The association of avoidance coping style, and perceived mother and father support with anxiety/depression among late adolescents: Applicability of resiliency models

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1. Introduction

Resiliency is the ability of individuals to be well adjusted despite exposure to risk factors. Theories of resiliency suggest that this is because of the operation of protective factors (Garmezy, Masten, & Tellegen, 1984; Masten et al., 1988; Werner & Smith, 1982). Risk factors are those negative circumstances or conditions that are associated with a higher likelihood of negative outcome or problem behaviours, while protective factors are circumstances or conditions that reduce the effect of the risk factor on adjustment. Among other factors, an avoidance coping style is considered a risk factor for adolescent adjustment. In contrast, supportive parenting is a protective factor. Based on models of resiliency, the current study examined four different, but not mutually exclusive models, depicting the concurrent effects of avoidance coping style and perceived mother and father support on the anxiety and depression among a group of late adolescents.

It is generally accepted that maladaptive coping behaviour is associated with maladjustment. At present there is evidence of consistency and stability in coping over time, and across different stressful situations (Costa, Somerfield, & McCrae, 1996; Hewitt & Flett, 1996). These dispositional forms of coping have been referred to as coping styles. One major adolescent coping style is avoidance coping, which includes strategies and behaviours that avoid or ignore the conflict, such as withdrawal and distraction (Billings & Moos, 1984; Herman-Stahl, Stemmler, & Petersen, 1995). Although existing data indicate gender and age differences for avoidant coping style (Gomez, 1988) and also anxiety and depression (Achenbach, 1991), studies have generally shown that avoidance coping style is positively associated with adolescent anxiety and depression (Gomez, 1988; Seiffge-Krenke & Klessinger, 2000). This raises the possibility that avoidance coping style is a general risk factor for adolescent anxiety and depression.

In contrast to avoidant coping style, positive family related factors are associated with better adolescent adjustment. In this respect, there are data showing that overall perceived parent support (companionship, intimacy, affection, instrumental aid, and expression of admiration) is generally associated negatively with adolescent anxiety and depression (Holahan, Valentiner, & Moos, 1995; Wolfradt, Hempel, & Miles, 2003; Zimmerman, Ramirez-Valles, Zapert, & Maton, 2000). Interestingly, a recent longitudinal study showed that time 1 parent support predicted time 2 anxiety and depression, and that neither anxiety nor depression at time 1 predicted parent support at time 2 (Zimmerman et al., 2000). These findings imply that parental support is a protective factor for anxiety and depression.

To date no study has examined the effects of avoidance coping and perceived mother and father support on anxiety and depression from the resiliency perspective. Researchers have proposed at least four generic resiliency models for evaluating the relationships of risk and protective factors with adjustment (Garmezy et al., 1984; Hollister-Wagner, Foshee, & Jackson, 2001; Masten et al., 1988). These are the compensatory model, the risk-protective model, the challenge model, and the protective-protective model. The compensatory model suggests that the risk and protective factors have additive effects on maladjustment, with the risk factors increasing maladjustment, and protective factors reducing maladjustment. The risk-protective model suggests that maladjustment is related to the interaction involving the risk and protective factors. More specifically, relative to low levels of the protective factor, higher levels of the protective factors will have more buffering effects on the relation between the risk factor and maladjustment. The challenge model implicates a curvilinear relation between risk and maladjustment, such that a certain moderate

amount of the risk factor is seen as enhancing better adjustment. This model assumes that at such levels of the risk factor, protective factors are activated, thereby reducing the potential impact of the risk factor. The protective–protective model suggests that maladjustment is related to the interaction between the risk factor and number of relevant protective factors that are present. The model predicts that the relationship between the risk factor and maladjustment will weaken as the number of protective factors increases. As an example, a person with 4 protective factors can be expected to have less maladjustment compared to a person with less than 4 protective factors even if they both have the same level of the risk factor.

The aim of the current study was to examine the applicability of the compensatory, the risk–protective, the challenge, and the protective–protective models of resiliency for the prediction of anxiety plus depression (anxiety/depression) from avoidance coping style and perceived mother and father support. Thus, unlike most previous studies that have examined separately the role of various risk and protective factors for depression and anxiety, this study examines the interplay of some of these risk and protective factors. Furthermore their effects on depression and anxiety will be examined through four general (normative) models that have been identified by past researchers as relevant for explaining individual differences in response to risk factors. Given the possibility of gender and age differences, the study controlled for gender effects statistically, and limited the participants to late adolescents. It is to be noted that generally there has been minimal research with adolescents in terms of the applicability of the resiliency models.

For this study, we did not have any definite hypothesis on the applicability of the four resiliency models because there is currently no empirical data that would justify us doing so. However, it is worth noting that the compensatory model would suggest that avoidance coping will contribute positively, while perceived parental (father or mother) support will contribute negatively to the prediction of anxiety/depression. The risk–protective model would suggest that higher levels of perceived parental (father or mother) support will reduce the effect of avoidant coping on anxiety/depression. For the challenge model, the prediction will be that anxiety/depression would have a curvilinear relationship with avoidant coping, such that moderate amounts of avoidance coping will have little or no effects on the level of anxiety/depression, compared to high levels. The protective–protective model would suggest that the level of anxiety/depression will be low for those with both high perceived father and mother support compared to those with either perceived father or mother support, and that the latter group would have less anxiety/depression compared to those with neither perceived father nor mother support.

2. Method

2.1. Participants

A total of 331 adolescents participated in the study. The mean age of the participants was 18.83 years ($SD = 0.76$). Their age ranged from 18 to 20 years, and all age categories had more or less equal proportions of females and males. There were 192 females and 139 males. The mean ages of females and males were 18.72 ($SD = 0.82$) and 18.92 ($SD = 0.93$) years, respectively. Although the groups differed in age, $t(329) = 2.09$, $p < .05$, the difference was very low (Cohen's effect size = 0.23). The vast majority of participants were of Western European decent.

Participants were recruited from three Universities in the State of Victoria, Australia. Most participants were in their first year at University, and were residing at home with their parents/families. Approximately 65% of adolescents contacted participated in the study.

2.2. Measures

Avoidant coping: Avoidant coping was measured using an Avoidant Coping Scale derived from the slightly modified version (Herman-Stahl et al., 1995) of the Coping Across Situations Questionnaire (CASQ; Seiffge-Krenke & Shulman, 1990). The CASQ has been used as a measure of coping styles (Herman-Stahl et al., 1995; Seiffge-Krenke & Shulman, 1990). The modified CASQ has a total of 17 items, requiring respondents to indicate how they generally deal with their concerns and worries. Each item was rated on a 5-point Likert-type scale, ranging from “not used” (rated 1) to “always used” (rated 5). The avoidant coping scale used for obtaining the avoidant coping scores comprised 5 items. They were: “I try to let out my feeling with loud music, riding my motorbike, wild dancing, etc.”; “I let out my feelings by shouting, crying, banging doors, etc.”; “I try not to think about the problem”, “I try to forget my problems with alcohol and drugs”, and “I withdraw because I cannot change anything anyway”. The 5-item scale had Cronbach’s alpha value of 0.64 for the sample in this study.

Perceived mother support and perceived father support: The perceived mother support and perceived father support measures were obtained from the perceived parental support measure developed by Stice, Barrera, and Chassin (1993). This questionnaire has 6 items assessing the following parent support relationships: parental companionship, guidance, intimacy, affection, admiration, and reliable alliance. It has a high internal consistency, ranging around .90 (Stice et al., 1993). For this study, the 6 items of this measure were reworded so as to obtain separate scores for perceived support from fathers and from mothers. An example of an item in the father version is “How much could you count on your father to be there when you needed him no matter what”? The same item in the mother version reads “How much could you count on your mother to be there when you needed her no matter what”? As in the original scale, for both the father and mother versions, each item is rated on a 5-point Likert scale, ranging from “little or none” (rated 1) to “the most possible” (rated 5). Thus higher scores indicate more positive perceptions of perceived support. For this study, total scale scores were used to obtain perceived father and mother support scores. They had Cronbach’s alpha values of .83 and .77, respectively.

Number of protective factors: The number of protective factors was derived from the scores for perceived mother support and perceived father support. To obtain this score, the mean scores for the perceived mother support and perceived father support were used to recode these scores. Individuals with scores at or above the mean scores of the total sample were considered to be protected by the factors in these measures, and were scored 1. All other individuals were scored 0. Following this, the recoded scores for perceived mother and father scores were combined to provide the number of protective factors score. Thus participants had either 0 protective factors, or 1 protective factor (either perceived mother or father support), or 2 protective factors (both mother and father perceived support). This measure had a Cronbach’s alpha value of .87.

Anxiety/depression: Anxiety/depression was measured using the Anxiety/Depression factor of the Youth Self-Report (YSR; Achenbach, 1991). The YSR is a valid and reliable self-report rating scale, with eight domains (factors) of childhood and adolescent psychopathology. The anxiety/

depression factor has 15 items, and has excellent internal consistency value of around .90 (Achenbach, 1991). Examples of anxiety/depression items are “*I feel lonely*” and “*I am nervous or tense*”. Each item is rated, based on the preceding 6 months, on a 3-point scale: 0 if the problem is “*not true*”, 1 if the item is “*somewhat or sometimes true*”, and 2 if it is “*very true*”. The score for this scale is obtained by adding the scores for all its items, with higher scores reflecting higher severity. The Cronbach’s alpha value of the anxiety/depression scale in this study was .91.

2.3. Procedure

The plain language statement to potential participants indicated that the study was addressing aspects of family experience and behaviour. Following consent, participants were asked to complete the self-rating scales described above (as well as other scales, not focused on in the current study). All scales were completed in groups at the end of lectures. The order of scales was randomised across participants. In all instances, the completed scales were collected immediately after they were completed.

2.4. Data analysis

The compensatory, risk–protective, challenge, and protective–protective models were tested using the multiple regression methods proposed by Garnezy et al. (1984) and others (e.g., Hollister-Wagner et al., 2001). All models tested controlled for gender effects. The compensatory, risk–protective, and challenge models were tested in the same analysis by regressing the outcome measure (anxiety/depression) on gender, the risk factor (avoidant coping), the relevant protective factor (either perceived mother support or perceived father support), risk factor $\times$ protective factor, and risk factor $\times$ risk factor. Significant prediction by both the risk and protective factor indicates support for the compensatory model. Significant predictions by risk factor $\times$ protective factor, and risk factor $\times$ risk factor indicate support for the risk–protective, and challenge models, respectively.

The protective–protective model was tested by regressing the outcome measure (anxiety/depression) on gender, the risk factor (avoidant coping), number of protective factors, risk factor $\times$ number of protective factors, risk factor $\times$ risk factor, and risk factor $\times$ risk factor $\times$ number of protective factors. Significant contribution to the prediction of the outcome measure by the risk factor $\times$ number of protective factors variable indicates support for the protective–protective model. As non-centered cross-product terms are not interactions, centered scores (i.e., the actual score minus the mean score) were used in all regression analyses. An added advantage of using centered scores is that it reduces problems of multicollinearity of product terms (Cohen & Cohen, 1983).

3. Results

3.1. Descriptive scores, correlations between measures, and gender difference

Table 1 presents the mean and standard deviation scores for all study measures. The mean (SD) scores for perceived father support for males and females were 18.71 (5.22) and 18.41 (6.52),

Table 1
Descriptive statistics and correlations for all study measures

	1	2	3	4	5
<i>Correlations</i>					
1. Avoidant coping		-.14*	-.18**	-.12*	.31***
2. Perceived mother support			.48***	.87***	-.25***
3. Perceived father support				.48***	-.35***
4. Number of protective factors					-.22**
5. Anxiety/depression					
Mean	12.49	21.00	18.54	1.26	8.80
Standard deviation	3.51	5.68	6.00	0.90	5.80

* $p < .05$.

** $p < .01$.

*** $p < .001$.

respectively. This difference was not statistically significant, $t(329) = 0.44$, ns, Cohen's $d = .05$. In contrast, the mean scores for perceived mother support were different, $t(329) = 2.44$, $p < .05$, Cohen's $d = .27$, with females, 21.64 (4.94), scoring higher than males, 20.11 (4.94). The mean scores for avoidant coping for females and males were 12.44 (3.63) and 12.00 (3.23), respectively. The scores for females and males for number of protective factors were 1.35 (0.90) and 1.14 (0.89), respectively. The scores for females and males for anxiety/depression were 9.85 (6.19) and 7.34 (4.97), respectively. Females had higher scores than males for avoidant coping, $t(329) = 2.17$, $p < .05$, Cohen's $d = .24$, number of protective factors, $t(329) = 2.04$, $p < .05$, Cohen's $d = .22$, and anxiety/depression, $t(329) = 3.98$, $p < .001$, Cohen's $d = .44$. Apart from anxiety/depression, which showed medium effect size, the differences for all the others were small.

Table 1 also shows the intercorrelations between the study measures for males and females together. As shown, both perceived mother and father support, and number of protective factors correlated positively with each other, and they all correlated negatively with avoidant coping and anxiety/depression. The correlation between avoidant coping and anxiety/depression was positive and significant. Although details are not provided here, partial correlation analyses, with gender as the covariate, indicated highly similar intercorrelations.

3.2. Testing the compensatory, risk-protective, and challenge models with perceived mother support as the protective factor

These models were tested by regressing anxiety/depression on gender, avoidant coping, perceived mother support, avoidant coping $\times$ perceived mother support, and avoidant coping $\times$ avoidant coping. Table 2 shows the results. As will be noticed, there were significant predictions by avoidant coping, perceived mother support, avoidant coping $\times$ perceived mother support, and avoidant coping $\times$ avoidant coping. The significant predictions by both avoidant coping and perceived mother support indicates support for the compensatory model, while the significant predictions by avoidant coping $\times$ perceived mother support, and avoidant coping $\times$ avoidant coping indicate support for the risk-protective, and challenge models, respectively.

Table 2

Results of the analyses for testing the compensatory, risk protective, and challenge models involving perceived mother support, and perceived father support as protective factors

	<i>b</i>	SE	β	<i>t</i>
<i>Protective factor perceived mother support</i>				
Gender	−2.49	.59	−.21	4.25***
Avoidant coping	.89	.39	.54	2.68**
Perceived mother support	−.25	.05	−.24	4.81***
Avoidant coping × perceived mother support	−.03	.02	−.36	1.99*
Avoidant coping × avoidant coping	.05	.02	.16	2.93**
$R^2 = .22$ [$F(4, 330) = 18.23^{***}$]				
<i>Protective factor perceived father support</i>				
Gender	−2.06	.57	−.18	3.63***
Avoidant coping	.62	.27	.38	2.29**
Perceived father support	−.30	.05	−.31	6.33***
Avoidant coping × perceived father support	−.02	.01	−.22	1.38
Avoidant coping × avoidant coping	.05	.02	.16	2.90**
$R^2 = .25$ [$F(3, 330) = 21.51^{**}$]				

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Fig. 1 shows the avoidant coping × perceived mother support interaction effect. For clarity, the regression equation used for the graph was derived from an analysis in which anxiety/depression was regressed on avoidant coping, perceived mother support, and avoidant coping × perceived mother support. The regression equation for this prediction was as follows: anxiety/depression = $8.70 + (1.21 \times \text{avoidant coping}) + (-0.20 \times \text{perceived mother support}) + (-0.04 \times \text{avoidant coping} \times \text{perceived mother support})$. For the graph, the effects of avoidant coping and perceived mother support on anxiety/depression were plotted at 2 points: high and low. High

Fig. 1. Anxiety/depression as a function of high and low avoidant coping, and high and low perceived mother support.

Fig. 2. Anxiety/depression as a function of avoidant coping $\times$ avoidant coping.

and low values for both these measures were $+1$ SD and -1 SD of their centered mean of zero. As will be noticed in Fig. 1, the rate of increase of anxiety/depression as a function of avoidant coping is greater for low perceived mother support, compared to high perceived mother support.

Fig. 2 shows the avoidant coping $\times$ avoidant coping interaction effect. The regression equation used for the graph was derived from an analysis in which anxiety/depression was regressed on avoidant coping and avoidant coping $\times$ avoidant coping. The regression equation for this prediction was as follows: anxiety/depression $8.27 + (.42 \times \text{avoidant coping}) + (-0.04 \times \text{avoidant coping} \times \text{avoidant coping})$. Using this equation, the values for anxiety/depression at values for centered avoidant coping scores ranging from -8 (minimum score) to 12 (maximum score) were computed for the graph. As shown, low levels of avoidant coping were not associated with an increase in anxiety/depression. At around the mean avoidant coping score (zero), anxiety/depression increased as avoidant coping increased.

3.3. Testing the compensatory, risk-protective, and challenge models with perceived father support as the protective factor

These models were tested by regressing anxiety/depression on gender, avoidant coping, perceived father support, avoidant coping $\times$ perceived father support, and avoidant coping $\times$ avoidant coping. Table 2 shows the results. Here, there were significant predictions by avoidant coping, perceived father support, and avoidant coping $\times$ avoidant coping. The significant predictions by both avoidant coping and perceived father support indicate support for the compensatory model. The significant prediction by avoidant coping $\times$ avoidant coping is consistent with that found when perceived mother support was the protective factor, and as noted, this implies support for the challenge model.

3.4. Testing the protective-protective model

The protective-protective model was tested by regressing anxiety/depression on gender, avoidant coping, number of protective factors, avoidant coping $\times$ number of protective factors, avoid-

Table 3

Results of the analysis for testing the protective protective model

	<i>b</i>	SE	β	<i>t</i>
Gender	−2.34	.59	−.20	3.95***
Avoidant coping	.69	.17	.42	3.95***
Number (#) of protective factors	−1.37	.39	−.21	3.54**
Avoidant coping × # of protective factors	−.26	.11	−.24	2.44*
Avoidant coping × avoidant coping	.03	.03	.11	1.17
Avoidant coping × avoidant coping × # of protective factors	.01	.02	.03	0.28
$R^2 = .21$ [$F(3, 330) = 14.40^{***}$]				

* $p < .05$.** $p < .01$.*** $p < .001$.

Fig. 3. Anxiety/depression as a function of avoidant coping for different number of protective factors: * $p < .05$, ** $p < .01$ and *** $p < .001$.

ant coping × avoidant coping, and avoidant coping × avoidant coping × number of protective factors. Table 3 shows the results. As shown, there were significant predictions by avoidant coping, number of protective factors, and avoidant coping × number of protective factors. The significant prediction by avoidant coping × number of protective factors indicates support for the protective–protective model. As shown in Fig. 3, as the number of protective factors increased the relationship between avoidant coping and anxiety/depression weakened.

4. Discussion

Consistent with existing data (Holahan et al., 1995; Wolfradt et al., 2003; Zimmerman et al., 2000), the results in this study showed that both perceived mother and father support were

correlated negatively with anxiety/depression. In addition, consistent with existing data (Gomez, 1988; Seiffge-Krenke & Klessinger, 2000), results in this study indicated that avoidance coping style was correlated positively with anxiety/depression. Further to these findings, both perceived mother and father support were associated with avoidance coping style. This finding is also consistent with existing data (Meesters & Muris, 2004). Taken together these findings are consistent with the view that avoidance coping style and perceived parental support are risk and protective factors, respectively, as they relate to anxiety and depression. The protective quality of perceived parental support was further supported by negative correlations involving number of protective factors with avoidance coping style and anxiety/depression.

The study showed that for both perceived mother support and perceived father support, there was support for the compensatory, the challenge, and the protective-protective models of resiliency. The support for the compensatory model implies that while avoidance coping and perceived parent (both father and mother) support will predict anxiety/depression, avoidance coping style will make an independent positive contribution, while perceived parent support makes a negative contribution. The support here for the challenge model means that anxiety and depression would have a curvilinear relationship with avoidant coping. The results indicated that low to moderate levels of avoidance coping has little or no effect on the level of anxiety and depression, compared to high levels. The support for the protective-protective model suggests that the level of anxiety and depression will be low for those with both mother and father support, compared to those with only father or mother support, and that the latter group would have less anxiety and depression compared to those with no father or mother support. In relation to the risk-protective model, the findings supported this model when perceived mother support was the protective factor, but not when perceived father support was the protective factor. These findings imply that relative to low perceived mother support, high perceived mother support will have a greater buffer effect on the prediction of anxiety and depression from avoidance coping style.

Although there were some slight differences in the mechanism through which perceived mother support and perceived father support reduces the impact of avoidance coping style on anxiety and depression, overall the findings demonstrate the protective quality of perceived parent support. It is possible that the protective role offered by parental support can be explained by attachment theory. In adolescence, secure parental attachment has been characterized in terms of general feelings of being accepted and supported by parents, with roots in infancy (Armsden & Greenberg, 1987). Since perceived parental support is somewhat comparable to secure parental attachment, it is conceivable that the process involved in attachment may underlie the protective role offered by perceived parent support. In this respect, attachment theory suggests that the quality of attachment that infants and children develop to their caregivers, or internal working model of relationships with caregivers, will provide them with a set of expectations on how to interpret the actions of others and how to respond to them. According to this theory, children who experience sensitive and supportive caring or secure attachment will develop the expectation that others are supportive, thereby providing a secure base that promotes feelings of personal control, self-esteem, and mastery, and these in turn influence and promote better cognitive, emotional and social development (Bowby, 1982).

While the findings in this study provide important new data, they need to be viewed cautiously in view of several limitations. Firstly, as the study used correlation analysis on data collected concurrently, it is not possible to infer any causal relationship between variables. In this study, all

data were collected through self-report from the same source. Thus a second limitation is the possibility that the results may have been confounded by common method variance. Thirdly, this study focused only on global perceived mother and father support. Thus the extent to which the findings in this study can be generalised to the different aspects of perceived parent support behaviour such as parent warmth or use of inductive discipline techniques is unclear. Fourthly, as this study used a measure that combined anxiety and depression, it is not possible to say if the findings reported here are applicable to anxiety or depression separately. Finally, although we focused on avoidant coping and parent support, these are just two out of a wide range of risk and protective factors in the etiology of anxiety and depression. Given these limitations, future studies may wish to examine from a developmental-longitudinal perspective, the interplay between a wider range of risk and protective factors, and coping styles. It will also be useful if these studies use data obtained through multiple methods and sources and examine anxiety and depression separately.

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