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Proactive coping and preventive coping: Evidence for two distinct constructs?

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ABSTRACT

Proactive coping and preventive coping are commonly researched forms of future-oriented coping. There is however, contention in the literature regarding their underlying factor structures: some studies report they are separate constructs, while others have combined them together with other constructs. Given the growing literature using these forms of future-oriented coping, it is important to clarify the underlying structures of these measures. To inform these discussions, the factor structures of both proactive and preventive coping were empirically assessed with three independent samples. Sample 1 ($N = 181$) investigated the underlying structures using exploratory factor analysis, with the resulting factors then examined in Sample 2 ($N = 282$) and Sample 3 ($N = 345$) using confirmatory factor analyses. The results supported the differentiation between proactive and preventive coping, revealing two distinct factors, however correlations with personality and psychological strain were inconsistent between the samples. These results contribute to recent discussions by demonstrating proactive and preventive coping are both uni-dimensional constructs as measured by the Proactive Coping Inventory, yet the conceptual distinctions may not be supported empirically in older and more educated samples. Future research is required to enhance our understanding of the theoretical distinction between the two coping scales in heterogeneous samples.

1. Introduction

The importance of effectively managing stressful events due to their potential for negative consequences for individuals, organisations, and society, is widely acknowledged. As the future contains a number of known and unknown stressors, investigating and understanding coping efforts aimed at managing potential future stressors is a valuable area of research that has received recent attention (e.g., Drummond & Brough, in press). Within the future-oriented coping literature, the two most widely researched forms of coping are *proactive coping* and *preventive coping*. Schwarzer (2000) defined proactive coping as efforts aimed at building up resources to enhance one's potential and opportunities for personal growth, while preventive coping involves accumulating resources to reduce the severity of potential negative outcomes.

Schwarzer, Greenglass and colleagues developed a measure of future-oriented coping: the Proactive Coping Inventory (PCI; Greenglass, Schwarzer, Jakubiec, Fiksenbaum & Taubert, 1999 [Greenglass, Schwarzer, Jakubiec, et al., 1999]; Greenglass, Schwarzer & Taubert, [Greenglass, Schwarzer and Taubert, 1999]). The PCI consists of seven subscales, six of which assess different components of future-oriented coping (*proactive coping*, *preventive coping*, *reflective coping*, *strategic planning*, *emotional support seeking*, and *instrumental support seeking*), while the final subscale assesses *avoidance coping*. Coping as measured by the PCI is conceptualised as an "approach to life, an existential belief that things will work out … because the individual takes responsibility for outcomes" (Greenglass, Schwarzer, Jakubiec, et al., 1999, p. 5). In this regard, proactive and preventive coping as measured by the PCI are considered to be dispositional measures of coping (e.g., Roesch et al., 2009; Zhou, Gan, Knoll, & Schwarzer, 2013).

It is widely recognised that valid and reliable measurement tools are crucial to progress our understanding of conceptual constructs. It is therefore important to investigate and clarify the measures when mixed findings are reported in the literature. The current paper aims to do this for the measurement of proactive coping and preventive coping.

Similar to the difficulties in assessing the measurement of traditional (past-oriented) coping (e.g., Brough, O'Driscoll, & Kalliath, 2005), the measurement of future-oriented coping has also resulted in inconsistent findings. Replication of the uni-dimensionality of the PCI by independent researchers has produced mixed findings: while some studies have found support for the uni-dimensional nature of the constructs, others have not. For example, Wu, Chen, and Yao (2008) and Roesch et al. (2009) conducted individual assessments of proactive and preventive coping as measured with the PCI, and reported evidence that both measures were uni-dimensional. However, Lopes and Cunha (2008) found evidence to suggest that proactive coping was best represented by two factors: *proactive coping* and *passive coping*, with passive coping comprised of two of the three reverse-worded items. Possible reasons for these differences may be related to the samples utilised in each study. For example, Wu et al. (2008) and

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Roesch et al. (2009) both sampled university students over-represented by females (65% and 74% respectively) with a mean age of approximately 20 years, whereas Lopes and Cunha (2008) surveyed a group of employees with more evenly distributed gender (51% female) where approximately half of the sample was aged between 26 and 35 years.

Similarly, replication of proactive and preventive coping as individually unique constructs has also produced mixed results. While some research has found support for the distinctiveness of the two constructs (e.g., Gan, Yang, Zhou, & Zhang, 2007; Sohl & Moyer, 2009), other research has combined these two measures with other coping and/or personality variables. For example, Moring, Fuhrman, and Zauszniewski (2011) reported that proactive coping and preventive coping formed one 'planning' factor along with other active coping measures. Similarly, Vernon, Dillon, and Steiner (2009) combined proactive coping with proactive personality and self-efficacy to produce a single 'proactive' construct. It appears that when investigated in conjunction with other measures, proactive and preventive coping are often combined, although they are proposed to be conceptually distinct. Unlike the sample differences that may account for differences in dimensionality, the studies referred to here were all conducted with university students with an average age of approximately 20 years and a higher proportion of female respondents. Furthermore, with the exception of Gan et al. (2007), these samples all consisted of US university students. It is also possible that the type of analyses performed contributed to the different results. For example, Gan et al. performed an EFA with proactive and preventive coping items, followed by CFAs with item parcels. Sohl and Moyer (2009) also used CFAs with item parcelling. Conversely, Moring et al. (2011) performed an EFA using proactive and preventive coping scaled scores (rather than items) along with scaled scores of other coping measures, and Vernon et al. (2009) conducted an EFA with items from scales measuring proactive coping, proactive attitude, and self-efficacy. As Moring et al. only used scaled scores, and as Vernon et al. did not include preventive coping in their analyses, in addition to Gan et al. and Sohl and Moyer using item parcels in their CFAs, further investigation into item-level EFA and CFA analyses with both proactive and preventive coping is warranted.

Research has also reported revisions to the PCI scales, notably via the deletion of scale items (e.g., Lopes & Cunha, 2008; Roesch et al., 2009; Vernon et al., 2009; Wu et al., 2008). It has been consistently demonstrated across a range of samples that the second item of the proactive coping scale ("*I try to let things work out on their own*" — reverse scored) does not load highly on the proactive coping factor, resulting in its deletion (e.g., Chinese college students: Gan et al., 2007; Spanish employees: Lopes & Cunha, 2008; American college students: Roesch et al., 2009 and Vernon et al., 2009; and Taiwanese college students: Wu et al., 2008). These varied samples indicate that the item did not behave as intended in samples of university students or working adults from different cultures, of varying ages and gender breakdowns. These findings warrant the further inspection of the second item in subsequent proactive coping research.

Based on the aforementioned examples of prior research, we thought it prudent to conduct an a-priori assessment of the constructs using exploratory factor analytic techniques and follow this with confirmatory analyses, to more clearly understand the underlying structural relationships. To maintain consistency with prior research and to more closely understand the constructs as they have been previously tested, we include three samples of university students and working adults with a stronger female-oriented gender breakdown. We hypothesise that; consistent with theory and some existing research, proactive coping and preventive coping are both distinct uni-dimensional constructs.

2. Method

2.1. Participants and procedure

The research received approval from the University Human Resources Ethics Committee. Three independent samples were utilised in this research.

2.1.1. Sample 1

Sample 1 was comprised of psychology undergraduate university students who participated in exchange for course credit (first year participants only) or a chance to win $150 cash (all other undergraduate students). Hard copy surveys were distributed to 335 research participants, with $N = 182$ usable survey responses collected, representing a 54% response rate. The majority of respondents were female ($n = 159$; 87%), aged between 17 to 52 years ($M = 23.19$, $SD = 7.01$), and were studying full-time ($n = 171$; 94%). Approximately half of the respondents were in their first year of their bachelor's degree ($n = 92$; 51%), with a quarter in their third year ($n = 45$; 25%).

2.1.2. Sample 2

Sample 2 was comprised of a convenience sample of participants recruited through online networks and University sources. All participants received a link to an online confidential survey. A total of 286 respondents completed the survey, and the majority were female ($n = 230$; 80%), aged between 15 to 71 years ($M = 30.04$, $SD = 13.02$) and had a tertiary qualification (i.e., certificate, bachelor or postgraduate degree; $n = 166$; 58%). Approximately one quarter of respondents were employed full-time ($n = 75$; 26%), and 44% ($n = 126$) were employed part-time, while another quarter were not currently working ($n = 85$; 29%). Respondents were primarily working in clerical/sales/service job roles ($n = 78$; 27%) or in professional roles ($n = 76$; 27%).

2.1.3. Sample 3

Sample 3 was comprised of employees from Australian not-for-profit organisations involved in health and community service work. An online survey link was sent to all employees inviting them to complete the anonymous survey. A total of $N = 352$ employees provided useable survey responses. The sample was comprised primarily of females ($n = 270$; 77%) aged between 41 and 60 years ($n = 200$; 57%) who had achieved a tertiary qualification (i.e., certificate, bachelor or postgraduate degree; $n = 304$; 86%), and were employed full-time ($n = 245$; 70%).

2.2. Measures

The proactive coping and preventive coping subscales of the PCI (Greenglass, Schwarzer & Taubert, 1999) were used to assess proactive and preventive coping. Proactive coping was comprised of 14 items such as "I am a 'take charge' person", and preventive coping was comprised of 10 items such as "I prepare for adverse events." Responses were scored on a 4-point scale ranging from 1 (not at all true) to 4 (completely true). Greenglass, Schwarzer, Jakubiec, et al. (1999) reported reliability coefficients between .80 and .85 for proactive coping, and between .79 and .83 for preventive coping.

Optimism was measured with the six-item Revised Life Orientation Test (LOT-R; Scheier, Carver, & Bridges, 1994). Three positively-worded and three-negatively worded items were scored on a 5-point scale from 0 (strongly disagree) to 4 (strongly agree). An example item is "I'm always optimistic about my future." Reliability coefficients ranging from .70 to .81 have been reported in the literature (Geers, Helfer, Kosbab, Weiland, & Landry, 2005; Mäkikangas, Kinnunen, & Feldt, 2004; Scheier et al., 1994).

Neuroticism was assessed with 12 items from the NEO-Five Factor Inventory (NEO-FFI; Costa & McCrae, 1992). Respondents indicated their agreement or disagreement on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). An example item is "I often feel tense and jittery." Reported reliability coefficients range from .81 to .88 (Costa & McCrae, 1992; Eaton & Bradley, 2008).

Context-free psychological strain was measured using the 12-item General Health Questionnaire (GHQ-12; Goldberg, 1972). Respondents indicated their degree of psychological health over the past few weeks relative to their usual level of health on a 4-point scale ranging from 0 (not at all) to 3 (much more than usual). An example item is "Been