

Stress-Coping Congruence: A Tripartite Conceptual Framework for Exploring the Health Consequences of Effective and Ineffective Coping.

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Abstract

A tripartite model of relational (R), individual (I) and collective(C) self-aspects was applied to the process of coping with stress. Self-aspects, current sources of stress, preferred coping styles and two health outcomes, well-being and ill-being, were examined in a sample of 237 Australians. As predicted, self-aspects were found to guide preferences for particular styles of coping, but not sources of current stress. The match or mismatch between type of current stress and type of preferred coping differentially predicted health outcomes. When self-guided R, I and C coping styles were applied to corresponding R, I and C sources of stress, the congruence between stress source and coping style was associated with greater well-being. In contrast, the use of coping styles which were incongruent with sources of current stress appeared to be less effective. Mismatched stress and coping (e.g., the use of individual coping to deal with relational stress) was associated with greater ill-being. Separating sources of stress and styles of coping into individual, relational and collective domains appears to provide a promising new framework for exploring the health consequences of effective and ineffective coping.

Keywords: Coping; Stress; Health Consequences, Self-Construct.

Despite decades of research, the process of coping with stress is not well understood (Coyne & Racioppo, 2000; Folkman & Moskowitz, 2000; Lazarus, 2000; Somerfield & McCrae, 2000). Most experts agree that a coping strategy is likely to be most effective when appropriately matched to the stressor (e.g., Banyard & Graham-Bermann, 1993; Somerfield & McCrae, 2000; Steed, 1998; Tamres, Janicki & Helgeson, 2002), but there is no consensus on how to match types of stress with types of coping. The present study applies a theoretical model of the Self to the process of coping with stress in order to explore a new conceptual framework for assessing stress-coping congruence. Sources of stress and styles of coping were reconceptualised within a tripartite framework of relational (R), individual (I) and collective (C) domains. It was proposed that the strength of a person's R, I and C self-aspects would guide their preference for particular styles of coping

and, when faced with stress in a matching domain, use of the congruent style of coping would be particularly effective in maintaining or enhancing health. In contrast, when faced with stress in a mismatched domain, use of an incongruent coping style was likely to be ineffective and, thus, detrimental to health. Put simply, stress-coping congruence was expected to promote well-being, while incongruence between sources of stress and preferred styles of coping was expected to contribute to ill-being.

Stress, Coping and Health

Theories of stress, coping and health posit relationships between high stress levels, ineffective coping and poor health consequences (e.g., Fisher, 1986; Lazarus & Folkman, 1984; Trumbell & Appley, 1986). Stress involves the appraisal of a situation as threatening, demanding or challenging. Coping includes the cognitive, emotional or behavioural strategies which are used to adjust to the stressful situation. The negative influence of stress on health is thought to be buffered by effective coping; that is, the use of strategies which allow the person to successfully manage the stressful situation. When there is a poor fit between a person's stress levels and their coping capacity, adjustment strategies are likely to be ineffective and negative health outcomes can occur. Conversely, when appropriate coping resources are available, a person is likely to manage stress effectively (e.g., De Longis, Folkman & Lazarus, 1988; Hobfoll, 1989). Effective coping can be beneficial to health, promoting positive outcomes such as increased well-being. Conversely, ineffective coping may contribute to ill-being.

Tripartite Model of Self: Links with Stress, Coping and Health

Multiple self-aspects, sometimes referred to as self-representations or self-constructs, coexist within an integrated cognitive self-system which organises one's experiences, provides meaning and directs behaviour (e.g., Cross, 1995; Deaux & Perkins, 2001; Markus & Kitayama, 1991; Sedikides & Brewer, 2001; Triandis, 1989). Recent work suggests there are three fundamental domains of self-representation:

individual, relational and collective (see Brewer & Gardner, 1996; Kashima & Hardie, 2000; Kashima, Yamaguchi, Kim, Choi, Gelfland & Yuki, 1995; Sedikides & Brewer, 2001). The individual self-aspect reflects a person's independence, autonomy and separateness from others. The relational self-aspect reflects interpersonal relationships with significant others. The collective self-aspect reflects shared social group memberships. These three self-aspects coexist, to varying degrees, within the self-systems of men and women from many cultures (Kashima et al., 1995). Self-aspects are thought to influence all aspects of everyday life, including cognitions, emotions, and behaviours (Breckler & Greenwald, 1986; Cross & Madson, 1997; Markus & Kitayama, 1991; Trafimow, Triandis & Goto, 1991), emotional well-being (Oyserman et al., 2002) and physical health (Contrada & Ashmore, 1999).

The Present Study

As potential links between self-aspects, stress and coping have been relatively neglected, the present research sought to explore a process through which self-aspects might influence styles of coping with current life stress. The effectiveness of coping would, in turn, influence health outcomes. The importance of appropriately matching coping activities with the type of stress has previously been noted, but the classification of types of coping and types of stress remains unclear. Studies have typically assessed the amount or degree of perceived stress experienced by the person, rather than the type or source of perceived stress. Similarly, studies have generally assessed coping as the endorsement of a wide range of activities which were broadly classed as approach or avoidance, problem-focussed or emotion-focussed, and direct or indirect coping (see, e.g., Cross, 1995; Steed, 1998; Tamres et al., 2002). The appropriate use of particular types of coping with particular types of stress has not been specified. There is currently no taxonomy of stress types and coping styles which allows for their match or mismatch to be determined. The individual, relational and collective domains of the tripartite model seemed a potentially useful way to classify sources of stress and styles of coping.

In the framework of the tripartite self, the relative prominence of a particular self-aspect; i.e., one's degree of orientation towards self-definition as an autonomous individual (I self), in relation to specific significant others (R self), or as a member of a collective (C self), would likely influence the types of strategies typically employed to cope with stress, the effectiveness of those coping strategies, and the subsequent health consequences. Recent research lends some support to this proposition, showing that

incongruence between self-aspects and current levels of life stress from relational, individual and collective sources was associated with greater ill-being (Hardie, Kashima & Pridmore, 2005). While that study did not assess coping styles, the health decrement associated with mismatched self-stress experiences was interpreted as a reflection of incongruent or ineffective coping. The links between self., stress and health were established, but the role of coping remained open to investigation.

For the purposes of the present study, sources of stress and styles of coping were conceptualised as individual, relational or collective. Individual stress represented a threat, demand or challenge to the person (e.g., a personal health threat); relational stress represented a threat, demand or challenge to a significant interpersonal relationship (e.g., marital problems), and collective stress represented a threat, demand or challenge to a social group (e.g., demands on your work group). Similarly, coping was categorised within the tripartite framework. Individual coping was defined as independent stress adjustment activities (e.g., solving your own problems), relational coping was defined as stress adjustment activities involving a significant other (e.g., seeking advice from your best friend), and collective coping was defined as stress adjustment activities involving social groups (e.g., turning to your church group for support). Ideally, a person would have well developed coping strategies in all three domains, i.e., a full repertoire of available relational, individual and collective coping strategies. With such a comprehensive set of coping resources a person would be well equipped to deal with stress from any source.

If the development of coping styles is influenced by the strength of self-aspects, people with well-developed self-aspects in all three domains would be expected to possess the full set of relational, individual and collective coping styles, however, those with limited self-aspect development may have coping deficits in their less prominent self domains. A recent study demonstrated the range of self-orientation patterns found in a sample of Australians (Hardie et al., 2005). Around 20% of the sample reported strong self-aspects in all three domains, around a quarter of the sample had a pattern of dual self-aspects (well-developed in two of the three domains) and a third of the sample had only a single dominant self-orientation. The triple orientation group reported the highest levels of well-being. The dual and single orientation groups may have lacked effective coping strategies to deal with stress in their non-dominant domains.

For the current study, a process was posited whereby self-aspects guide coping styles, the match or mismatch between one's available coping styles and types of current stress affects coping effectiveness, and coping effectiveness determines health consequences. Thus, the present study included three aspects of self (R, I and C self), three types of stress (R, I and C stress), three styles of coping (R, I and C coping) and two types of health outcomes, well-being (WB) and ill-being (IB).

It was expected that the strength of a person's self-aspects would guide their preferred styles of coping, but, as stressful situations are a function of the social environment, self-aspects were not expected to be predictive of actual sources of stress. The strength of the R self was expected to predict a preference for R coping, the strength of I self to predict I coping, and C self to predict C coping; however self-aspects were not expected to be significant predictors of current stress in any particular domain.

To assess the proposed process by which the correspondence/lack of correspondence between self-guided coping styles and current sources of stress can differentially influence health outcomes, two models were tested. In the Stress-Coping Congruence Model of Well-Being, the posited process included pathways between matched domains of stress and coping and well-being. In the Stress-Coping Incongruence Model of Ill-Being, the posited process included pathways between mismatched domains of stress and coping and ill-being.

Method

Participants

A community sample of 237 Australians (103 men, 134 women) ranging in age from 17 to 70 years (Mean = 32.88 years, SD=12.45) completed the questionnaire. The participants were recruited by psychology undergraduates. Most (64%) were partnered (married, living together, in a relationship), while the remainder were single (unpartnered, separated, widowed, or divorced). In terms of ethnicity, the sample was representative of the Australian population: 79% Anglo-Australian, 12% Euro-Australians, 3% Asian-Australians, 6% from a variety of backgrounds (North America, South America, South Africa) and a single indigenous Australian. In terms of socioeconomic status, the sample was largely middle class (85%), with 15% describing themselves as working class. The sample was also highly educated with 73% reporting a

university education. The remainder had completed high school or technical training.

Measures

The questionnaire included measures of self, sources of current stress, preferred coping styles, and health. The Relational, Individual and Collective Self-Aspects (RIC) scale (Kashima & Hardie, 2000) was used to measure the three aspects of self. This scale consists of 10 item triads, each triad including a stem sentence followed by three items, one for each self-aspect. RIC subscale scores are computed by summing ratings for the 10 Relational items (R self), the 10 Individual items (I self), and the 10 Collective items (C self). Items were rated on a 6-point (1-6) scale, thus each subscale score had a possible range of 10 to 60. The reliability and validity of this scale has been previously reported (Kashima & Hardie, 2000). For the present sample, internal reliability coefficients were .84 for R self, .84 for I self and .83 for C self.

Based on the tripartite conceptualisation of coping described above, a set of three coping style items was developed to assess the extent to which one prefers to use relational, individual and collective coping activities to effectively deal with stress ("I cope most effectively with stress... on my own/with the help of my partner/with the help of my social group"). Each response to the stem item was rated separately, yielding separate scores for R coping, I coping and C coping which ranged from 1 to 6. This exploratory set of single-item RIC coping style measures could not be assessed for reliability.

Relational, individual and collective sources of current stress were measured with a checklist of 12 areas of life which could be classified as potential sources of stress in individual (personal health, appearance, finances, work/study), relational (intimate relationship, friendship, family relationship, health of family member), and collective (household, social group, sports team, community issues) domains. The extent to which the four areas within each domain was a source of stress during the past week was rated on a 6-point (0=none, 5=a great deal) scale. Ratings were tallied for each stress domain, yielding three subscale scores, each with a possible range of 0-20. Internal reliability coefficients were .73 for R stress, .62 for I stress, and .64 for C stress.

Positive and negative dimensions of health were measured with the 35-item short version of the Multidimensional Health States Scale (Hardie et al., 2005), comprised of five well-being (WB) subscales (emotional, somatic, cognitive, social, sexual) and

three ill-being (IB) subscales (somatic symptoms, depression, anxiety). Each item represents a symptom or state of being which is rated on a 5-point scale (0=not experienced, 4=strongly experienced) within a recent timeframe, in this case the past week. Mean subscale scores were computed for each dimension, then combined into composite well-being and ill-being scores which yielded alpha coefficients of .92 for the 20-item WB scale and .89 for 15-item IB scale. The WB and IB scales have demonstrated acceptable reliability and validity in previous studies (Hardie, 1994; Hardie et al., 2005).

Results

A series of t-tests confirmed there were no sex differences in self-aspects, sources of stress, coping styles, or health states of well-being and ill-being for this sample of Australians. On average, the sample demonstrated a very strong relational ($M = 48.30$, $SD = 8.28$) self-aspect, moderately strong individual ($M = 46.82$, $SD = 8.25$) self-aspect, and a moderate collective self-aspect ($M = 42.56$, $SD = 8.52$). Repeated measures ANOVA with post hoc comparisons confirmed that these within-subject differences were significant ($F(2, 235) = 108.34$, $p < .001$) with R self scores significantly higher than I self scores which, in turn, were significantly higher than C self scores ($p < .001$ for all pairwise comparisons).

The highest levels of current stress were in the individual domain ($M = 9.78$, $SD = 4.02$), followed by relational stress ($M = 7.84$, $SD = 4.42$), and collective stress ($M = 5.51$, $SD = 3.65$). Repeated measures ANOVA with post hoc comparisons confirmed these difference to be significant ($p < .001$ for all pairwise comparisons, $F(2, 235) = 117.78$, $p < .001$ for the omnibus effect).

Repeated measures ANOVA with post hoc comparisons revealed a significant within-subject difference in coping style ($F(2, 235) = 29.27$, $p < .001$). The sample tended to use similarly high levels of individual ($M = 4.24$, $SD = 1.51$) and relational ($M = 3.97$, $SD = 1.59$) coping, but significantly lower levels of collective ($M = 3.23$, $SD = 1.52$) coping ($p < .001$).

On average, the sample reported moderately high levels of Well-Being ($M = 3.24$, $SD = .74$) and low levels of Ill-Being ($M = 1.96$, $SD = .99$). A within-subjects comparison confirmed this health differential to be significant ($t(236) = 14.05$, $p < .001$).

The Role of Self in Stress and Coping

Two sets of regression analyses were conducted to examine the role of self in relation to sources of

current stress and preferred styles of coping. The first set of analyses addressed the question of whether self-aspects influence the appraisal of stressful situations. The second set examined the influence of self-aspects on preferred styles of adjustment to stressful situations.

In the first set of regressions, the three self-aspects were entered as predictors for each domain of stress, with a separate analysis for each criterion variable: R stress, I stress, C stress. The hypothesis that self-aspects would not influence sources of current stress was supported. The set of self-aspects made no significant contribution to current R stress ($F(3, 233) = 0.42$, $p = .74$), current I stress ($F(3, 233) = 0.63$, $p = .60$), or current C stress ($F(3, 233) = 1.28$, $p = .28$). Self-aspects did not appear to influence the appraisal of perceived sources of current stress.

In the second set of regressions, the three self-aspects were entered as predictor variables for each style of coping. A separate analysis was conducted for each criterion variable: R coping, I coping and C coping. The hypothesis that self-aspects would guide matching styles of coping was supported. The set of self-aspects combined contributed to R style coping ($F(3,233) = 17.40$, $p < .001$, $R = .43$, $R^2 = .18$), with R self found to be a positive independent predictor ($\beta = .64$, $p < .001$) and C self found to be a negative independent predictor ($\beta = -.24$, $p < .01$) of relational coping. The set of self-aspects contributed to I style coping ($F(3,233) = 13.78$, $p < .001$, $R = .39$, $R^2 = .15$), with I self shown to be the only significant independent predictor of I coping ($\beta = .33$, $p < .01$). The set of self-aspects contributed to C style coping ($F(3,233) = 8.77$, $p < .001$, $R = .50$, $R^2 = .25$) and C self was the only significant independent predictor ($\beta = .27$, $p < .01$). As predicted, self-aspects influenced preferences for corresponding styles of coping.

SEM Model Testing

Two models which posited pathways by which matched and mismatched stress and coping styles might differentially influence health outcomes were tested using structural equation modelling. In view of the modest sample size, the number of parameter estimates needed to be kept to a minimum to meet the 1:10 minimum recommended by Tabachnick and Fidell (1996). As the link between self-aspects and matched styles of coping had been demonstrated in the regression analyses, the three self-aspects were not included in the models. For health outcomes, the composite observed variables of well-being and ill-being were used, as opposed to their latent constructs as represented by the well-being and ill-being subscales. By testing the models in this way, acceptable parameter to case ratios were maintained.

All parameter estimates, modification indices and goodness of fit statistics were calculated via AMOS version 5. The set of variables departed from multivariate normality, showing a significant positive skew (Mardia's MNE = 3.74, $p < .05$). The asymptotically distribution-free estimation method was used to adjust for non-normality (Browne, 1984). Model fit was assessed via conventional criteria (Goodness of Fit (GFI) and Adjusted GFI $> .90$), but in light of the sensitivity of the Chi Square (χ^2) statistic and root mean square error of approximation (RMSEA) to sample size, fit was deemed acceptable if the value of χ^2/df fell between 2 and 3, and RMSEA was below .10 (see Bentler, 1990; Byrne, 2001 on fit indices).

Stress-Coping Congruence Model of Well-Being

The Stress-Coping Congruence Model of Well-Being (SCCWB) included correlations among the three sources of stress. This seemed justified since previous research had shown that the three stress domains could be treated as separate but related dimensions of a latent stress construct (Hardie et al, 2005). Direct paths from each domain of stress to the outcome, well-being, were expected to be negative, reflecting the typical inverse relationship between stress and health. Positive indirect pathways from each stress domain, through its matched coping domain, were expected to predict well-being. These indirect paths were deemed to represent effective coping.

As shown in Figure 1, the SCCWB model demonstrated very good fit. Chi square was marginally significant (17.09, $df = 6$, $p = .05$), however fit indices were excellent (GFI = .98, AGFI = .95, $\chi^2/df = 2.85$, RMSEA = .06). Parameter estimates were generally in the expected direction, with direct negative pathways from R stress and I stress to WB, however the path from C stress to WB was positive and, none of these pathways was significant. There was support for the hypothesised benefit of congruent stress and coping in the relational and individual domains, where the paths from R stress through R coping and from I stress through I coping, were significant predictors of well-being.

The SCCWB model was compared to a plausible alternative model which reversed the positions of coping and stress and included direct paths from coping to well-being as well as indirect paths from coping via stress to well-being. This alternative coping-stress congruence model was significantly inferior to the SCCWB model (χ^2 difference = 57.95, $p < .001$). The proposed Stress-Coping Congruence Model of Well-Being seemed to best represent a

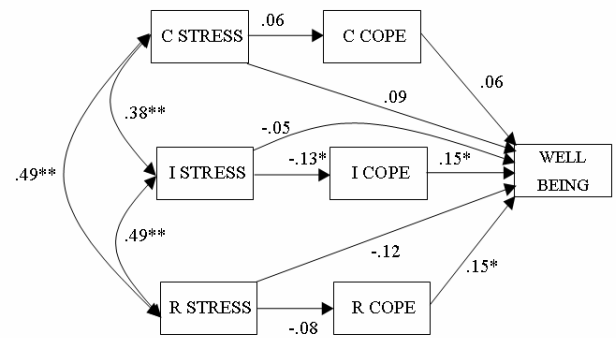


Figure 1. Test of the Stress-Coping Congruence Model of Well-Being. (Goodness of Fit: $\chi^2/df = 2.85$, GFI = .98, AGFI = .95, RMSEA = .06)

process whereby effective coping can be conducive to good health.

Stress-Coping Incongruence Model of Ill-Being

The Stress-Coping Incongruence Model of Ill-Being (SCIIB) included direct pathways from each stress domain to ill-being to represent the typical positive relationship found between stress and ill-being. In addition, there were indirect pathways from each stress domain, by way of its two mismatched domains of coping, to ill-being. These indirect pathways, where coping did not match the type of stress, represented ineffective coping.

As shown in Figure 2, the model demonstrated very good fit (GFI = .98, AGFI = .92, RMSEA = .09). Chi square was significant (17.66, $df = 6$, $p < .01$), however χ^2/df was an acceptable 2.94. Although the pathways from domains of stress to mismatched domains of coping, and from stress to ill-being via mismatched coping, were not significant, the direct paths from I stress to ill-being, and from R stress to ill-being were significant.

The SCIIB model was compared to a plausible alternative model which reversed the positions of coping and stress, including direct paths from coping to ill-being and indirect paths from each coping style through its mismatched domains of stress to IB. The Stress-Coping Incongruence model was shown to be significantly superior to the alternative coping-stress incongruence model (χ^2 difference = 53.93, $p < .001$).

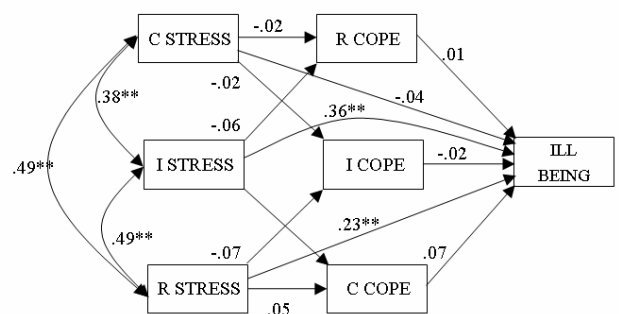


Figure 2. Test of the Stress-Coping Incongruence Model of Ill-Being. (Goodness of Fit: $\chi^2/df = 2.94$, GFI = .98, AGFI = .92, RMSEA = .09)

The proposed Stress-Coping Incongruence Model of Ill-Being seemed to best represent a process whereby ineffective coping can be detrimental to health.

Discussion

The findings of the present study supported the contention that self-aspects guide coping styles, and that congruence between sources of stress and styles of coping represent effective coping, while incongruence between stress sources and coping styles represent ineffective coping. Although the evaluation of effective coping is a difficult issue (Somerfield & McCrae, 2000; Lazarus, 2000), it is generally accepted that matching the type of stress with an appropriate coping strategy would be most effective and thus beneficial to health, while use of an inappropriate coping strategy would be less effective and therefore detrimental to health. In line with that premise, this study found preliminary support for a differential process whereby appropriately matched stress-coping congruence was associated with well-being, while mismatched stress-coping incongruence was associated with ill-being.

The stress-coping congruence model of well-being, which posited that matches between sources of stress and styles of coping would contribute to good health, demonstrated excellent fit. Not all predicted pathways were significant, but matched sources of stress and coping styles in the relational and individual domains were shown to contribute to well-being. The negative pathways from relational stress and individual stress to well-being were not significant, but were in the expected direction. Moreover, the indirect paths from relational stress to well-being via relational coping, and from individual stress to well-being via individual coping, were significant and positive. Given the relatively strong relational and individual self-aspects, and relatively weak collective self-aspect evident in this sample, the absence of any significant pathways in the collective domain may have reflected the dominant self-orientation of the sample.

The stress-coping incongruence model of ill-being, which posited that mismatched sources of stress and coping styles would contribute to poor health, also demonstrated excellent fit. Although the hypothesised pathways were generally not significant, the overall model was statistically superior to a plausible alternative model, providing partial support for a process whereby the use of self-guided, preferred coping strategies which do not correspond to current sources of stress can contribute to poor health.

The present findings highlighted the previously neglected role of self-aspects in the adoption of particular styles of coping. Although several theorists

have noted that self-aspects influence cognition, emotion and behaviour (e.g., Cross & Madson, 1997; Markus & Kitayama, 1991), no explicit link had been made between self and coping styles. Results of the regression analyses strikingly demonstrated that the strength of relational, individual and collective self-aspects guided preferences for corresponding coping styles. As hypothesised, self-aspects predicted parallel styles of coping, with each self-aspect shown to be an independent predictor of its matching style of relational, individual or collective coping.

In contrast, self-aspects did not predict perceived sources of current stress. It was noteworthy that sources of stress were not influenced by self-aspects, as it was plausible that a person's self-orientation might increase their sensitivity to stress in self-guided domains. Instead, stress sources seemed to reflect the diverse threats, demands and challenges of person's social environment.

Taken together, these findings suggest that self-aspects do not influence what is deemed stressful, but they do seem to influence how a person attempts to cope with stressful experiences. These findings have important implications for stress management programs. A full repertoire of available relational, individual and collective coping strategies would provide a person with the range of skills needed to deal with stress from any source, however most stress management programs provide generic (largely individual) coping skills training. The tripartite approach allows training to be tailored to each person's coping profile. By assessing the strength of a person's self-aspects and preferred coping styles, their coping deficits could be identified. Training could then be targeted accordingly, with relational, individual and/or collective coping skills training provided to those with deficits in particular domains.

Overall, these findings supported the utility of a tripartite approach to the assessment of self, stress, coping and health consequences. Within the conceptual framework of relational, individual and collective domains, stress was redefined to distinguish between relational (interpersonal), individual (personal) and collective (social group-based) sources of threat, demand or challenge. Coping was reconceptualised to distinguish a preference for singular strategies (individual coping style), strategies involving a significant other (relational coping style), and strategies involving social group membership (collective coping style) to manage stressful demands. The domains of this tripartite approach provide testable links among matched and mismatched sources of stress, styles of coping and health consequences.

Further advancement of the tripartite approach will require verification of these findings in larger, more diverse samples. Research in this area will also benefit from the development of more comprehensive measurement tools to assess relational, individual and collective sources of stress and styles of coping. The psychometric properties of the RIC self-aspects scale have been previously established (Kashima & Hardie, 2000), however the small sets of items used to measure current sources of R, I and C stress in the present study were assessed only for reliability and not validity. In the absence of any appropriate scales to measure R, I and C coping styles these were measured with single items which could not be psychometrically assessed. There is a need for more comprehensive R stress, I stress and C stress scales. Likewise, a psychometrically sound coping inventory which covers a range of stress adjustment activities which can be classified as styles of relational, individual and collective coping will need to be developed for future research in this area.

In conclusion, the current research demonstrated links between relational, individual and collective aspects of self, stress and coping. Self-aspects guided the development of preferred coping styles. The match or mismatch between preferred coping styles and current sources of stress influenced the effectiveness of coping and subsequent health consequences. The posited process whereby self-coping congruence promotes well-being and self-coping incongruence contributes to ill-being was supported. Future studies will benefit from refined measurement instruments and larger samples to allow for more comprehensive tests of the predicted models, however, these results do demonstrate the potential utility of the tripartite approach to further our understanding of the processes by which stress and coping influence health. Moreover, this approach has practical implications for the refinement of stress management programs.

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Research Profile

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