

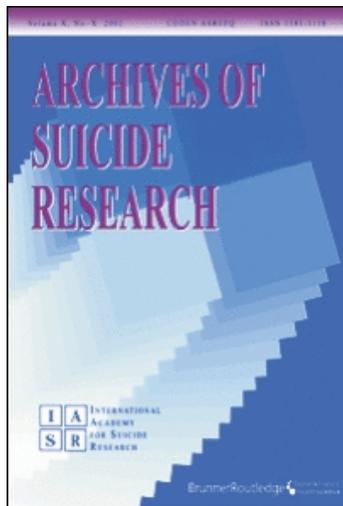
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Appraisals and Suicidality: The Mediating Role of Defeat and Entrapment

Peter James Taylor, Alex M. Wood, Patricia Gooding, and
Nicholas Tarrrier

This study tested whether feelings of defeat and entrapment mediated the effects of negative appraisals upon suicidal ideation and behavior. A sample of 93 university students who reported some degree of suicidal ideation completed questionnaires of negative appraisals of social-support and problem-solving, defeat, entrapment, hopelessness and suicidality. The results supported a model whereby defeat and entrapment fully mediated the effect of appraisals of social support and problem-solving ability upon suicidality. Furthermore, controlling for hopelessness had no substantive impact upon this model. The findings support socio-cognitive models of suicidal behavior and highlight the key role of defeat and entrapment in suicide. The clinical implications of these findings are discussed.

Keywords appraisal, defeat, entrapment, hopelessness, suicide

INTRODUCTION

Suicidality can be seen as a continuum ranging from mild ideation through planning and attempts to completed suicide (Brent, Perper, Goldstein et al., 1988; Johnson, Gooding, & Tarrrier, 2008; Smith, Alloy, & Abramson, 2006). A recent model of suicidal behavior, the Schematic Appraisals Model of Suicide (SAMS; Johnson, Gooding, & Tarrrier, 2008) aims to account for an individual's position on this continuum. This model is itself a modification of William's (1997) Cry of Pain model. One implication of these models is a mediational pathway whereby negative cognitive appraisals contribute to an overwhelming sense of defeat and entrapment, which in turn drive suicidal ideation and behavior. These negative appraisals may relate to a

variety of domains, including self-appraisals of personal and social resources. The current study is the first to test this putative pathway and the role of defeat and entrapment as key mediators of an individual's self-appraisals on suicidality.

Defeat has been defined as a sense of failed struggle or diminished social rank, while entrapment has been described as a desire to escape coupled with an awareness that all escape routes are blocked (Gilbert & Allan, 1998). Both variables were originally developed within the context of social rank theory, which provides an evolutionary perspective on mental health problems (Gilbert & Allan, 1998; Gilbert, Allan, Brough et al., 2002). Theorists have since linked feelings of defeat and entrapment to suicide (e.g., Williams, 1997; Williams, Crane, Barnhofer et al., 2005).

Simply stated, the logic behind such assertions is that within the context of these feelings suicide may come to be seen as the only viable escape route from aversive life circumstances. This links with the general idea that suicide functions as a form of escape (Baumeister, 1990). Despite this theoretical basis, little empirical work has directly tested the role of defeat and entrapment in suicide. Only three studies so far have demonstrated that defeat and entrapment are significantly related to suicidality (O'Connor, 2003; Rasmussen, Fraser, Gotz et al., in press; Taylor, Gooding, Wood et al., in press).

More recently the SAMS has argued that defeat and entrapment are best conceptualized as a single construct which drives suicidality (Johnson, Gooding, & Tarrrier, 2008). This argument is grounded in suggestions that defeat and entrapment share a common phenomenology when applied to humans, involving themes of having no way forward or any identifiable solutions, and emerge from common underlying cognitive processes (Johnson, Gooding, & Tarrrier, 2008; Taylor, Wood, Gooding et al., 2009). These assertions have since received empirical support via factor analysis (Taylor, Wood, Gooding et al., 2009).

The type of appraisal investigated most extensively in relation to suicidality has been self-appraisal of social problem-solving ability (for a review, see Clum & Febbraro, 2002). More negative subjective appraisals of problem-solving ability appear to increase the risk of suicidal thinking and behavior in both clinical and non-clinical groups (Bonner & Rich, 1988; Chang, 2002; Clum & Febbraro, 1994; Dixon, Heppner, & Anderson, 1991; Esposito & Clum, 2002; Rudd, Rajab, & Dahm, 1994). Appraisals of this nature could understandably influence the extent that an individual feels trapped by aversive experiences. Perceptions of the availability of social support also may contribute to a

sense of defeat and entrapment, as social support provides an important source of rescue from aversive situations (Williams, 1997; Williams, Crane, Barnhofer et al., 2005). Research has shown social support to buffer the impact of aversive life events on suicidality in a range of samples and settings (Clum & Febbraro, 1994; Esposito & Clum, 2002; Thompson, Short, Kaslow et al., 2002). These different appraisals represent primary cognitive judgments of the self and personal circumstances, which can be distinguished from the more affectively laden concepts of defeat and entrapment they are predicted to feed into.

This study aimed to test a mediational pathway, whereby self-appraisals drive suicidal ideation and behavior through increased feelings of defeat and entrapment. Within this article, feelings of defeat and entrapment have been conceptualized as a single latent variable, in line with the theoretical assertions of the SAMS model (Johnson, Gooding, & Tarrrier, 2008). Evidence suggests individuals with experiences of suicidal ideation, even brief past ideation, may still be distinct from never-suicidal individuals in terms of subsequent risk of recurrence (Kerr, Owen, & Capaldi, 2008; Lau, Segal, & Williams, 2004). This study was therefore conducted in a sample of students who reported some degree of past suicidal ideation or behavior. To this end, the study was advertised as research looking into suicide, and respondents who did not report previous suicidality were screened from the study.

Structural Equation Modeling (SEM) was used to analyze the data. It was hypothesized that feelings of defeat and entrapment would mediate the effect of self-appraisals of problem-solving ability and social support upon suicidality. There is evidence that hopelessness is another key mediator of cognitive factors on suicidal behavior (Abramson, Alloy, Hogan et al., 2002; Dixon, Heppner, & Anderson, 1991; Smith, Alloy, & Abramson, 2006).

Furthermore, there is strong evidence that hopelessness is a robust predictor of suicidality (Kuo, Gallo, & Eaton, 2004), which also accounts for the relationship between depression and suicide (Beck, Kovacs, & Weissman, 1975; Bedrosian & Beck, 1979; Dyer & Kreitman, 1984). Since hopelessness also overlaps conceptually with defeat and entrapment (Johnson, Gooding, & Tarrier, 2008), it was relevant to control for this variable in the present study. It was therefore further hypothesized that these findings would hold while controlling for hopelessness.

METHOD

Participants

Participants were students studying at the University of Manchester, who responded to posters advertising for participants for a study into suicide. The inclusion criteria for the study required participants to demonstrate some degree of current or past suicidality. Consequently participants who answered “no” or “never” to every question the Suicidal Behaviors Questionnaire – Revised (SBQ-R; Osman, Bagge, Gutierrez et al., 2001), and who reported “I don’t have any thoughts of killing myself” for the past two weeks (Taken from Item 9 of the Beck Depression Inventory-II; Beck, Steer, & Brown, 1996) were not included in the study. A sample of 93 participants were recruited for the study (17 male, $M_{age} = 23.45$, $SD = 7.06$). An additional 62 students responded to advertisements for the study who did not meet the inclusion criteria, and were therefore not included in the study (10 male, $M_{age} = 22.79$, $SD = 6.78$). All participants provided informed consent prior to taking part in the study. Scores for this group on the measure of suicidality (SBQ-R) had an inter-quartile range from 4, indicating minimal ideation without risk, to 7,

indicating current risk of suicide (Osman, Bagge, Gutierrez et al., 2001). The full range of scores on this measure was 4 to 16, with variability apparent across all items of the scale, indicating that a wide range of suicidal thoughts, feelings and behaviors were present in the sample.

Materials

Entrapment Scale. The Entrapment Scale (Gilbert & Allan, 1998) is a 16-item scale assessing feelings of entrapment. Items refer to the perception of being trapped by internal and external events, and a desire to escape from those (e.g., “I want to get away from myself”) and are rated on a five-point scale ranging from *Not at all like me* to *Extremely like me*. Higher scores indicate greater feelings of entrapment. The alpha coefficient for the present sample was .95.

Defeat Scale. The Defeat Scale (Gilbert & Allan, 1998) is a 16-item scale assessing feelings of social and personal defeat including perceptions of failed struggle and low social rank (e.g., “I feel that I am one of life’s losers”). Items are rated for their prevalence in the past week, on a 5-point scale ranging from *Never* to *Always/all the time*. Higher scores indicate greater feelings of defeat. The alpha coefficient for the present sample was .83.

Problem-Solving Inventory. The 11-item Problem-solving confidence subscale of the Problem-Solving Inventory (PSI; Heppner & Petersen, 1982) was used to assess negative appraisals of problem-solving ability. Items assess self-confidence in various aspects of the problem-solving process (e.g., “I make decisions and am happy with them later”) with each scored on a 6-point Likert scale ranging from *Really disagree* to *Really agree*. Responses are reverse scored so that higher scores indicate poorer appraisals of

problem-solving ability. This subscale demonstrated a test re-test reliability of .85 over two weeks. The alpha coefficient for the present sample was .71.

Social Support Behaviors Scale. The Social Support Behaviors Scale (SS-B; Vaux, Riedel, & Stewart, 1987) provides a measure of the perceived availability of various forms of social support, rather than the frequency with which such behaviors occur. It is therefore consistent with Lazarus and Folkman's (1984) description of *secondary appraisals* (i.e., an appraisal of the availability of resources to deal with an aversive situation). Participants are asked to rate the likelihood of friends and family providing each kind of support (e.g., "My friends/family would comfort me if I was upset") on a 5-point Likert scale, ranging from *no one would do this* to *most family/friends would certainly do this*. The 10-item Emotional support, 7-item Socializing and 12-item Advice-guidance subscales were used in this study, with alpha coefficients calculated at .95, .93, and .96, respectively, in the current sample. The subscales correlated with each other at between $r = .87$ and $.92$.

Beck Hopelessness Scale. The Beck Hopelessness Scale (BHS; Beck, Weissman, Lester et al., 1974) is a 20-item true or false measure assessing the prevalence of hopelessness in the past week (e.g., "My future seems dark to me"). Higher scores indicate greater hopelessness. The BHS converged with clinician ratings of hopelessness at between $r = .62$ and $.74$. This measure had a test-retest reliability of .85 over 3 weeks in undergraduates (Holden & Fekken, 1988). Internal reliability using the KR20 (Kuder-Richardson) was .80 for the present sample.

The Suicidal Behaviors Questionnaire-Revised. The Suicidal Behaviors Questionnaire – Revised (SBQ-R; Osman, Bagge, Gutierrez

et al., 2001) measures the level of suicidality experienced by the respondent. Four items assess a range of suicidal experiences including past engagement in suicidal thinking and behavior, recent suicidal ideation, the communication of a suicide attempt, and the predicted likelihood of suicidal behavior in the future (e.g., "How often have you thought about killing yourself in the past year?"). Total scores thus provide a rough estimate of where an individual lies upon the continuum of suicidality. Attainable scores range from 3 to 18, with higher scores indicating greater levels of suicidality. Suicidal individuals have been found to score significantly higher on this measure than non-suicidal individuals in both clinical and non-clinical groups. When used as a screening tool for suicide risk in university and high-school students a sensitivity between .83–.93 and specificity between .95–.96 was attained (Osman, Bagge, Gutierrez et al., 2001). The alpha coefficient for the present sample was .66.

Procedure

Ethical approval was obtained from a University ethics committee prior to running the research. Participants completed all measures in a single session with a researcher present. All participants were debriefed following the study and provided with a sheet listing local helplines and counseling services. In addition, participants were given the option of consenting to be referred to the counseling service if their responses were seen as a cause for concern (criteria: SBQ-R item 1 \geq 3; item 2 \geq 3; item 3 \geq 2; item 4 \geq 4). Those who declined this opportunity but were still identified as a cause for concern were invited to attend a debriefing session with a trained clinical psychologist to discuss sources of support.

 Statistical Analysis

The mediational model was tested using Structural Equation Modelling (SEM). Covariances were analyzed via AMOS version 7.0 using Maximum-Likelihood estimation (Arbuckle, 2006). Based on recommendations for SEM that sample size at a minimum should exceed five participants per parameter in the model (Kline, 1998), a sample of over 80 was sought ($n = 93$). Goodness of fit was primarily assessed via the chi-squared statistic, which tests the significance of the difference between the hypothesized model and the observed data. To compensate for potential bias in the chi-squared statistic due to the small sample size (Fouladi, 2000; Nevitt & Hancock, 2004) this statistic was adjusted using a k-factors correction (Bartlett, 1950).¹ The adjusted value is reported as χ^2_{-K} . This adjusted statistic was found in Monte Carlo simulations to function acceptably in structural equation models with participant to parameter ratios of 5:1 (Nevitt & Hancock, 2004). In addition the Comparative Fit Index (CFI; Bentler, 1990), calculated using the adjusted chi-squared value, and the Standardized Root Mean squared Residual (SRMR) were employed as further measures of fit based on recommendations by Hu and Bentler (1999). For the chi-squared test a non-significant result ($p > .05$) indicates better fit. Cut-off scores of $< .09$ for the SRMR and $> .95$ for the CFI were chosen to indicate good fit based on recommended combinational rules found to minimize type I and type II error (Hu & Bentler, 1999).

¹This adjustment involves a multiplicative scaling of the original chi-squared test statistic of the form $c = 1 - [(2p + 4k + 5)/6(n - 1)]$, where p = the number of measured variables and k = the number of latent variables. For the current sample this resulted in $c = 0.965$, for the model not including hopelessness and $c = 0.961$, for the model including this variable.

Bootstrapping with 1000 random samples was used to test the significance of the indirect effect of the predictors on suicidality. This method is most appropriate for testing mediation in smaller samples (Preacher & Hayes, 2004). This method utilizes a process of random re-sampling from the data to generate confidence intervals.

 RESULTS

 Data Screening

The data were initially screened for skewness and multicollinearity. Tolerance statistics for the three social support subscales were low ($< .18$) suggesting substantial multicollinearity. These three subscales were therefore averaged to produce a single social support variable. This single measure had an alpha coefficient of .98. Transformations were applied to the measures of social support, hopelessness, defeat, entrapment and suicidality to correct for skew. Following this all variables demonstrated normal distributions as indexed by non-significant levels of skewness and kurtosis ($z < 1.96$). Variable means, standard deviations (reported for both untransformed and transformed variables) and Pearson's correlations are reported in Table 1. All tolerance statistics for subsequent analyses were above .2, suggesting substantial multicollinearity was not a problem (Menard, 1995). Two participants failed to complete the social support measure and were subsequently excluded from the analysis.

 Testing the Model

The hypothesized model is displayed in Figure 1, with associated standardized coefficients and squared multiple correlations reported. This model fit the data well, χ^2_{-K} (4, $n = 91$) = 6.43, $p = .17$, SRMR = .05, CFI = .98. All the pathways depicted

TABLE 1. Means, Standard Deviation and Correlations for Variables in Model

	Mean (SD)		2	3	4	5	6
	Un-transformed	Transformed ^a					
1. Suicidality	6.09 (2.54)	0.15 (0.06)	.49*	.45*	-.41*	.35*	.36*
2. Defeat	14.68 (9.80)	2.58 (0.59)		.73*	-.31*	.55*	.52*
3. Entrapment	10.36 (11.39)	2.02 (0.94)			-.36*	.59*	.60*
4. Social-support appraisal	75.61 (15.21)	4.79 (2.19)				-.18	-.35*
5. Problem-solving appraisal	28.36 (7.61)						.58*
6. Hopelessness	4.11 (3.49)	0.62 (0.28)					

* $p < .05$.

^aCorrelations only provided for transformed variables.

were significant, $p < .01$. In this model appraisals accounted for 54% of the variance in perceptions of defeat and entrapment, which in turn explained 32% of the variance in suicidality. The results of the bootstrap suggested the indirect paths from problem-solving appraisals (95% CI = 0.23–0.47, $p = .002$) and social-support appraisals (95% CI = (-0.32)–(-0.06), $p = .002$) to suicidality were significant. These findings suggest that feelings of defeat and entrapment mediated the effect of all three predictors on suicidality.

The model outlined in Figure 1 assumes full mediation, that is no significant relationship remains between the two predictors (appraisals of problem-solving and social-support) and suicidality after defeat and entrapment have been

accounted for. This model was compared to a second model, which assumed in addition to this indirect (mediated) effect, a direct effect between the two predictors and suicidality, independent of defeat and entrapment. Comparisons were based on the difference in chi-squared statistics and Akaike’s Information Criterion (AIC), calculated using the adjusted chi-squared value. It has been suggested that differences ≤ 2 on the AIC provide substantial support for the more parsimonious model (Burnham & Anderson, 2004). The partial mediation model failed to demonstrate a significant improvement in fit, $\Delta\chi^2_{-K} (2, n = 91) = 5.17, p > .08$, and $\Delta AIC = 1.17$. The more parsimonious full mediation model was therefore favored.

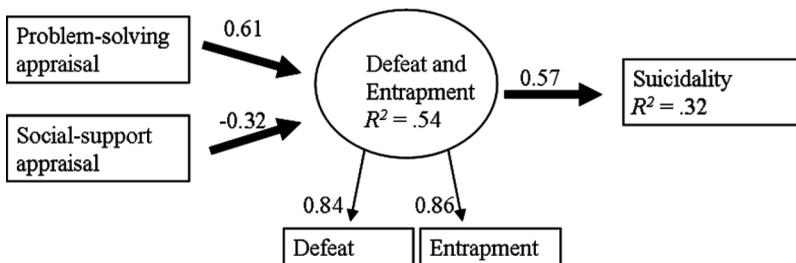


FIGURE 1. Model depicting full mediation of appraisals on suicidality via defeat and entrapment. Defeat and entrapment are modeled as a single latent variable. Standardized regression weights and squared multiple correlations reported.

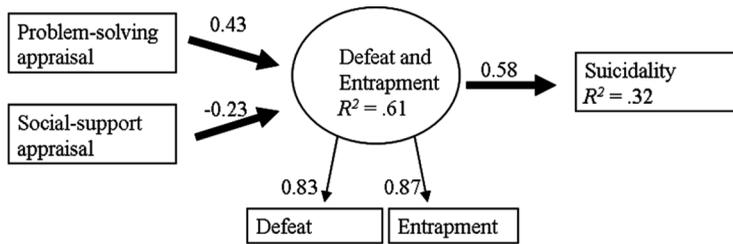


FIGURE 2. Model depicting full mediation of appraisals on suicidality via defeat and entrapment, whilst controlling for hopelessness. Defeat and entrapment are modeled as a single latent variable. Standardized regression weights and squared multiple correlations reported.

Next the model was re-calculated controlling for the effect of hopelessness. This was achieved by modeling a direct effect of hopelessness on defeat and entrapment and on suicidality. Controlling for this variable made no substantive difference to the model. The full mediation model continued to fit the data well $\chi^2_{-K}(5, n=91) = 7.44$, $p = .19$, $SRMR = .04$, $CFI = .99$. This model is displayed in Figure 2, with associated standardized coefficients and squared multiple correlations reported. All direct and indirect paths remained significant, and standardized coefficients were altered by $\beta < 0.2$.

DISCUSSION

The aim of the current study was to test a mediational pathway whereby negative appraisals were associated with increased suicidality through heightened feelings of defeat and entrapment. Structural Equation Modeling (SEM) found that this model fit the data well in a sample of individuals experiencing a range of suicidal thoughts and feelings. The analysis supported the hypotheses that the links, which perceptions of problem-solving ability and social support availability have with suicidality, would be mediated by feelings of defeat and entrapment. A partial mediation model did not provide a significant improvement in

fit, suggesting that mediation was full. In addition it was found that controlling for hopelessness had no substantive impact on the model, supporting the hypothesis that these findings would hold when feelings of hopelessness were taken into account.

This study contributes to growing evidence that feelings of defeat and entrapment play a key role in the development of suicidality (O'Connor, 2003; Rasmussen, Fraser, Gotz et al., in press; Taylor, Gooding, Wood et al., in press; Williams, 1997). Furthermore, the results suggest that this effect is not just an artefact of the theorized overlap of defeat and entrapment with hopelessness (Johnson, Gooding, & Tarrier, 2008), but that defeat and entrapment have an association with suicidality independent of hopelessness. Overall these results support theoretical models of suicide, including the SAMS (Johnson, Gooding, & Tarrier, 2008) and Cry of Pain model (Williams, 1997; Williams, Crane, Barnhofer et al., 2005), which view perceptions of defeat and entrapment as the proximal psychological processes driving suicidality, and suggest that these perceptions may emerge from specific negative appraisals in domains such as problem-solving and social support. The value of this conceptualization is that although it fits with findings that appraisals of social support (Clum & Febraro, 1994; Esposito & Clum, 2002; Thompson, Short, Kaslow

et al., 2002) and problem-solving ability (Bonner & Rich, 1988; Chang, 2002; Clum & Febraro, 1994; Dixon et al., 1991; Esposito & Clum, 2002; Rudd, Rajab, & Dahm, 1994) are associated with suicide, it also highlights the need for some form of affective motivational component in suicidal behavior, which mediates the link between these specific appraisals and more general thoughts of suicide. Defeat and entrapment may provide such a mediator.

It is important to note that the current study investigates defeat and entrapment as a subjective psychological state. This is different to previous research that has operationalized these variables in terms of concrete life events and circumstances (e.g., Brown, Harris, & Hepworth, 1995). Although life events likely have a role in triggering and maintaining a sense of defeat and entrapment, it is suggested that their impact is mediated by psychological processes (Johnson, Gooding, & Tarrier, 2008; Rasmussen, Fraser, Gotz et al., in press; Williams, 1997), so that assessing defeat and entrapment within this context remains important. Defeat and entrapment were also conceptualized as a single latent variable, based on the theoretical assertions of the SAMS (Johnson, Gooding, & Tarrier, 2008) and supporting research (Taylor, Wood, Gooding et al., 2009). This decision was supported in the current study by the high factor loadings of the defeat and entrapment scales on this latent variable, and the good overall fit of the model.

The focus of the current study was on an individual's subjective appraisals of their problem-solving ability, as opposed to their objective ability to generate effective solutions, commonly indexed by the Means-Ends Problem-Solving procedure (Platt & Spivack, 1975). Nonetheless, it is likely these two facets of problem-solving are related. Theories of problem-solving assume that an individual's orientation towards problems, including their appraisals of their abilities, contribute to their

overall performance (D'Zurilla, Nezu, & Maydeu-Olivares, 2004). Likewise, personal judgments of problem-solving ability are likely, at least in part, to be influenced by past instances of effective problem-solving. Social support can also be divided into two distinct, but likely interrelated, objective and subjective forms (i.e., perceived availability versus objective instances of received support; Wethington & Kessler, 1986). Consequently, perceptions of defeat and entrapment also may be related to these more objective measures of social support and problem-solving ability. It would be interesting for future research to explore whether these objective measures have incremental validity in predicting defeat and entrapment once subjective appraisals have been taken into account.

Another recent theory of suicide, the interpersonal-psychological theory suggests that two different variables, perceived burdensomeness and thwarted belongingness, provide the main impetus behind the desire for suicide (Joiner, 2005). These two variables appear conceptually similar to defeat and entrapment, with a shared emphasis on negative perceptions of social rank. However, defeat and entrapment may be more generic constructs, in that they also relate to internal goals and aims (Rhode, 2001). Considering the substantial support for the interpersonal-psychological theory of suicide (e.g., Van Orden, Witte, Gordon et al., 2008), comparison of this model with other account, such as the SAMS or Cry of Pain model of suicide would be an interesting goal for future research.

The findings of this study have a number of clinical implications. First, they highlight the clinical relevance of perceptions of defeat and entrapment as an indicator of increased suicide risk. This is potentially something clinicians should investigate, in addition to more established indicators such as depression and hopelessness (Kessing, 2004; Kuo, Gallow, & Eaton, 2004). It may be that such perceptions are

sometimes present prior to the manifestation of suicidal ideation allowing them to act as a form of early warning sign, although this assertion requires further empirical testing. Second, in the context of psychological treatment, these findings support a two-step approach for interventions to prevent suicidal behavior. By establishing the more specific appraisals that underlie inferences of defeat and entrapment, this study highlights potential targets for a therapist in terms of both the specific underlying cognitions and the more general emotional states associated with suicide risk to which they contribute.

A number of limitations of this study require mention. First, this study had a small sample size for use with a statistical technique such as SEM. However, to counter this problem a scaled version of the chi-squared statistic was used, which has been found to operate effectively, maintaining acceptable power and Type 1 error rates, under smaller participant to parameter ratios than present in this study (Nevitt & Hancock, 2004). Furthermore, the significance of the indirect paths in the model were tested using the bootstrapping method, which again is suitable with more smaller sample sizes as it is not based on large-sample theory (Preacher & Hayes, 2004). Nevertheless, replication of the present results with larger samples would be advantageous in confirming the generalizability of these findings.

A second limitation is the cross-sectional nature of the study. This raises doubts about the direction of causality, and in particular the possibility that the mediations are a result of overlapping variance rather than a causal sequence of events. However, even if findings were attributable to overlapping variance, this would still have theoretical relevance. For example this would still support the assertion that feelings of defeat and entrapment emerge from underlying appraisals, as a large proportion of their variance is

accounted for by these specific appraisals. Future longitudinal research could directly test the causal order of events outlined in this study (e.g., Wood, Maltby, Stewart et al., 2008).

Third, a student sample was used, albeit one who experienced some degree of suicidality. Although the level of suicidality in this group is less than would be expected in a clinical group, the current study was primarily a model-testing exercise, and the same underlying processes and relationships would be predicted to apply in a group with more severe levels of suicidality. In particular, replicating the current findings in a group with psychotic disorders will be an important next step. Although the SAMS provides a transdiagnostic account of suicide, it was initially developed in the context of suicide in psychosis.

Fourth, the internal reliability for the measure of suicidality (SBQ-R) did not meet the accepted standard of .7 or over (Field, 2005). Nevertheless, low internal reliability does not increase the likelihood of spurious results, but will instead reduce the strength of the correlations this variable shares with others (Smith, Fischer, & Fister, 2003; Zuckerman, Hodgins, Zuckerman et al., 1993). As such the lower internal reliability of the suicidality variable in the present study would only work against the predictions made, resulting in a more conservative test of these predictions.

Finally, depression was not controlled for in the analysis. The study did control for hopelessness, however, which has been theoretically and empirically supported as a robust predictor of suicidality (Abramson, Alloy, Hogan et al., 2002; Kuo, Gallo, & Eaton, 2004), and may actually account for the link between depression and suicide (Beck, Lovacs, & Weissnian, 1975; Bedrosian & Beck, 1979; Dyer & Kreitman, 1984).

In conclusion, the current study suggests that heightened perceptions of defeat

and entrapment may emerge from underlying negative appraisals and are associated with suicidal ideation and behavior. This was found in a sample of students with suicidal ideation. Future research is needed to replicate these findings in clinical samples and test the causal paths of the mediation model prospectively.

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