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Summary

Research on coping has been hampered by psychometric shortcomings in coping scales, which have typically relied on items based on face-value, extracted too many factors or lacked the evidence for the obtained structure from confirmatory factor analysis. The present paper describes the development and concurrent validation of a new three-factor avoidance coping scale, the General and Specific Avoidance Questionnaire (GSAQ), which comprises General Avoidance, Emotional Avoidance and Conflict Avoidance. In contrast to earlier scales the items were derived from a scenario technique which elicits items from participants' experience, and the three factor structure was endorsed by two confirmatory factor analyses on independent samples and a further exploratory factor analysis based on the total pooled sample of participants from all three analyses. Factor correlations indicate that the scales measure discrete facets of the avoidance coping domain, and while concurrent validation showed that General and Conflict Avoidance were related in predictable ways to criterion measures, the pattern for Emotional Avoidance was unexpected.

Introduction

Coping has succinctly been defined as using skills and strategies to deal with stressful and/or difficult situations (Sica, Novara, Dorz and Sanavio, 1997), but the structure of the coping process is less clear. The early scales suffered from a number of psychometric shortcomings in their development, especially the extraction of too many factors by relying on eigenvalue-1 extraction criteria and the lack of confirmatory factor analyses to substantiate the extracted factor structures (Steed, 1998). The widely-used Ways of Coping Questionnaire (WCQ –

Folkman and Lazarus, 1985), for example, was based on eight subscales, and the later COPE questionnaire (Carver, Scheier and Weintraub, 1989) claimed 14 discrete dimensions. However, Endler and Parker (1990) proposed just three fundamental coping dimensions in their Multidimensional Coping Inventory (MCI), labelled task, emotional and avoidance coping. An independent analysis of the COPE reduced the factors to the same three components (Lyne and Roger, 2000), and the broad three-factor structure has been confirmed by Roger, Jarvis and Najarian (1993) with their Coping Styles Questionnaire (CSQ).

Subsequent research has provided a better understanding of the rational and emotional coping dimensions, but avoidance coping has remained an ambiguous construct, despite having potentially significant implications for psychological and physical health (for example, Nielsen and Shapiro, 2009). Broadly defined, avoidance refers to refraining from an action or escaping from a person or object and avoidant coping as a defensive response involving the ignoring, distorting or escaping from stimuli that are perceived to be threatening (Ottenbreit & Dobson, 2004). The suppression or distorting of thought patterns are also incorporated in the concept of experiential avoidance, which is defined as wanting to avoid private physical, emotional and cognitive experiences (Hayes, Wilson, Gifford, Follette & Strosahl, 1996).

Avoidance is a fundamental component of disorders across the spectrum of anxiety and depression, and individuals who habitually use avoidance coping strategies also report lower levels of optimism and self-esteem than those who used less avoidance coping (Friedman, Nelson, Baer, Lane, Smith, and Dworkin, 1992; Oxlad, Miller-Lewis, and Wade, 2004). It had been suggested that avoidant strategies may have beneficial outcomes until the individual has the resources available to deal with the crises at hand, but a meta-analysis by Suls and

Fletcher (1985) indicated that avoidant strategies require considerable effort that could compromise adaptation and well-being in the longer term. The effects of avoidance might also be compromised by a priming or 'rebound effect', whereby the suppression of an unwanted thought can paradoxically lead to an increased recurrence of that thought (Wegner, Schneider, Carter and White, 1987).

Several avoidance coping scales have been developed to help resolve the equivocal findings, but the research has unfortunately been hampered by similar psychometric shortcomings to those reported for general coping scales. The four-factor Cognitive-Behavioural Avoidance Scale (CBAS - Ottenbreit and Dobson, 2004) was developed to address the inconsistent definitions of avoidance within the depression domain, and while the authors did report moderate but significant relationships between avoidance and both depression and anxiety, the absence of confirmatory factor analysis leaves the question of the fit of the four-factor structure in doubt. The Cognitive Avoidance Questionnaire (Sexton and Dugas, 2008) was subjected to confirmatory factor analysis, but the fit proved to be poor, probably as a result of the high number of double-loadings across five factors which comprised only five items each. The authors also acknowledged that, like the CBAS, the original scale development was based on theoretical and clinical considerations to generate items.

Among the more recent avoidance measures is the Multidimensional Experiential Avoidance Questionnaire (MEAQ - Gámez, Chmielewski, Kotov, Ruggero, and Watson, 2011), but item generation was again based on face-valid judgements of a panel with a strong bias towards clinical contexts, such as clinical faculty and practising clinicians. The psychometric process was also biased towards selecting too many factors; indeed, the analysis suggested 11 factors, which would have reduced substantially had a scree plot been used. Successive exploratory

factor analyses of selected factor items were then used rather than confirmatory factor analysis to arrive at a final 6-factor structure.

In sum, research on the assessment of avoidance coping has been psychometrically compromised. Existing scales have generally not been subjected to confirmatory factor analysis to endorse the obtained factor structures, and one of the important contributions in the development of the new scale reported in this paper is the inclusion of confirmatory factor analysis (CFA). The absence of confirmatory procedures could of course be addressed by subjecting existing scales to CFA, but a second distinguishing feature of the present study is that the items for the new measure were derived from a more objective scenario technique rather than relying on face validity.

Research on avoidance has also tended to be biased towards viewing it primarily as a clinical construct, but the findings have indicated that there are clear and important implications of avoidance in a wide range of contexts. The construction and validation of the new scale was based on samples from the general population, and is aimed at maintaining a wider perspective on avoidance rather than restricting it to the domain of clinical psychology. The procedure for generating the items will be discussed, followed by the factorial validation of the initial item pool based on exploratory factor analysis and subsequent confirmatory factor analysis using an independent sample. A third sample was recruited to address the shortage of male participants in the first samples, and a second confirmatory analysis is reported based on this sample, followed by a final exploratory factor analysis using the pooled sample of participants from all three analyses. Descriptive statistics are reported for the pooled sample, followed by a study of the concurrent validity of the new scale.

Methods and Results

Item Generation: The Scenarios and Life Domains Questionnaire (SLDQ)

One of the criticisms of psychometric scales is that they are based on face-valid item pools derived from theory or from existing scales. As an alternative, Roger and his co-workers (for example, Forbes and Roger, 1999) developed a scenario technique which derives primary scale item pools from unbiased responses to sets of scenarios. To ensure a broad scope for the new scale the 35 scenarios used to elicit the responses intentionally ranged over both work and personal situations, with varying degrees in the level of the relationship between individuals and the social interactions they may have to cope with.

Responses to the 35 scenarios were obtained from 30 volunteer participants with a wide range in age (mean age: 40.97; range: 23-68) and approximately balanced for gender (12 males, 17 females, 1 gender not disclosed). The sample also ranged widely in work experience. Since the responses to the scenarios are used solely to generate items rather than being subjected to statistical analysis, previous research (for example, Forbes and Roger, 1999) has indicated that samples of this size are adequate for the purpose of eliciting initial items. Respondents were asked to say how they would think, act and feel in each scenario, and to enhance the overall qualitative nature of the scenario study the first author added a list of nine life domains including work, family and health. Respondents were asked to describe a significant event in each domain and say how they had dealt with it.

The resulting Scenario and Life Domain Questionnaire (SLDQ) yielded coping responses based on the respondents' experience, and expressed in the vernacular rather than

'academese'.   Removing duplications and ambiguous items yielded an initial item pool of 67 responses. These were cast into a dichotomised true-false response format to limit the tendency for responses to regress towards mid-points, and to ensure that most-likely responses were elicited.

Exploratory Factor Analysis

Participants: The sample for the exploratory factor analysis comprised 264 participants, 191 females (mean age 29.38 years; range 18-65 years; SD 11.45) and 73 males (mean age 35.22 years; range 18-70 years; SD 12.57). The sample included 113 undergraduate students from the University of Westminster, London, and 151 working adults from a wide range of occupational backgrounds. The Kaiser-Meyer-Olkin index of sampling adequacy was .868, and the approximate χ^2 value for Bartlett's test of sphericity was 7267.855 ($p<.001$).

Procedure and Results: Responses from the participants to the 67 items were subjected to Exploratory Factor Analysis (EFA). The data-set was binary, and Principal Axis Factoring (PAF) was used to accommodate skewness; in addition, a Parallel Analysis (O'Connor, 2000) was added. A scree plot (Brown, 2006; Costello and Osborne, 2005) from orthogonal (Varimax) rotation indicated a three factor solution: eigenvalues for the first three factors were 14.842, 3.355 and 2.230, respectively, and 2.146 for the fourth factor. Based on an exclusion criterion of .35, 43 items loaded above criterion on the three factors, and a three-factor oblique (direct oblimin) rotation made no significant difference to the orthogonal factor structure. The Parallel Analysis endorsed the three factor extraction at the 95th and 99th percentiles, and apart from changes in some loadings for lower-order items the three-factor structure remained intact when explored with a range of other extraction methods

(Unweighted Least Squares, Generalised Least Squares, Alpha Factoring, Image Factoring and Maximum Likelihood).

The loadings for the items are displayed in Table 1.

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TABLE 1 ABOUT HERE

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Factor 1 included 23 items with the highest loading on item 39 ("*I think to myself that I have to deal with the situation, but don't do anything about it*", .709), and based on item content Factor 1 was named General Avoidance. The highest loading on the 11-item Factor 2 was item 35 ("*I try to forget about unpleasant things I have experienced*", .737), and the factor was labelled Emotional Avoidance. For the final 9-item factor the highest loading was for items 8 ("*I deal with tension between me and other people because it won't go away by itself*", -.737), and the factor was labelled Conflict Avoidance. Only six items cross-loaded over the three factors and these items were included on the factor with the highest loading.

Confirmatory Factor Analysis

Participants: The sample comprised returns from 205 volunteer participants from an independent sample, mostly working adults who were resident in New Zealand and recruited through the first author's professional network. Of these, 169 provided usable returns, 144 women (mean age 39.05 years; range 19 - 72 years; SD 11.45) and 25 men (mean age 47.12 years; range 18 – 63 years; SD 12.61). The analysis was based on parcelling methodology, which is aimed in part at accommodating smaller sample sizes (for example, Bandalos,

2002), and while the sample was biased towards female participants, subsequent analyses reported below included an additional sample to address this issue.

Procedure and Results: Confirmatory factor analysis (CFA) is based on a series of goodness-of-fit indices, including Absolute Fit Indices such as Chi-square (χ^2), Parsimony Correction Indices such as Root Mean Square Error of Approximation (RMSEA − Browne and Cudeck, 1993), and comparative or incremental fit indices such as the Comparative Fit Index (CFI) or the Tucker-Lewis Index (TLI) (Brown, 2006; Rogelberg, 2004). Chi-square is rarely used as the only indicator of model fit as it is sensitive to sample size and non-normal data, but it can also be used to calculate other fit indices such as the Tucker-Lewis Index (Brown, 2006). The fit indices used to evaluate the CFA of the new scale were χ^2, CFI, TLI and RMSEA, based on the Maximum Likelihood estimation method (AMOS version 19 - Brown, 2006). The interpretation of the corresponding acceptable cut-off values (Brown, 2006; Schweizer, 2010) for these fit indices are explained in Table 2.

CFA based on item parcels rather than individual items is a well-documented technique for dealing with large numbers of items, non-normal data and small sample sizes (Bandalos, 2002; Little, Cunningham, Shahar, and Widaman, 2002). Following the guidelines suggested by these authors, the items from the new scale were allocated into four, three and two parcels, respectively, for General Avoidance, Emotional Avoidance and Conflict Avoidance. Scree plots indicated that all parcels were unidimensional. The alpha coefficients were generally satisfactory, and, although marginal in one case (0.529), ranged up to 0.708.

Goodness-of-fit indices were calculated for unifactor, two-factor (combining Factors 1 and 3, which had the highest intercorrelation) and three-factor solutions, and the results displayed in Table 2 show clearly that the three-factor structure provides the most favourable fit.

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TABLE 2 ABOUT HERE

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The confirmatory three-factor model for the scale is displayed in Figure 1.

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FIGURE 1 ABOUT HERE

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There is much debate about the most appropriate estimation technique for confirmatory factor analysis, and although the data were analysed using Maximum Likelihood (ML) estimation, to ensure that the results were reliable the data were re-analysed using four additional estimation methods: Generalised Least Squares, Unweighted Least Squares, Scale-Free Least Squares, and Asymptotically Distribution Free analysis. In all cases the results endorsed the three-factor solution obtained using ML estimation – for example, the common goodness-of-fit indices of CFI, TLI and RMSEA for the Asymptotically Distribution Free analysis were .915, .872 and .085, respectively.

Internal Consistency and Retest Reliability for the GSAQ Factors

Avoidance coping is considered a stable trait (Ottenbreit and Dobson, 2004), and it was anticipated that the new GSAQ would also show stability over time. The scale was completed by a sample of 109 participants drawn from the 169 participants who completed the scale for the confirmatory factor analysis. Retest returns were made over intervals ranging from 30 to 107 days, and the retest coefficients for the overall sample were 0.844 for General Avoidance, 0.780 for Emotional Avoidance and 0.822 for Conflict Avoidance. For the internal consistency of the scale, coefficient alphas calculated for each of the factors were 0.915 for General Avoidance, 0.818 for Emotional Avoidance and 0.817 for Conflict Avoidance.

Additional Factor Analyses and Descriptive Statistics: Expanded sample

Participants: One of the problems with the exploratory and confirmatory factor analyses discussed above was the relatively small number of males in the samples, and a further sample was subsequently recruited from undergraduate students attending the University of Westminster, London. The sample of 186 participants provided the opportunity for an additional confirmatory factor analysis, as well as contributing a further 168 females (mean age 19.89 years; range 18 - 43 years; SD 4.46) and 18 males (mean age 19.25 years; range 18 − 26 years; SD 1.95) to an overall pooled sample of 619 participants (116 males and 503 females).

Confirmatory Factor Analysis: Although the number of males in the sample was again small, a second confirmatory factor analysis was performed on the sample of 186 participants using the same parcelling procedure used for the first CFA. This analysis yielded goodness-of-fit indices that again favoured the three-factor solution, more strongly than the first CFA

sample. The fit indices from the parcel-based analysis were: $\chi^2 = 28.29$ ($df = 24$; $p = .248$); CFI = .994; TLI = .991; RMSEA = .031.

Pooled Exploratory Factor Analysis: The general rule of thumb for determining the optimal sample size for stable factor analytic findings is two-and-a-half times the number of items. Pooling the three samples provided 116 males, which satisfied this criterion, as well as a pooled sample of 503 females and a total sample of 619 participants. A final series of EFAs were conducted for the total pooled sample and for the males and females separately, and the scree tests again indicated three-factor structures. Apart from some inevitable item migration, Varimax rotation to terminal solutions unambiguously endorsed the three factors obtained previously in the initial EFA and confirmed by the subsequent CFAs.

Descriptive Statistics: Using the pooled sample of 619 participants, the score distributions for the three scales were tested by calculating skew and kurtosis, and the results are displayed in Table 3 together with descriptive statistics for the scales broken down by gender. A figure greater than +/- 1.0 is generally used as a criterion for skewness, and the data show that the distributions for Factor 1 were moderately skewed for females but more so for males, a discrepancy that can probably be attributed to the smaller sample for male participants.

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TABLE 3 ABOUT HERE

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Gender differences were computed for the total sample of 619 participants, and an independent-samples t-test showed that females scored significantly higher than males on General Avoidance ($t = 3.769$, $df = 617$, $p < .01$). Females also scored significantly higher

than males on both Emotional Avoidance (t = 3.810, df = 617, $p<.01$) and Conflict Avoidance (t = 3.326, df = 617, $p<.01$). These findings are consistent with previous studies showing that females generally score significantly higher than males on measures of avoidance coping (for example, Matud, 2004). Correlations amongst the factors for the total sample showed that General Avoidance correlated relatively highly with Emotional Avoidance (0.463) and Conflict Avoidance (0.629). The correlation between Emotional Avoidance and Conflict Avoidance was 0.307. While the coefficients were all statistically significant the largest coefficient of determination between factors accounts for less than 40% of common variance, suggesting that the three factors assess relatively discrete facets of the coping process.

Concurrent Validation

Participants: A subset of 147 of the 169 participants who took part in the first confirmatory factor analysis exercise provided usable responses for the concurrent validation study. There were 126 females (mean age 38.83 years; range 19-72 years; SD 11.49) and 20 males (mean age 45.35 years; range 18-63 years; SD 13.28); one participant did not indicate their gender, and most were working adults.

Measures: Participants completed a package of selected questionnaires covering as wide a range of domains as possible, including measures of stress and resilience, mental and physical well-being as well as existing coping scales. The package comprised:

(i) The 14-item *Proactive Coping Scale* from the *Proactive Coping Inventory* (PCI - Greenglass, Schwarzer, Jakubiec, Fiksenbaum, and Taubert, 1999). Alpha coefficients range

between 0.79 and 0.81, and retest reliability was .73 over an 8-week interval. Proactive coping correlates negatively with depression and positively with active coping and self-efficacy, and individuals with proactive coping styles are less likely to employ avoidant strategies when dealing with demand (Greenglass, *et al*., 1999).

(ii) The 42-item *Depression Anxiety and Stress Scales* (DASS21 - Lovibond and Lovibond, 1995) have reported alpha coefficients of .91, .84 and .90, respectively, and retest reliabilities ranging from .71 to .81. The three-factor structure has been confirmed using confirmatory factor analysis, and the scale has been extensively validated in both clinical and non-clinical samples (Brown, Choprita, Korotitch & Barlow, 1997; Crawford and Henry, 2003). The DASS21 was included in view of previous research reporting links between depression, anxiety, stress and avoidance coping (for example, Friedman, *et al*., 1992; Ottenbreit and Dobson, 2004; Oxlad, *et al*., 2004).

(iii) The *Detached/Emotional* scale from the revised *Coping Styles Questionnaire* (CSQ - Roger, Jarvis, and Najarian, 1993; Roger, 1996). The Detached/Emotional scale comprises 22 items, with an alpha coefficient of .880 and retest reliability of .793. The scale has been used in a wide variety of research settings (for example, Borrill, Fox, and Roger, 2011; Costa and Pinto-Gouveia, 2011). Detached coping is an adaptive coping style whereas avoidance coping is regarded a maladaptive coping strategy (see for example Roger, *et al*., 1993), and it was expected that the detached/emotional scale of the CSQ would correlate negatively with the avoidance scales of the GSAQ. Only the detached/emotional scale of the CSQ was included to allow for a broader range of concurrent measures to be included in the questionnaire pack, and also to maximise returns by limiting the number of questions respondents had to complete.

(iv) The *Rumination* component of the *Inhibition-Rumination Scale* (I-RS - Roger, Guarino de Scremin, Borril and Forbes, 2011). Rumination has been shown to prolong physiological recovery following exposure to stress, and in view of the positive correlation between rumination and avoidance coping (Roger and Najarian, 1998) only the rumination scale from the I-RS was included. Limiting the scales in the concurrent validation package only to those with established links to avoidance also ensured that returns were maximised. The rumination component of the I-RS has alpha and re-test reliability coefficients of .914 and .869, respectively, and the scale has been used in a wide variety of research settings (for example, Thomsen, Mehlsen, Hokland, Viidik, Olesen, Avlund, Munk & Zachariae, 2004; Clarke & Roger, 2007).

(v) The *Physical Symptoms Inventory* (PSI - Spector and Jex, 1998) was included to explore the links between avoidance coping and both psychological and physical health. Each of the 18 items in the PSI assesses a separate condition, and the scale is completed over a retrospective 30-day period based on having not had the symptom, having had the symptom, or having seen a doctor for it. A number of publications highlight the link between avoidance coping and physical health (for example, Davies & Clark; 1998; Suls & Fletcher), and the PSI was included to further explore this link. Alpha coefficients for the PSI range from .79 to .81, and re-test reliabilities from .50 to .56 (Spector, Zhou & Yang, 2012); the modest retest figures would be anticipated in a scale assessing a state index like health status.

Results: The table of correlations between the factors in the GSAQ and the scales included in the concurrent validation study are displayed in Table 4.

The table shows that the negative correlations between Proactive Coping and the GSAQ subscales were all statistically significant, which was anticipated and consistent with findings reported by Greenglass, *et al*. (1999). However, the correlation with Emotional Avoidance was more marginally significant compared to those for General Avoidance and Conflict Avoidance, and the differential relationships between the three GSAQ factors and the criterion indices were even more marked with the Depression, Anxiety and Stress Scales. While the coefficients were all modest, both General Avoidance and Conflict Avoidance correlated positively and significantly with Depression, Anxiety and Stress; by contrast, all of the correlations with Emotional Avoidance were non-significant.

A comparable pattern emerged for the Detached/Emotional component of the CSQ3 and the Rumination scale from the I-RS. The correlation between these scales and the Emotional Avoidance scale approximated zero, while the correlations with General Avoidance and Conflict Avoidance were significantly positive for Rumination and significantly negative for Detached/Emotional Coping.

The first measure from the Physical Symptoms Inventory ('reporting no symptoms') correlated significantly inversely with both General Avoidance and Conflict Avoidance, while the second measure ('having symptoms') correlated significantly positively with these two GSAQ factors. The third measure, 'reporting symptoms to a doctor', also correlated inversely with General Avoidance and Conflict Avoidance, though more marginally.

Emotional Avoidance correlated marginally with 'reporting no symptoms' and 'having symptoms', and did not correlate significantly with the 'reporting symptoms to a doctor'.

Discussion and Conclusions

The literature reviewed in the Introduction showed that research on coping has been hampered by psychometric shortcomings in coping scales, but where appropriate methods have been used, the optimal structure of coping in general has been shown to devolve on three primary components, usually labelled task (or rational), emotional and avoidant coping (for example, Endler and Parker, 1990; Lyne and Roger, 2000).

Subsequent studies have refined the understanding of task and emotional coping, but despite the significant implications of avoidance in both clinical and non-clinical settings the nature of avoidance coping has remained unclear, in part owing to similar psychometric problems that have beset research on coping in general. The aim of the present paper was to develop a new scale for assessing the dimensions of avoidance coping based on items generated by a unique scenario and life-domains technique. The paper reports on the studies required to establish the reliability and the factorial and concurrent validity of the new scale, to allow it to be used in future research on avoidance coping.

Exploratory factor analysis of the initial item pool yielded three factors that could unambiguously be labelled General Avoidance, Emotional Avoidance and Conflict Avoidance, and confirmatory factor analysis using an independent sample provided a clear confirmation of the three-factor structure. However, one of the disadvantages of these

analyses was having small numbers of male participants in the samples, and a further sample was recruited. This too was female gender-biased, but pooling all three samples provided a sufficient number of male participants for reliable factor analysis.

The results of a series of exploratory factor analyses for the total pooled sample as well as for males and females separately all clearly endorsed the three-factor structure obtained initially, as did a second confirmatory factor analysis performed on the new sample only. The substantial number of participants in the pooled samples also provided a data-base for computing reliable descriptive statistics for the new GSAQ, which showed that the only notably skewed distribution was for General Avoidance amongst males. Females scored significantly higher on all three avoidance scales than males, which echoes previous findings (Matud, 2004).

Research on the impact of avoidance coping on health and well-being has been compromised by psychometric shortcomings in the avoidance scales that were used. The new GSAQ has addressed these issues by generating items in a more objective way, using the scenario and life-domains technique, and by using confirmatory factor analysis to establish the fit of the subscales obtained from exploratory factor analysis. Overall the new scale displays satisfactory psychometric properties, and the findings from the concurrent validation study indicate that the new scale offers a significant advance in understanding the differential role played by the identified components of avoidance. The relationships between the criterion measures and the General and Conflict Avoidance scales generally confirmed anticipated outcomes, and the significant inverse correlations with the proactive coping and detached/emotional coping measures as well as the significant positive correlations with the

depression, anxiety, stress and rumination measures confirms the maladaptiveness of avoidance coping.

The negative (albeit modest) relationship between General and Conflict Avoidance on the one hand and reporting symptoms to a doctor on the other is also consistent with avoidance. Having symptoms but avoiding their disclosure perhaps reflects the potentially anxiety-provoking nature of medical consultations and the distress that might follow from a negative diagnosis. If true, this finding would endorse the view that while avoidance coping might reduce distress in the short term it may have a significant impact on wellbeing in the long term (Davies and Clark, 1998; Suls and Fletcher, 1985), since a reluctance to report symptoms associated with psychological distress to a doctor could potentially lead to more serious untreated health outcomes.

Unexpectedly, Emotional Avoidance showed a pattern of relatively low or non-significant correlations across all of the concurrent scales. This might perhaps have been a consequence of the particular measures that were selected for the concurrent validation, and it is important to bear in mind that these results are based on self-reported questionnaire completion with non-clinical samples. There was also a notable gender imbalance in the samples separately, but the differences between the scales was evident across the data-set.

The contrast between General and Conflict Avoidance on the one hand and Emotional Avoidance on the other is of particular interest, and future research avenues currently planned by the authors include experimental studies of predictive validity as well as cross-cultural studies to explore the factorial stability of the scale across cultures. The CFA results indicated a best fit for the three-factor model in two separate samples, further confirmed by

the χ^2 difference tests for both samples. The covariance between General and Conflict Avoidance was nonetheless relatively high, and although acceptable, this finding will also be further explored in the planned research with the GSAQ. Avoidance coping has been implicated in a range of clinical conditions (for example, Friedman, *et al*., 1992; Oxlad, *et al*., 2004), and while the present paper focused on the construction and preliminary validation of a new scale using samples that were all non-clinical, further exploration of the clinical implications of the three components of the GSAQ offers another line of future research using the new scale.

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Table 1: Item loading from the Exploratory Factor Analysis of 43-item GSAQ

Item	Content	1	2	3
GSAQ39	I think to myself that I have to deal with the situation, but don't do anything about it.	.709		
GSAQ25	I think of excuses why I shouldn't deal with the situation.	.687		
GSAQ33	I complain about the situation but don't actually do anything about it.	.684		
GSAQ13	I deal with unpleasant circumstances by wishing they will just go away.	.657		
GSAQ24	In difficult situations, I pretend it didn't happen.	.616		
GSAQ41	I usually just ignore things and hope that time will somehow sort them out.	.613		
GSAQ40	Under pressure, I prefer to sit tight and hope it all goes away.	.610		
GSAQ5	I try to avoid having to deal with the situation.	.580		
GSAQ38	I pretend something else is wrong, instead of focussing on the actual problem.	.536		
GSAQ30	I consciously overlook things which are difficult to deal with.	.520		
GSAQ22	If I pretend that the problem doesn't exist it will go away by itself.	.496		
GSAQ1	I try to ignore thinking about the situation.	.479	.396	
GSAQ29	I prefer dealing with a problem rather than making up excuses why I shouldn't have to deal with it.	-.471		.393
GSAQ42	Rather than dealing with unpleasant things, I tend to look for something to distract me.	.465	.353	.369
GSAQ9	I deny the existence of concerns I have about a situation.	.462		
GSAQ6	I don't walk away from difficult situations I should be dealing with.	-.441		
GSAQ11	I try to find a way out of having to deal with it.	.435		
GSAQ37	I just hope the existence of concerns I have about a situation will go away.	.428	.419	
GSAQ4	Problems don't just go away by themselves, therefore I deal with problems.	-.409		
GSAQ7	I find out as much as I can about the situation in order to deal with it.	-.407		
GSAQ12	I tell myself that this is just my fate, I can't do anything about it.	.405		
GSAQ10	I don't shrug off the responsibility to deal with problems in my life.	-.367		
GSAQ17	When things bother me, I don't deny it to myself.	-.346		

GSAQ35	I try to forget about unpleasant things I have experienced.	.737	
GSAQ20	I try not to think about previous bad experiences.	.721	
GSAQ18	I try to ignore memories of difficult situations.	.718	
GSAQ23	I try to forget that it ever happened.	.550	
GSAQ3	I try not to think about things bothering me.	.526	
GSAQ36	When experiencing an unpleasant situation, I tend to focus on fond memories only and disregard negative feelings.	.521	
GSAQ31	I try to distract myself by thinking about other things.	.503	
GSAQ43	If something upsets me, I try to just blot the whole thing out of my mind.	.503	
GSAQ2	I try to think of other things to distract me from thinking about the situation.	.419	
GSAQ14	I try not to think about how bad it makes me feel.	.415	
GSAQ16	I try not to think of the negative aspects of the situation.	.382	
GSAQ8	I deal with tension between me and other people because it won't go away by itself.		-.737
GSAQ21	I deal with conflict between me and other people rather than ignoring it.		-.603
GSAQ32	I discuss difficult situations with the people involved.		-.590
GSAQ15	I don't delay dealing with a situation.		-.551
GSAQ26	In difficult situations with others, I tend to just leave it and walk away.		.525
GSAQ28	I deal with the situation immediately.		-.478
GSAQ34	Rather than dealing with conflict, I hope it will go away.	.472	.477
GSAQ19	I don't deny it when there is tension between me and other people.		-.454
GSAQ27	I pretend that there is no tension between me and others even when there is tension.	.342	.452

Table 2: Summary of goodness-of-fit indices for one, two and three factors and Chi-square difference test for the first CFA sample.

	Number of Factors			Chi-square difference (*diff*)			
	1	2	3	Factors	χ^2_{diff}	df_{diff}	*p*
χ^2	303.33	127.67	49.21	1 vs. 2	175.66	1	<0.001
df	27	26	24	1 vs. 3	254.12	3	<0.001
χ^2 *p*	0.000	0.000	0.002	2 vs. 3	78.46	2	<0.001
CFI	0.737	0.903	0.976				
TLI	0.649	0.866	0.964				
RMSEA	0.246	0.152	0.079				

χ^2 = Chi-square; χ^2_{diff} = Chi-square difference

df = degrees of freedom; *df* $_{diff}$ = degrees of freedom difference

p = Significance level of χ^2 (*p*<0.05 means the model fit is unsatisfactory)

CFI = Comparative Fit Index (>0.90 is good; >0.95 is very good)

TLI = Tucker-Lewis Index (>0.90 is good; >0.95 is very good)

RMSEA = Root Mean Square Error of Approximation (<0.08 is good; <0.05 is very good)

Table 3: Descriptive Statistics for the Three GSAQ Scales

Gender		General Avoidance	Emotional Avoidance	Conflict Avoidance	Total GSAQ
Male	Mean	4.129	4.353	2.250	10.733
	N	116	116	116	116
	SD	4.397	3.025	2.284	8.367
	Kurtosis	2.324	-.812	.079	1.242
	Skewness	1.547	.347	.903	1.175
Female	Mean	6.054	5.535	3.109	14.698
	N	503	503	503	503
	SD	5.077	3.007	2.557	8.601
	Kurtosis	.144	-.905	-.620	-.224
	Skewness	.923	-.174	.639	.595
Total	Mean	5.693	5.313	2.948	13.955
	N	619	619	619	619
	SD	5.010	3.043	2.529	8.690
	Kurtosis	.357	-.968	-.515	-.122
	Skewness	1.102	-.080	.688	.663

**Table 4:** Concurrent scale correlations (*r*)

GSAQ Scale	Proactive Coping	Depression	Anxiety	Stress	Detached / Emotional	Rumination	No Symptoms	Have Symptoms	Doctor Symptoms
General Avoidance	-.560**	.339**	.278**	.295**	-.460**	.395**	-.271**	.357**	-.174*
Emotional Avoidance	-.210*	.052	.170*	.076	-.006	.075	-.185*	.207*	-.041
Conflict Avoidance	-.577**	.288**	.217**	.269**	-.364**	.344**	-.229**	.321**	-.190*
GSAQ Total Avoidance	-.559**	.294**	.280**	.272**	-.368**	.350**	-.285**	.368**	-.169*

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

a. Listwise N=147

Figure 1: Confirmatory three factor model for the GSAQ
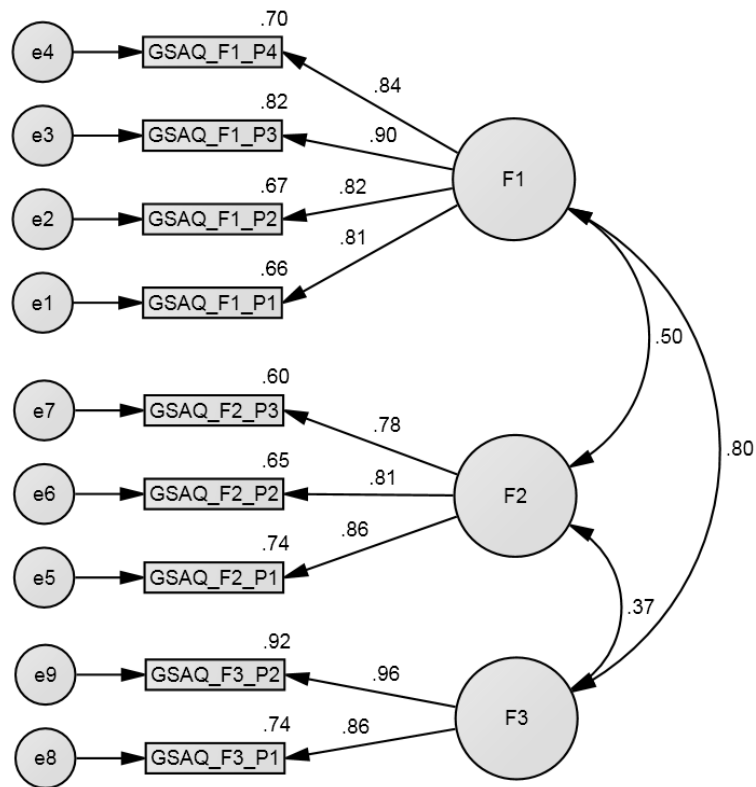
Note:

Latent Variables: F1 = General Avoidance; F2 = Emotional Avoidance; F3 = Conflict Avoidance

Observed Variables: E.g. GSAQ_F1_P1 = GSAQ Factor 1 Parcel 1 used in the CFA