respectively. Hence, the present results are consistent with research by Patzelt and Shepherd (2011), who found problem-focused coping (i.e., External Coping) buffered the relationship between self-employment and negative emotions. Results are also congruent with previous findings that indicate problem-focused coping facilitates well-being in entrepreneurs (Drnovšek et al., 2010).

No support was found for a moderating effect of External Coping on the relationship between Perceived Stress and Exhaustion. External Coping comprises both cognitive (Acceptance, Positive Reframing) and behavioural (Planning, Active Coping) coping strategies. Such strategies may exacerbate the effect of Perceived Stress on Exhaustion due to requiring investment and potentially further depletion of personal resources when the individual is already exhausted (cf. COR theory Hobfoll, 1989).

### **Internal Coping**

No support was found for Internal Coping as a moderator of the relationship between Perceived Stress and burnout. While previous studies have shown that entrepreneurs use emotion-focused strategies (i.e., Internal Coping) to regulate emotions such as grief, guilt, and despair in response to the stressor of venture failure (Cope, 2011; Jenkins, 2012; Shepherd, 2003; Singh et al., 2007), the current sample of entrepreneurs were owners of ventures which were currently active and therefore may have experienced more transient emotional states. Future studies may wish to compare the effectiveness of coping strategies in buffering the effect of stress on strain across different venture stages.

### **Relational Coping**

Contrary to research by Rahim (1996), which found no support for a moderating effect of social support on the relationship between stress and strain in entrepreneurs, the present results suggested that higher levels of Relational Coping (i.e., Using Instrumental/Emotional Support and Religion) are associated with higher levels of Professional Efficacy at moderate to high levels of Perceived Stress. In a 'real world context', this finding suggests that seeking support from others may illuminate

pathways for problem-solving and task accomplishment (i.e., enhanced Professional Efficacy).

Given the social nature of Relational Coping, it could be expected that the strength of the moderation effect would vary depending on the quantity and quality of an entrepreneurs' social networks; a larger and higher quality network likely provides greater advantage to entrepreneurs when coping with stress through providing access to a greater resources pool (cf. Hobfoll 1989). Properties of entrepreneurs' social networks were not measured in the current research, and as such, future studies could investigate their influence by using social network analysis, which is an emerging methodological approach in entrepreneurship research (see for example: Williams & Shepherd, 2015).

In sum, support was found for a buffering effect of External Coping and Relational Coping on the relationship between Perceived Stress and Professional Efficacy (at moderate and high levels of Perceived Stress). No support was found for a buffering effect of Internal Coping on the relationship between Perceived Stress and burnout (Exhaustion, Cynicism, or Professional Efficacy). Additionally, External Coping was the only dimension of functional coping found to diminish the effect of Perceived Stress on Cynicism (at moderate and high levels of Perceived Stress). Lastly, no support was found for a moderating effect of either External, Internal, or Relational Coping on the relationship between Perceived Stress and Exhaustion.

### 8.3.2 *Time-oriented coping*

*Research Aim 3: Investigate the size and direction of the relationship between future-oriented coping (Preventative Coping and Proactive Coping) and dimensions of burnout (Exhaustion, Cynicism, and Professional Efficacy)*

As hypothesised, Preventative Coping and Proactive Coping were negatively related to entrepreneurs' propensity for burnout. These findings are consistent with prior studies that have found future-oriented behaviours to be positively associated with mental and physical health (Boyd & Zimbardo, 2005; Hall & Fong, 2003; Henson et al., 2006). Notably, there was no meaningful difference in the size of the relationship between the two future-oriented forms of coping and burnout. This finding is contrary to prior

research (see e.g., Gan et al., 2007; Zambianchi & Ricci Bitti, 2014), which found Proactive Coping to be a stronger predictor of strain than Preventative Coping. In contrast to the current study, both Gan et al. (2007) and Zambianchi and Ricci Bitti (2014) measured future oriented coping in a sample of young adults enrolled in undergraduate courses. Findings from the current study indicate that a positive view of the future – a tenet of Proactive Coping that differentiates it from Preventative Coping – does not provide benefit over and above future-oriented behaviours alone in the current sample of entrepreneurs.

*Research Aim 4: Determine the buffering effect of time-oriented coping on the stressor-strain relationship*

Contrary to the hypotheses, no support was found for a moderating effect of future-oriented coping on the relationship between Perceived Stress and (a) Exhaustion, (b) Cynicism), or (c) Professional Efficacy. The failure to detect a significant interaction may be owing to temporal dimensions of coping being less important in moderating the stressor-burnout relationship than functional dimensions (External Coping and Relational Coping), for which a significant interaction was found.

*8.3.3 The role of trait time perspective in the stress-strain process*

The current research investigated an entrepreneurs' orientation towards time (i.e., present/future time perspective) using the Zimbardo Time Perspective Inventory (Zimbardo & Boyd, 1999). As introduced in Chapter One, trait time perspective was included as a variable of interest in the current research owing to entrepreneurs being attributed with future-oriented traits, and these traits showing an advantage for stress resilience i.e., positively related to mental and physical health (see e.g., Aspinwall, 2011; Boyd & Zimbardo, 2005; Griva et al., 2015; Henson et al., 2006). Phase Two investigated the relationship between trait time perspective and entrepreneurs' propensity for burnout, and whether trait time perspective affects strain outcomes via coping responses. Results are discussed below.

*8.3.3.1 Research Aim 5: Investigate the relationship between trait time perspective and an entrepreneur's propensity for burnout*

Present Fatalism was positively related to all dimensions of burnout, thus H4 was supported. This result is congruent with some studies outside the entrepreneurship literature (e.g., Drake et al., 2008; Zimbardo & Boyd, 1999), which have found Present Fatalism to positively correlate with stress-related problems (e.g., depression) and negatively correlate with subjective happiness, as well as studies that link Present Fatalism with poor health outcomes (see e.g., Guthrie et al., 2009; Hall & Fong, 2003). In relation to Professional Efficacy, findings support previous entrepreneurship studies, which have suggested that Present Fatalism negatively correlates with entrepreneurs' perceptions of success (Przepiorka, 2015; Zaleski & Przepiórka, 2015).

Partial support was found for H5, such that a positive correlation was found between Present Hedonism and Professional Efficacy. However, this relationship was weak, and is unlikely to have application in a real-world context.

Higher Future time perspective was found to negatively associate with all dimensions of burnout, thus H6 was supported. This finding is in keeping with some studies outside the entrepreneurship literature (e.g., Boyd & Zimbardo, 2005; Hall & Fong, 2003; Henson et al., 2006; Holman & Silver, 2005), which find Future time perspective to positively relate to health. Findings are further consistent with recent findings that a future temporal focus positively associates with perceptions of health status (Griva et al., 2015) given that burnout was self-reported in the current study. The results provide valuable insights into the relationship between trait time perspective and burnout dimensions in entrepreneurs and support for further investigation of the role of trait time perspective in burnout propensity in entrepreneurs.

*8.3.3.2 Research Aim 6: Investigating whether trait time perspective affects implications for strain outcomes via coping responses*

Results indicated that higher trait Future time perspective predicted lower burnout via its effect on coping responses. Specifically, higher trait Future predicted lower Internal Coping which in turn predicted both lower Exhaustion and Cynicism. It could be

expected that use of Internal Coping would decrease as trait Future time perspective increases, because an individual who focuses on the future would be less likely to use coping strategies that disengage them from approaching tasks and goals (e.g., Substance Abuse, Self-Distraction).

An entrepreneur's orientation towards the present was found to have implications for burnout via its effect on coping. Results found higher trait Present Fatalism to predict higher Internal Coping which in turn predicted higher Cynicism. Trait Present Fatalism had a negative indirect effect on Professional Efficacy, such that higher Present Fatalism predicted lower Preventative and Proactive Coping which in turn predicted higher Professional Efficacy. These results could largely be expected considering previous studies finding a hopeless view of life to negatively associate with health and well-being (see e.g., Guthrie et al., 2009; Hall & Fong, 2003; Henson et al., 2006; Sword et al., 2014; Zimbardo & Boyd, 1999).

Higher trait Present Hedonism predicted higher Internal Coping, which in turn predicted higher Cynicism. Furthermore, higher trait Present Hedonism was found to predict higher Preventative Coping, which in turn predicted higher Professional Efficacy. In sum, these results suggest that trait Present Hedonism has both positive and negative implications for burnout.

Findings from this research may somewhat explain contradictory findings regarding the relationship between emotion-focused coping and strain outcomes in the entrepreneurship literature (reported in Section 2.7.1) in that there could be an interplay between the function and time orientation of coping strategies. Little is known about the indirect effect of time orientation on health outcomes (for exceptions see: Crockett, Weinman, Hankins, & Marteau, 2009; Orbell & Hagger, 2009; Sheeran & Abraham, 2003). Given that individual difference variables may exert influence on coping strategy selection which in turn may influence strain outcomes (Hampson, 2012; Weibe & Smith, 1997), future entrepreneurship research may benefit from not only investigating *which* coping strategies entrepreneurs use (function), but also *how* coping is enacted (time orientation).

*8.3.4 Predictors of burnout – the proportion of variance in dimensions of burnout that can be accounted for by coping and trait time perspective*

*Research Aim 7: Explore the proportion of variance in dimensions of burnout that can be accounted for by coping and trait time perspective*

An exploratory approach was used to determine predictors of burnout in the current sample of entrepreneurs. Results indicated that Perceived Stress, Present Fatalism, Future time perspective, and Proactive Coping contributed to the prediction of Exhaustion, in that order. Present Fatalism, Internal Coping, and Perceived Stress (in that order) contributed to the prediction of Cynicism, whilst Age, Future time perspective, and Perceived Stress (in that order) contributed to the prediction of Professional Efficacy.

As shown in the study data, Perceived Stress was found to be a predictor of all burnout dimensions, consistent with previous studies (Rahim, 1996; Shepherd et al., 2010; Wei, Cang, & Hisrich, 2015). Findings are also consistent with prior research which has found stress to more strongly predict Exhaustion, than Cynicism or Professional Efficacy (see: Lee & Ashforth, 1996), as was the case here.

Contrary to expectation, higher trait Future time perspective and higher Proactive Coping were both associated with higher Exhaustion. This may be due to future-oriented behaviours being associated with resource depletion e.g., investment of energy in expectation of future rewards (Hobfoll, 1989; Stiglbauer & Batinic, 2015), as suggested by recent entrepreneurship burnout research (Wei et al., 2015). As mentioned in Section 5.6, resource investment may be detrimental if resource levels are low prior to future-oriented behaviours being enacted (Cangiano & Parker, 2016). Given that participants' resource levels were not measured in the current study, it is not known if an entrepreneurs' current resource base plays a role in the outcomes of future-oriented behaviours.

The relationship between trait Future time perspective and burnout was strongest for Professional Efficacy, such that a higher future perspective was associated with higher Professional Efficacy (i.e., decreased burnout). Due to the cross-sectional nature of the



current research, the direction of this relationship is not known. It is plausible that entrepreneurs who believe in their professional abilities are more likely to invest current resources in expectation of future gains (cf. Hobfoll 1989). It is also plausible that entrepreneurs with low Professional Efficacy may be reluctant to invest resources in expectation of future gains; an entrepreneur who does not believe in their professional ability is likely to feel that an investment of current resources will unlikely ‘pay off’ in the long term. Future studies may wish to use a longitudinal research design to explore the causal direction of this relationship.

The finding that Cynicism was positively influenced by Present Fatalism, Internal Coping (as well as Perceived Stress – discussed above), is somewhat expected. Present Fatalism (i.e., a hopeless view of life, Zimbardo & Boyd, 1999) and Cynicism (i.e., a negative attitude towards life and others, Maslach & Leiter, 2008) are conceptually similar, whilst Internal Coping includes emotion-focused strategies, which in the wider coping literature, tend to be considered maladaptive i.e., associated with declining psychological health (Baker & Berenbaum, 2007; Carver & Connor-Smith, 2010). Trait Present Fatalism was also found to predict Exhaustion. Similarly, prior research has shown that a fatalistic-orientation is negatively related to the level of effort and persistence entrepreneurs make towards their ventures (see: Przepiorka, 2015).

Age was shown to be the strongest predictor of Professional Efficacy (followed by Future time perspective, and Perceived Stress – discussed above). While this finding suggests that an entrepreneur’s age is a protective factor in relation to burnout, it is perhaps more likely that this result is due to survivor bias (i.e., individuals who have left entrepreneurship due to ‘burning out’ were not eligible to participate in the current research). This assumption is reflective of prior research showing health outcomes to be influenced by years of entrepreneurship experience (see e.g., Uy et al., 2013).

This concludes the current discussion of Phase Two findings. The next section presents key strengths and limitations of the overall research program and suggestions for future research.

## **8.4 Strengths and Limitations of the Research Program and Suggestions for Future Research**

### *8.4.1 Key strengths of the overall research program*

A strength of the current research program is the mixed-methods approach used to gain an understanding of the nature of coping in entrepreneurs. The current research used an exploratory sequential research design (cf. Creswell and Plano Clark, 2011), which is optimal when “investigators may not know the questions that need to be asked, the variables that need to be measured, and the theories that may guide the study” (Creswell & Plano Clark, 2011 p.9), as was the case with the current research. Without first exploring coping using qualitative methods (i.e., Phase One), the research may have omitted key variables (e.g., future-oriented coping) from the quantitative investigation (i.e., Phase Two).

Additionally, the current research used established theories, coping taxonomies and measures. This approach enables integration of the current research with the broader stress and coping literature.

### *8.4.2 Limitations of the current research*

Limitations specific to Phase One were previously outlined in Section 5.8. Several limitations of Phase Two have previously been mentioned. For example, Section 6.4 outlined limitations of the survey-based research, notably issues associated with self-report measures, response bias, strengths and limitations of correlational research design, and common method variance. Limitations pertaining to the sampling framework for the current study were noted in Section 6.5, and included challenges associated with using a volunteer opt-in panel sampling technique. In addition, other limitations unique to Phase Two are outlined next.

The definition of ‘entrepreneur’ used throughout the research program was ‘active owner manager’. Use of a broad category definition acts to homogenise a heterogenous occupational group. Phase Two findings cannot be extrapolated to all entrepreneurs, in part, owing the diverse nature of the entrepreneur population. Sample characteristics

unique to Phase Two include the percentage of women who took part in the research, which is higher than is typically observed in the wider entrepreneurship community (see: Global Entrepreneurship Monitor, 2014; Obschonka, Schmitt-Rodermund, & Terracciano, 2014). Furthermore, as was reported in Section 7.4, comparison of demographic variables for non-contracted and contracted data found that data could not be considered to represent a single sample, owing to the levels of education in participants recruited by the researcher being significantly higher than those in the contracted data sample. It is possible that the decision not to combine the two samples resulted in a final sample that underrepresents the education levels of Australian entrepreneurs – as no benchmark of education levels in Australian entrepreneurs could be located (see Section 7.4) it is not known whether this has occurred. Furthermore, data were collected from Australian entrepreneurs only, and as such, findings may have limited generalisability in an international context where business environments or cultural values that could influence coping responses.

The Phase Two questionnaire captured basic demographic information relating to participants' business experience. In hindsight, it would have been useful to ask participants whether previously operated businesses had ceased operating due to business failure. It is plausible that an entrepreneur who is operating their business after experiencing business failure is more resilient to entrepreneurial stressors than a participant who lacks prior experience (e.g., a nascent or startup entrepreneur); entrepreneurs who have experienced business failure have likely learned from the experience and may be better able to cope when encountering stressors in subsequent ventures (see: Shepherd, 2003; Singh et al., 2007). Follow up studies might benefit from capturing greater detail about an entrepreneur's prior entrepreneurship experience to better integrate with the entrepreneurship failure literature.

Limitations are also present in the measures used throughout the research program. For example, three, rather than five, subscales in the ZTPI (Zimbardo & Boyd, 1999) were used in the current research to assess time orientation. The three subscales were chosen based on their congruence with the direction with which coping is enacted: Present Hedonism and Present Fatalism were thought to be congruent with reactive (i.e., present oriented) coping, and Future time perspective thought congruent with anticipatory (i.e.,

future oriented) coping. Considering growing evidence that negative past orientation is detrimental for wellbeing (see: Cole, Andretta, & McKay, 2017; Olivera-Figueroa, Juster, Morin-Major, Marin, & Lupien, 2015; Stolarski, 2016), it is recommended that follow up studies incorporate measures of past orientation. Doing so may be particularly insightful in entrepreneurship research, for example, when investigating the influence of negative perceptions of business failure on an entrepreneur's likelihood to experience burnout in subsequent ventures. A related limitation is the decision to investigate dimensions of time perspective singularly. Studies outside the entrepreneurship literature (see: Stolarski, Vowinckel, Jankowski, & Zajenkowski, 2015; Zhang, Howell, & Stolarski, 2013) have shown that the ZTPI subscales can be combined to calculate a Balanced Time Perspective (BTP), which can be used to predict health and wellbeing outcomes and understand relationships between temporal profiles and health outcomes with greater nuance than is achieved when considering singular temporal dimensions.

The approach taken in the current research was to conceptualise burnout as resulting from 'overload' i.e., demands exceeding resources, which was measured using the Perceived Stress Scale (Cohen & Williamson, 1988). As noted in Section 2.3, there are several other theories relating to why individuals experience burnout. These include burnout occurring due to 'underload' (i.e., monotony), to a loss of resources (cf. Hobfoll 1989), and to one's lowered belief in the importance of their work and ability to achieve desirable results i.e., existential perspective (cf. Pines, 1993). Owing to the infancy of burnout research in the entrepreneurship domain, further research is perhaps warranted for investigating burnout through alternative theoretical lenses.

The current research did not investigate sources of stress, which is noted by Singh et al., (2007) to be important when determining the efficacy of coping in alleviating strain. Sources of stress were not measured owing to a lack of available measures (see Section 1.5.2). Therefore, results from Phase Two do not provide insight as to whether the efficacy of coping is domain dependent (e.g., economic, social, psychological). Such knowledge would likely better equip health practitioners when assisting entrepreneurs with stress-management interventions, as coping advice could be tailored to stressor origin. Health professionals are well placed in their role at the 'front line' to integrate

research findings into their counsel. Enhanced understanding of the sources of entrepreneurial stress represents an area for future research.

Lastly, Phase Two used a cross-sectional research design: data were collected at a single point in time. Since causal interpretation cannot be drawn from the current research, further studies are needed. A longitudinal research design would have enabled investigation of pathways or bi-directionality between variables. For example, a longitudinal research design would allow for investigation of whether Internal Coping enhances the outcome of External Coping – a relationship which has been shown to exist for emotion focused and problem-focused coping (see e.g., Baker & Berenbaum, 2007; Folkman & Moskowitz, 2004; Uy et al., 2013).

#### *8.4.3 Suggested key areas for future research*

In addition to previously mentioned suggestions for future research, there are several key areas warranting further investigation, which could not be addressed in the current research program due to limitations of scope.

Firstly, findings from Phase One indicated that spousal behaviours might aid or hinder entrepreneurship outcomes. For example, on the one hand, some later-stage entrepreneurs deliberately avoided seeking emotional support from their spouse due to differences in ‘risk appetite’ and increasing levels of distress if support was sought. On the other hand, some early-stage entrepreneurs described benefiting from the support provided by their partner. As such, one area for future entrepreneurship scholarship is investigating the influence of spousal (or romantic partner) support on entrepreneurs’ health and wellbeing. Conversely, future research might consider the impact of business ownership on family wellbeing, notably in relation to divorce, which was mentioned by some Phase One participants as having resulted from exposure to stressors associated with business ownership.

Secondly, the timely nature of the current research was noted in Section 1.2, where attention was drawn to the upward trend in the number of individuals pursuing entrepreneurship, the associated rise in the number of business owners, and the increasing number of higher education providers offering entrepreneurship courses

(Maritz, Jones, & Shwetter, 2015; O'Connor, 2013). Largely absent from the Australian entrepreneurship narrative is dialogue related to 'what happens when entrepreneurship goes wrong?' The review of entrepreneurship stress and coping literature presented in Part I, in combination with findings from Phase One and Phase Two, highlighted the potential deleterious effects of embarking on an entrepreneurship career. For example, many entrepreneurs in Phase One spoke of experiencing high levels of strain, marriage breakdowns, psychological distress, suicidal ideation, and mental health conditions. Higher education institutions delivering entrepreneurship education likely provide a ready platform for assisting entrepreneurs in coping with stress. Unfortunately, stress-management does not appear to be an agenda item for high education providers, with current entrepreneurship programs favouring courses that focus on 'business' skills (e.g., venture creation). By contrast, skill development focused on coping and mental health management is largely absent from the entrepreneurship curriculum. This is somewhat surprising given that the performance of the individual is central to venture success (Shepherd et al., 2010), and that an individual experiencing strain (who lacks coping skills) is unlikely to perform at her/his best (Jamal, 2007). Future research might investigate how entrepreneurship education can contribute positively to the 'human side' of entrepreneurship, for as long noted by Gumpert and Boyd (1984), promoting coping related education yields not only health benefits, but also financial rewards. Given the costs associated with entrepreneurs experiencing strain (detailed in Part I), it appears pertinent to develop effective pedagogical approaches for equipping entrepreneurs with stress-management skills. This might be achieved by integrating stress management training into entrepreneurship educational programs. A related research opportunity is a longitudinal study to assess the impact of stress-management training on entrepreneurs' health and wellbeing.

Thirdly, it is acknowledged that the current research is deficit-oriented; the current research focuses on the negative effects of stress (e.g., burnout). Future studies could combine deficit-oriented perspectives of stress with positive perspectives (e.g., the energising role of gain spirals cf. Hakanen, Perhoniemi, & Toppinen-Tanner, 2008). Such an approach may shed light on the motivational role of stress and the importance of resources for entrepreneurs. Furthermore, this may help to explain why, despite

operating in an occupational environment characterised by high stressor exposure (see Section 1.5.1), some entrepreneurs are highly engaged with their work

### 8.5 Implications of Findings and Contributions to Theory and Practice

The current research contributes to understanding influencing variables on the stressor-strain process in entrepreneurs. Several key contributions to the entrepreneurship stress and coping literature are noted below.

Firstly, findings are expected to assist researchers in making decisions as to the dimensions of coping to use when investigating coping in entrepreneurs (e.g., External, Internal and Relational Coping). The current research has also highlighted that it is perhaps insufficient to investigate *which* functional dimensions of coping are used by entrepreneurs – but instead future studies should seek to understand *how* coping is enacted. That is, it is perhaps necessary to understand not only the functional strategies used by entrepreneurs but also whether strategies are enacted in reaction to and/or anticipation of a stressor.

The current research further establishes that a more nuanced understanding of burnout in entrepreneurs is achieved when trait time perspective is integrated into a study's research design alongside more frequently examined dimensions such as stress and coping. Findings indicate that temporal perspective (notably Present Fatalism and Future) explain unique variance in burnout dimensions. As demonstrated by the present analysis, specific types of coping and certain trait time orientations are found to play a key role in minimising the risk of burnout. As such, temporal interventions (e.g., time perspective therapy cf. Sword et al., 2014) might represent a suitable focus for stress-management programs for entrepreneurs, and assist entrepreneurs in maintaining high levels of engagement throughout the entrepreneurship career.

The current study is unique in its approach to exploring function-oriented and time-oriented coping, perceived stress, and trait time perspective as predictors of burnout in a sample of entrepreneurs. Entrepreneurs might use the findings from the current research to reflect on whether they might be prone to experiencing burnout. For example,

entrepreneurs might use freely available tools (e.g., ZTPI; Zimbardo & Boyd 1999) to critically reflect on their temporal preferences in consultation with health professionals.

Findings from the current research are expected to have implications outside the entrepreneurship domain in relation to the changing nature of the workforce.

Increasingly, employees are encouraged to be ‘more entrepreneurial’ by organisations that are seeking entrepreneurial capacity in their workforce (e.g., proactivity, innovativeness, and the ability to inspire others) (Moriano, Molero, Topa, & Mangin, 2014). Organisations that encourage entrepreneurial behaviour in employees (i.e., intrapreneurship) are found to perform better than organisations that do not (Rauch et al., 2009). As the characteristics attributed to entrepreneurs and (some) employees blur (de Jong et al., 2015), it is likely that findings from entrepreneurship research will become increasingly valuable in an organisational context. Employees may benefit from awareness and skills training aimed at encouraging proactive behaviours and an orientation towards the future.

## 8.6 Concluding Remarks and Reflection

The current research investigated how entrepreneurs cope with stress, and the role of coping and dispositional time orientation in the stress-burnout process. Findings suggest that traits associated with entrepreneurs provide benefit in terms of stress resilience. Based on the findings from the research, it could be concluded that entrepreneurs may benefit from reducing internal-focused coping in favour of external-focused coping, and from relinquishing negative views of the present, and focusing on achieving future goals.

Although findings from the current research are expected to add to the emergent body of scholarly knowledge on coping and individual difference variables in entrepreneurs, and aid those who pursue an entrepreneurship career, there is still much which remains unknown. *There is a still a need to develop the body of knowledge of stress and coping in entrepreneurs, and that need remains more pertinent than ever.*



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## APPENDICES

### Appendix A: Phase One Interview Questions

The following questions were used to guide the semi-structured interviews with participants.

Examples of questions aimed at establishing what ‘type’ of entrepreneur the participant was, and the nature of their business:

- Firstly, can you tell me what kind of entrepreneur you are? That is, are you an aspiring or start-up entrepreneur, or an established entrepreneur?
- Please tell me about your business.
  - Prompting questions:
    - What does the business do?
    - What is your role in the business?

Example of a question aimed at exploring the level of stress currently felt by the participants:

- In general, how stressed do you feel in your role as an entrepreneur?

Examples of questions aimed at discovering how participants appraised stressors:

- How do you think stress impacts your business?
- How do you think stress impacts your personal life?
- How do you feel about the future?

Examples of questions aimed at determining which coping strategies are used by participants to cope with stress:

- How do you cope with stress?
- What do you think is the best way to cope with sources of stress that affect you at work?
- How do you prepare yourself for dealing with stress?
- What coping strategies would you recommend to other business owners?
- Is there anything I haven’t asked you about stress and coping that you’d like to tell me?

## Appendix B: Phase One Higher Order Coding Scheme for Thematic Analysis

CODE LABEL	DESCRIPTION
<b>Coping – Strategies</b> (Source: Brief COPE cf. Carver 1997)	
Active Coping	(a) I concentrate my efforts on doing something about the situation I'm in, (b) I take action to try to make the situation better.
Planning	(a) I try to come up with a strategy about what to do, (b) I think hard about what steps to take
Positive Reframing	(a) I try to see it in a different light, to make it seem more positive, (b) I look for something good in what is happening
Acceptance	(a) I accept the reality of the fact that it has happened, (b) I learn to live with it
Humour	(a) I make jokes about it, (b) I make fun of the situation
Religion	(a) I try to find comfort in my religion or spiritual beliefs, (b) I pray or meditate
Using Emotional Support	(a) I get emotional support from others, (b) I get comfort and understanding from someone
Using Instrumental Support	(a) I try to get advice or help from other people about what to do, (b) I get help and advice from other people
Self-Distraction	(a) I turn to work or other activities to take my mind off things, (b) I do something to think about it less, such as going to the movies, watching TV, reading, daydreaming, sleeping, or shopping
Denial	(a) I say to myself "this isn't real", (b) I refuse to believe that it has happened
Venting	(a) I say things to let my unpleasant feelings escape, (b) I express my negative feelings
Substance Use	(a) I use alcohol or other drugs to make myself feel better, (b) I use alcohol or other drugs to help me get through it
Behavioural Disengagement	(a) I give up trying to deal with it, (b) I give up the attempt to cope
Self-Blame	(a) I criticize myself, (b) I blame myself for things that happen
<b>Other strategies</b>	
Avoids encountering the stressor	Refers to avoiding a stressor
Existential coping / 'Why'	References to connecting with your 'why' (i.e. your purpose for entering into and continuing to engage with entrepreneurship)
Healthy living choices	Reference to diet and exercise that might not fit into other node classifications
Other	Coping strategies that don't seem to fit any other node
<b>Appraisal</b>	
Appraisal	How entrepreneurs appraise stress
Threat Harm-Loss	Stress appraised as a threat or harm-loss
Challenge	Stress appraised as a challenge
Mixed appraisal	Entrepreneur appraises stress as both positive and negative
Neutral	Entrepreneur sees stress as neither negative or positive
Ability to act	Appraisal linked to the entrepreneur's ability to action the stressor
Productivity Driver	Stress is seen as something that makes the entrepreneur more productive



Appendix C: Phase One Ethics Approval

To: A/Prof. Alex Maritz, FBE

Dear Alex and Bronwyn,

**SHR Project 2014/047 Coping: A buffer to burnout in entrepreneurs**

A/Prof. Alex Maritz, FBE et al.

Approved duration from 16-04-2014 to 28-02-2016

I refer to the ethical review of the above project protocol by a Subcommittee (SHESC3) of Swinburne's Human Research Ethics Committee (SUHREC). Your responses to the review, as per the email sent on 15 April 2014, were put to the Subcommittee delegate for consideration.

I am pleased to advise that, as submitted to date, the project may proceed in line with standard on-going ethics clearance conditions here outlined.

- All human research activity undertaken under Swinburne auspices must conform to Swinburne and external regulatory standards, including the current *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 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, self-audits and progress reports can be found at:  
<http://www.research.swinburne.edu.au/ethics/human/monitoringReportingChanges/>
- 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. The SHR project number should be quoted in communication. Researchers should retain a copy of this email as part of project recordkeeping.

Best wishes for the project.

Yours sincerely,

Astrid Nordmann  
SHESC3 Secretary

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Dr Astrid Nordmann  
**Research Ethics Executive Officer**  
Swinburne Research (H68)  
Swinburne University of Technology  
PO Box 218, Hawthorn, VIC 3122  
Tel: +613 9214 3845  
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## Appendix D: Phase One Consent Information Statement

### SWINBURNE UNIVERSITY OF TECHNOLOGY

#### Consent Information Statement



**PROJECT TITLE:** Coping: A buffer to burnout in entrepreneurs

**PRINCIPAL INVESTIGATOR:** Bronwyn Eager (Masters of Commerce [by research] student)

**SUPERVISORS:** Dr Alex Maritz, Dr Sharon Grant, Dr Susan Rushworth, Dr Lyndon Walker

#### WHAT IS THE STUDY ABOUT?

The occupational stress literature is based largely on studies of salaried workers with pre-defined jobs in large organisations. However, the process of coping with sources of stress ('stressors') among salaried workers may be less relevant for entrepreneurs. The aim of this study is to help gain a better understanding of the relevance of existing stress and coping frameworks to entrepreneurs.

#### PROJECT AND RESEARCHER INTERESTS

This project is being undertaken to satisfy the requirements for the completion of a Masters of Commerce (by research) qualification currently being undertaken by the principal investigator at Swinburne University of Technology.

#### WHY IS THE STUDY IMPORTANT?

The project aims to investigate the buffering effects of coping on burnout. Phase One of this study (i.e., the current project) aims to clarify the relevance of existing stress and coping frameworks, so that a second research project (Phase Two) can determine which coping strategies should most likely be investigated for their potential effect on buffering stress on strain.

In addition, health professionals working with entrepreneurs could use the findings from this study to inform stress prevention and/or management programs. Reducing stress and illness in entrepreneurs should enhance the quality of both their personal and professional business lives.

#### WHAT DOES THE STUDY INVOLVE?

Participation in the study involves a one-to-one interview with the researcher designed to assess the relevance of existing stress and coping frameworks to entrepreneurs. The interview will involve providing feedback on existing coping frameworks to assess (1) the frameworks' relevance to the way(s) in which the entrepreneur copes, (2) discover whether the entrepreneur copes in ways different to existing frameworks. Feedback is also sought on the current level of stress experienced by the entrepreneur. Participants will also be asked to complete a demographic information questionnaire (e.g., age, sex, education, marital status, country of birth, business age, business/industry type, business size) for the purpose of sample description.

It is possible that questions about coping with stress may invoke distress in some participants. If you have concerns that you would like to discuss with a counsellor, please contact the Swinburne Psychology Clinic (a low cost counselling service; for Victorian participants) on (03) 9214 8025 or Lifeline (a 24-hour, telephone counselling service; Australia-wide) on 13 11 14.

#### WHAT IS THE TIME COMMITMENT?

The interview should take approximately 45 minutes to complete and can be completed face-to-face, online (e.g., via Skype) or via telephone, at a time and location that is convenient to you. Participation in this study is **voluntary**. You are free to omit any questions you do not wish to answer and you may withdraw from the study at any time.



**WILL ALL DATA PROVIDED BE CONFIDENTIAL?**

You will not be required to give your name or to provide any other identifying information. For administrative purposes, your name will be replaced by a random code. This code will be recorded at the start of the interview and also placed on the demographic information questionnaire. Accordingly, all data will be anonymous and data will not be traceable to a particular individual. No information about any individual will be given to Swinburne University, or to any other individual or organisation. All processed data will be stored electronically with password protection. Only the researcher will have access to the data. Your signed consent form will be stored separately to the data collected and only accessible to the listed researcher.

**HOW WILL THE DATA BE USED?**

Findings from this project will be used mainly to satisfy the requirements of the researcher's academic qualification, Masters of Commerce (by research).

Findings from the project may also be published in an academic journal, book, or presented at a conference. Data will be analysed and reported on an aggregate (group-level) basis or in a manner that does not identify the individual.

While results from the study may appear in publications, it will not be possible to identify individual participants through these publications (or otherwise) without your written consent.

**HOW DO I TAKE PART IN THE STUDY?**

If you would like to participate in this research project, or have any questions regarding the project at any stage, please contact:

Principal investigator:

*Bronwyn Eager (Masters of Commerce [by research] student)*

*Room AGSE 337*

*Hawthorn Campus*

*Tel: (03) 9214 8246*

*Email: beager@swin.edu.au*

Supervisor:

*Dr Alex Maritz (Associate Professor of Entrepreneurship)*

*Office BA1014*

*Hawthorn Campus*

*Tel: (03) 9214 8045*

*Email: amaritz@swin.edu.au*

**This project has been approved by or on behalf of Swinburne's Human Research Ethics Committee in line with the National Statement on Ethical Conduct in Research Involving Humans. If you have any concern or complaint about the conduct of this project, you can contact:**

**Research Ethics Officer, Swinburne Research, Swinburne University of Technology, P.O. Box 218, Hawthorn, VIC 3122. Tel. (03) 9214 5218 or rethics@swin.edu.au**

**Please retain this sheet for your records.**

### Appendix E: Phase One Participant Consent Form



**Signed Consent Form**  
**Swinburne University of Technology**

**Project Title:** Coping: A buffer to burnout in entrepreneurs

**Principal Investigator:**

Bronwyn Eager  
Room AGSE 337  
Hawthorn Campus  
Telephone: (03) 9214 8246  
Email: beager@swin.edu.au

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 allow the interview to be recorded by electronic device	Yes
▪ I agree to make myself available for further information if required	Yes
▪ I agree to be interviewed by the researcher about stress and coping	Yes
  
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 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 F: Sample Social Media Recruitment Posts

The following are examples of social media posts, and an email which were used during recruitment.

### **Twitter sample post**

Entrepreneurs wanted for stress and coping research #startup #smallbiz #entrepreneur

Entrepreneurs wanted for stress and coping online survey [insert survey link] #startup #smallbiz #entrepreneur

Stress and Coping Study on #entrepreneurs seeks participants [insert survey link] #startup #business #research

Contribute to the conversation on the health of entrepreneurs. Stress & Coping Survey [SURVEY LINK] #SME #SMB

### **Sample LinkedIn and Facebook post**

Seeking entrepreneurs for an online survey on stress, coping and burnout.

This research aims to identify coping strategies that help entrepreneurs to manage stress and reduce the risk of burnout.

For more information, click here [insert survey link]

### **Hashtags used in social media posts included:**

- #entrepreneur
- #smallbiz
- #startup
- #business
- #smallbusiness
- #SME
- #SocialBusiness
- #Research
- #Health
- #stress
- #survey

**Sample email sent to members of the researcher's professional network**

Dear [insert name],

I am conducting an online survey which aims to investigate stress, coping, and burnout in entrepreneurs. The project forms part of my Doctor or Philosophy (PhD) program of study at Swinburne University of Technology.

I am looking for participants to partake in the study. Participation is voluntary and all data is collected and reported anonymously.

If you are interested in learning more please visit [insert survey link], or contact me via email [insert email address] or by phone [insert phone number].

If you know anyone who might be interested in participating, please forward them this email.

Kind regards,

Bronwyn Eager

Appendix G: Phase One Demographic Information Questionnaire

Code (assigned by researcher): \_\_\_\_\_

**Instructions:** Please complete the following questions by ticking the appropriate box or by filling in the blanks where appropriate.

(a) My age is: \_\_\_\_\_

(b) Gender:

1. Female

2. Male

(c) Education:

1. No formal qualification

2. Pass in Year 12 or equivalent

3. TAFE certificate

4. Bachelor degree

5. Postgraduate degree

6. Other (please specify) \_\_\_\_\_

(d) Marital status:

1. Single

2. De facto

3. Married

4. Other (please specify) \_\_\_\_\_

(e) My country of birth is: \_\_\_\_\_

(f) Length of time in business: \_\_\_\_\_ months \_\_\_\_\_ years

(g) My business is based in the following industry: \_\_\_\_\_

(h) I currently employ: \_\_\_\_\_ people

Appendix H: Phase Two Ethics Approval

To: Dr Alex Maritz, FBE/Ms Bronwyn Eager

Dear Dr Maritz,

**SHR Project 2014/267 Coping: A buffer to burnout in entrepreneurs (Phase 2)**

Dr Alex Maritz, FBE/Ms Bronwyn Eager

Approved Duration: 11/11/2014 to 28/02/2016 [Adjusted]

I refer to the ethical review of the above project protocol by a Subcommittee (SHESC1) of Swinburne's Human Research Ethics Committee (SUHREC) at a meeting held 24 October 2014. Your response to the review, as emailed on 6 November was reviewed by a SHESC1 delegate *who wished to commend you for very effectively responding to the Subcommittee's concerns.*

I am pleased to advise that, as submitted to date, the project may proceed in line with standard on-going ethics clearance conditions here outlined.

- All human research activity undertaken under Swinburne auspices must conform to Swinburne and external regulatory standards, including the current *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 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, self-audits and progress reports can be found at:  
<http://www.research.swinburne.edu.au/ethics/human/monitoringReportingChanges/>
- 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. The SHR project number should be quoted in communication. Researchers should retain a copy of this email as part of project recordkeeping.

Best wishes for the project.

Yours sincerely,

Kaye Goldenberg  
Acting Secretary, SHESC1

-----  
Kaye Goldenberg  
**Research Ethics Executive Officer (Acting)**  
Swinburne Research (H68)  
Swinburne University of Technology  
Level 1, SPS, 24 Wakefield Street  
Hawthorn, VIC 3122  
Tel: +61 3 9214 5218  
Fax: +61 3 9214 5267

Email: [kgoldenberg@swin.edu.au](mailto:kgoldenberg@swin.edu.au)

## Appendix I: Phase Two Participant Consent Information Statement

**PROJECT TITLE:** Coping: A buffer to burnout in entrepreneurs

**STUDENT INVESTIGATOR:** Bronwyn Eager (PhD student, Faculty of Business and Enterprise)

**SUPERVISORS:** Dr Alex Maritz (Faculty of Business and Enterprise), Dr Sharon Grant (Faculty of Health, Arts and Design), Dr Susan Rushworth (Faculty of Business and Enterprise), Dr Lyndon Walker (Faculty of Health, Arts and Design)

### **WHAT IS THE STUDY ABOUT?**

The research aims to gain a better understanding of the relationship between stress, coping, time perspectives (e.g., past, present or future-oriented), and burnout in entrepreneurs, in order to provide recommendations about coping strategies that may reduce the effect of stress on symptoms such as emotional exhaustion, cynicism and low levels of professional efficacy.

### **PROJECT AND RESEARCHER INTERESTS**

This project is being undertaken to satisfy the requirements for the completion of a Doctor of Philosophy qualification currently being undertaken by the student investigator at Swinburne University of Technology.

### **WHY IS THE STUDY IMPORTANT?**

Health professionals working with entrepreneurs could use the findings from this study to inform stress prevention and/or management programs. Reducing stress and illness in entrepreneurs should enhance the quality of both their personal and professional business lives.

### **WHAT DOES THE STUDY INVOLVE?**

Participation involves completing an online survey that will take approximately 40 minutes. You are free to omit any questions you do not wish to answer and you may withdraw from the study at any time.

Survey questions relate to stress, coping, time perspective (e.g. whether you focus on the past, live in the moment, or focus on the future) and burnout (e.g. feelings of exhaustion, cynicism and lack of professional efficacy) as well as demographic information (e.g. age, sex, education). Your name or other identifying information is not required. Therefore all responses to the survey will be completely anonymous.

### **AGE RESTRICTION**

Please note that participation is restricted to persons 18 years of age and above.



## OVERSEAS PARTICIPANTS

Please abide by any local restrictions regarding participation in research.

### WILL ALL DATA PROVIDED BE CONFIDENTIAL?

Data will be stored with password protection. Only the named researchers will have access to the data and the data will not be given to any other individual or organisation.

Findings from this project will be used mainly to satisfy the requirements of the researcher's academic qualification, Doctor of Philosophy. Findings from the project may also be published in an academic journal, book, or presented at a conference. While results from the study may appear in publications, it will not be possible to identify individual participants through these publications (or otherwise).

Privacy and security statements for the survey can be found here [insert link].

It is possible that questions about coping with stress may invoke distress in some participants. If you have concerns that you would like to discuss with a counsellor, please contact the following services:

- Victoria, Australia: Swinburne Psychology Clinic (a low cost counselling service; for Victorian participants) on (03) 9214 8653
- Australia-wide: Lifeline (a 24-hour, telephone counselling service) on 13 11 14
- International: Lifeline International <https://www.lifeline.org.au/About-Lifeline/Lifeline-International/Looking-for-Help/Looking-for-Help>

*If you have any questions regarding the project, please contact the investigator:*

*Dr Alex Maritz*

*Responsible Swinburne First Investigator/Supervisor*

*Telephone: +61 3 9214 8045*

*Email: [amaritz@swin.edu.au](mailto:amaritz@swin.edu.au)*

This project has been approved by or on behalf of Swinburne's Human Research Ethics Committee (SUHREC) in line with the *National Statement on Ethical Conduct in Human Research*. If you have any concerns or complaints about the conduct of this project, please contact:

Research Ethics Officer, Swinburne Research (H68), Swinburne University of Technology, PO Box 218, HAWTHORN VIC 3122. Phone: (03) 9214 5218 or [resethics@swin.edu.au](mailto:resethics@swin.edu.au)

## Appendix J: Phase Two Participant Debriefing Statement

Thank you for participating in this online survey.

The study you have just completed aimed to gain a better understanding of stress, coping, time perspectives and burnout in entrepreneurs.

Recommendations derived for this research are expected to be of benefit to health professionals working with entrepreneurs, who could use the study's findings to inform stress prevention and/or management programs. Reducing stress and illness in entrepreneurs should enhance the quality of both their personal and professional business lives.

### COUNSELLING SERVICES

It is possible that answering questions about coping and stress may have invoked feelings of distress. If you experienced feelings of distress, or have concerns that you would like to discuss with a counsellor, please contact the following services:

- Victoria, Australia: Swinburne Psychology Clinic (a low cost counselling service; for Victorian participants) on (03) 9214 8653
- Australia-wide: Lifeline (a 24-hour, telephone counselling service) on 13 11 14
- International: Lifeline International <https://www.lifeline.org.au/About-Lifeline/Lifeline-International/Looking-for-Help/Looking-for-Help>

### CONFIDENTIALITY

Throughout the survey, no identifying information (e.g., name or email address) was requested. Collected data will be stored with password protection. Qualtrics software was used to collect this data, their security and privacy policy can be found here: <http://www.qualtrics.com/privacy-statement/>

Only the named researchers (listed below) will have access to the data and the data will not be given to any other individual or organisation.

STUDENT INVESTIGATOR: Bronwyn Eager (PhD student, Faculty of Business and Enterprise)

SUPERVISORS: Dr Alex Maritz (Faculty of Business and Enterprise), Dr Sharon Grant (Faculty of Health, Arts and Design), Dr Susan Rushworth (Faculty of Business and Enterprise), Dr Lyndon Walker (Faculty of Health, Arts and Design)

## FURTHER INFORMATION

If you have any questions regarding the project, or wish to learn more, please contact the investigator below:

- Dr Alex Maritz  
Responsible Swinburne First Investigator/Supervisor  
Telephone: +61 3 9214 8045  
Email: [amaritz@swin.edu.au](mailto:amaritz@swin.edu.au)

This project has been approved by or on behalf of Swinburne's Human Research Ethics Committee (SUHREC) in line with the *National Statement on Ethical Conduct in Human Research*. If you have any concerns or complaints about the conduct of this project, please contact:

Research Ethics Officer, Swinburne Research (H68), Swinburne University of Technology, PO Box 218, HAWTHORN VIC 3122. Phone: (03) 9214 5218 or [resethics@swin.edu.au](mailto:resethics@swin.edu.au)

Thank you again.

## Appendix K: Phase Two Questionnaire

### Demographic Information

Age:

Gender:

1. Male
2. Female
3. Other

Country of residence:

Marital Status:

1. Single
2. De facto
3. Married
4. Other (please specify)

Level of Education:

1. No formal qualification
2. High School (e.g. Year 12 or equivalent)
3. TAFE certificate
4. Bachelor degree
5. Postgraduate degree
6. Other (please specify)

Entrepreneur type:

Industry of current business(es):

Number of people business employs:

Number of sites at which business operates:

Annual organisational income:

Number of business you currently operate:

Number of previous businesses (not run by you at this time):

### Perceived Stress Scale (PSS)

(Cohen & Williamson, 1988)

Instructions: The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling how often you felt or thought a certain way.

*Response format:*

0 = never, 1 = almost never, 2 = sometimes, 3 = fairly often, 4 = very often,

## Items:

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous and “stressed”?
4. In the last month, how often have you felt confident about your ability to handle your personal problems?
5. In the last month, how often have you felt that things were going your way?
6. In the last month, how often have you found that you could not cope with all the things that you had to do?
7. In the last month, how often have you been able to control irritations in your life?
8. In the last month, how often have you felt that you were on top of things?
9. In the last month, how often have you been angered because of things that were outside of your control?
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

## Scoring:

PSS scores are obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0) to the four positively stated items (items 4, 5, 7, & 8) and then summing across all scale items.

**Brief COPE – Dispositional Format**

(Carver 1997; Carver et al., 1989)

*Instructions:* These items deal with ways you *generally* cope with stressors. There are many ways to try to deal with stressors. Obviously, different people deal with things in different ways, but I'm interested in how you deal with it. Each item says something about a particular way of coping. I want to know to what extent you do what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not – just whether or not you do it. Use these response choices. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

*Response format:*

- 1 = I haven't been doing this at all
- 2 = I've been doing this a little bit
- 3 = I've been doing this a medium amount
- 4 = I've been doing this a lot

## Items:

1. I turn to work or other activities to take my mind off things.
2. I concentrating my efforts on doing something about the situation I'm in.
3. I say to myself "this isn't real".
4. I use alcohol or other drugs to make myself feel better.
5. I get emotional support from others.
6. I give up trying to deal with it.
7. I take action to try to make the situation better.
8. I refuse to believe that it has happened.
9. I say things to let my unpleasant feelings escape.
10. I get help and advice from other people.
11. I use alcohol or other drugs to help me get through it.
12. I try to see it in a different light, to make it seem more positive.
13. I criticize myself.
14. I try to come up with a strategy about what to do.
15. I get comfort and understanding from someone.

16. I give up the attempt to cope.
17. I look for something good in what is happening.
18. I make jokes about it.
19. I do something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.
20. I accept the reality of the fact that it has happened.
21. I express my negative feelings.
22. I try to find comfort in my religion or spiritual beliefs.
23. I try to get advice or help from other people about what to do.
24. I learn to live with it.
25. I think hard about what steps to take.
26. I blame myself for things that happened.
27. I pray or meditate.
28. I make fun of the situation.

*Scoring:* SELF-DISTRACTION = sum of item 1 and item 19; ACTIVE COPING = sum of item 2 and item 7; DENIAL = sum of item 3 and item 8; SUBSTANCE USE = sum of item 4 and item 11; USING EMOTIONAL SUPPORT = sum of item 5 and item 15; USE OF INSTRUMENTAL SUPPORT = sum of item 10 and item 23; BEHAVIOURAL DISENGAGEMENT = sum of item 6 and item 16; VENTING = sum of item 9 and item 21; POSITIVE REFRAMEING = sum of item 12 and item 17; PLANNING = sum of item 14 and item 25; HUMOUR = sum of item 18 and item 28; ACCEPTANCE = sum of item 20 and item 24; RELIGION = sum of item 22 and item 27; SELF-BLAME = sum of item 13 and item 26.

### **Proactive Coping Inventory (PCI)**

(Greenglass, Schwarzer and Taubert 1999)

*Instructions:* The following statements deal with reactions you may have to various situations. Indicate how true each of these statements is depending on how you feel about the situation. Do this by checking the most appropriate box.

*Response format:*

1 = not at all true, 2 = barely true, 3 = somewhat true, 4 = completely true

#### Items of the Proactive Coping Scale

1. I am a "take charge" person.
2. I try to let things work out on their own. (-)
3. After attaining a goal, I look for another, more challenging one.
4. I like challenges and beating the odds.
5. I visualise my dreams and try to achieve them.
6. Despite numerous setbacks, I usually succeed in getting what I want.
7. I try to pinpoint what I need to succeed.
8. I always try to find a way to work around obstacles; nothing really stops me.
9. I often see myself failing so I don't get my hopes up too high. (-)
10. When I apply for a position, I imagine myself filling it.
11. I turn obstacles into positive experiences.
12. If someone tells me I can't do something, you can be sure I will do it.
13. When I experience a problem, I take the initiative in resolving it.
14. When I have a problem, I usually see myself in a no-win situation. (-)

#### Items of the Preventative Coping Scale

1. I plan for future eventualities.
2. Rather than spending every cent I make, I like to save for a rainy day.
3. I prepare for adverse events.

4. Before disaster strikes I am well-prepared for its consequences.
5. I plan my strategies to change a situation before I act.
6. I develop my job skills to protect myself against unemployment.
7. I make sure my family is well taken care of to protect them from adversity in the future.
8. I think ahead to avoid dangerous situations.
9. I plan strategies for what I hope will be the best possible outcome.
10. I try to manage my money well in order to avoid being destitute in old age.

*Scoring:* In scoring responses, 1 is assigned to “not at all true, 2 to “barely true”, 3 to “somewhat true” and 4 to “completely true”. (-) indicated reverse scoring, where: 1 becomes a 4, 2 becomes a 3, 3 becomes a 2, and 4 becomes a 1. Responses should be added to obtain a summed score for each scale.

### **Zimbardo Time Perspective Inventory (ZTPI)**

(Zimbardo & Boyd 1999)

Note: Only three (of the five) scales of the ZTPI are used within this study: Future, Present Hedonistic, and Present Fatalistic Time Perspective. Items from these three scales (total 37-items) are indicated below in bold.

*Instructions:* Read each item and, as honestly as you can, answer the question: "How characteristic or true is this of me?"

*Response format:*

1 = very uncharacteristic, 2 = uncharacteristic, 3 = neutral, 4 = characteristic, 5 = very characteristic

Items:

- 1. I believe that getting together with one’s friends to party is one of life’s important pleasures.**
2. Familiar childhood sights, sounds, smells often bring back a flood of wonderful memories.
- 3. Fate determines much in my life.**
4. I often think of what I should have done differently in my life.
5. My decisions are mostly influenced by people and things around me.
- 6. I believe that a person’s day should be planned ahead each morning.**
7. It gives me pleasure to think about my past.
- 8. I do things impulsively.**
- 9. If things don’t get done on time, I don’t worry about it.**
- 10. When I want to achieve something, I set goals and consider specific means for reaching those goals.**
11. On balance, there is much more good to recall than bad in my past.
- 12. When listening to my favorite music, I often lose all track of time.**
- 13. Meeting tomorrow’s deadlines and doing other necessary work comes before tonight’s play.**
- 14. Since whatever will be will be, it doesn’t really matter what I do.**
15. I enjoy stories about how things used to be in the “good old times.”
16. Painful past experiences keep being replayed in my mind.
- 17. I try to live my life as fully as possible, one day at a time.**
- 18. It upsets me to be late for appointments.**
- 19. Ideally, I would live each day as if it were my last.**
20. Happy memories of good times spring readily to mind.
- 21. I meet my obligations to friends and authorities on time.**
22. I’ve taken my share of abuse and rejection in the past.
- 23. I make decisions on the spur of the moment.**
- 24. I take each day as it is rather than try to plan it out.**
25. The past has too many unpleasant memories that I prefer not to think about.
- 26. It is important to put excitement in my life.**

27. I've made mistakes in the past that I wish I could undo.
- 28. I feel that it's more important to enjoy what you're doing than to get work done on time.**
29. I get nostalgic about my childhood.
- 30. Before making a decision, I weigh the costs against the benefits.**
- 31. Taking risks keeps my life from becoming boring.**
- 32. It is more important for me to enjoy life's journey than to focus only on the destination.**
33. Things rarely work out as I expected.
34. It's hard for me to forget unpleasant images of my youth.
- 35. It takes joy out of the process and flow of my activities, if I have to think about goals, outcomes, and products.**
36. Even when I am enjoying the present, I am drawn back to comparisons with similar past experiences.
- 37. You can't really plan for the future because things change so much.**
- 38. My life path is controlled by forces I cannot influence.**
- 39. It doesn't make sense to worry about the future, since there is nothing that I can do about it anyway.**
- 40. I complete projects on time by making steady progress.**
41. I find myself tuning out when family members talk about the way things used to be.
- 42. I take risks to put excitement in my life.**
- 43. I make lists of things to do.**
- 44. I often follow my heart more than my head.**
- 45. I am able to resist temptations when I know that there is work to be done.**
- 46. I find myself getting swept up in the excitement of the moment.**
- 47. Life today is too complicated; I would prefer the simpler life of the past.**
- 48. I prefer friends who are spontaneous rather than predictable.**
49. I like family rituals and traditions that are regularly repeated.
50. I think about the bad things that have happened to me in the past.
- 51. I keep working at difficult, uninteresting tasks if they will help me get ahead.**
- 52. Spending what I earn on pleasures today is better than saving for tomorrow's security.**
- 53. Often luck pays off better than hard work.**
54. I think about the good things that I have missed out on in my life.
- 55. I like my close relationships to be passionate.**
- 56. There will always be time to catch up on my work.**

Scoring: The following items are reverse scored: 9, 24, 25, 41, and 56. Where: 1 becomes a 5, 2 becomes a 4, 3 becomes a 3, 4 becomes a 2, and 5 becomes a 1.

*Past-negative Time Perspective:* add scores for items 4, 5, 16, 22, 27, 33, 34, 36, 50 and 54. Then divide this number by 10.

*Present-hedonistic Time Perspective:* add scores for items 1, 8, 12, 17, 19, 23, 26, 28, 31, 32, 42, 44, 46, 48, and 55. Divide this number by 15.

*Future Time Perspective:* add scores for items 6, 9 (reversed), 10, 13, 18, 21, 24 (reversed), 30, 40, 43, 45, 51, and 56 (reversed). Then divide this number by 13.

*Past-positive Time Perspective:* add scores for items 2, 7, 11, 15, 20, 25 (reversed), 29, 41 (reversed), and 49. Then divide this number by 9.

*Present-fatalistic Time Perspective:* add scores for items 3, 14, 35, 37, 38, 39, 47, 52, and 53. Then divide this number by 9.



**Maslach Burnout Inventory – General Survey (MBI-GS)**

(Schaufeli, Leiter, Maslach, & Jackson, 1996)

Instructions: The following are statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, write the number “0” (zero) in the space before the statement. If you have had this feeling, indicate how often you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way. An example is shown below.

If you never feel depressed at work, you would write the number “0” (zero) under the heading “How Often.” If you rarely feel depressed at work (a few times a year or less), you would write the number “1.” If your feelings of depression are fairly frequent (a few times a week but not daily), you would write the number “5.”

*Note: The full scale comprises 16 items. Owing to the copyright nature of the MBI-GS, only three sample items are allowed to be reproduced in doctoral theses. An example of one item from each subscale is provided below.*

Sample items:

Exhaustion: I feel emotionally drained from my work.

Cynicism: I have become less enthusiastic about my work.

Professional Efficacy: I have accomplished many worthwhile things in this job.

Scoring:

Exhaustion (EX) Subscale: add response for items 1, 2, 3, 4, and 6. Result: High = 16 or over, Moderate = 8-15, Low = 0-7.

Cynicism (CY) Subscale: add responses for items: 8, 9, 13, 14, and 15. Results: High = 13 or over, Moderate 6-12, Low = 0-5.

Professional Efficacy (PE) Subscale: add responses for items: 5, 7, 10, 11, 12, and 16. High = 30 or over, Moderate = 24-29, Low = 0-23.

Appendix L: Phase Two Ethics Amendment

To: Dr Alex Maritz, FBE/Ms Bronwyn Eager

Dear Dr Maritz,

**SHR Project 2014/267 Coping: A buffer to burnout in entrepreneurs (Phase 2)**

Dr Alex Maritz, FBE/Ms Bronwyn Eager

Approved Duration: 11/11/2014 to 28/02/2016 [Adjusted]

Modified: May 2015

I refer to your e-mail of 22 May 2015 in which you requested a modification to the project by reducing the time taken to complete the survey. 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 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  
PO Box 218, Hawthorn, VIC 3122  
Tel: +613 9214 3845  
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Email: anordmann@swin.edu.au

Appendix M: Phase Two Ethics Amendment: Addition of Panel Recruitment

To: Dr Alex Maritz, FBL/Ms Bronwyn Eager

Dear Dr Maritz,

**SHR Project 2014/267 Coping: A buffer to burnout in entrepreneurs (Phase 2)**

Dr Alex Maritz, FBL/Ms Bronwyn Eager

Approved Duration: 11/11/2014 to 28/02/2016 [Adjusted]

Modified: May 2015, July 2015.

I refer to your e-mail of 08 July 2015 in which you requested a modification to the project by using a panel recruitment service. 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 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**  
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PO Box 218, Hawthorn, VIC 3122  
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