



Hopelessness and future thinking in parasuicide: The role of perfectionism

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Objectives. This study had three aims: (1) to independently replicate the future thinking effect, that parasuicides, when compared with controls, show a deficit in positive future thinking but no increase in negative future thinking; (2) to determine whether positive future thinking and socially prescribed perfectionism discriminate general hospital parasuicides from controls beyond measures of affect and; (3) to explore the relationship between future thinking and perfectionism.

Design. A cross-sectional design was employed. Three groups of participants took part: hospital parasuicide patients ($N = 22$), hospital controls ($N = 22$) and community controls ($N = 21$).

Methods. Parasuicide patients admitted, via accident and emergency, to a general hospital were matched with hospital and community controls and assessed on measures of hopelessness, depression, anxiety, perfectionism, and future thinking.

Results. There was evidence to support the future thinking effect. A discriminant function analysis revealed that social perfectionism and positive future thinking did indeed discriminate parasuicides from controls beyond the effects of hopelessness, depression, and anxiety. Exploratory relationships between perfectionism and positive future thinking were also reported.

Conclusions. The results reinforce the importance of future thinking in parasuicide. Moreover, the role of social perfectionism in the suicidal process was elucidated and ought to be replicated within a prospective design.

Hopelessness—pessimism for the future—is thought to be the pernicious component of the depressive cognitive style that predisposes an individual to increased suicidal risk (O'Connor, Sheehy, & O'Connor, 1999; Petrie, Chamberlain, & Clarke, 1988). Although

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its role as a mediator between depression and suicidality has long been recognized, limited research has focused on understanding further the characteristics or predictors of this important risk factor (see O'Connor & Sheehy, 2000).

In the early 1990s, Andrew MacLeod and colleagues commented on this lack of conceptual clarity, observing that hopelessness 'seems particularly central to suicidal behavior. Despite this, little research has addressed the question of what hopelessness actually is and the term is used in different ways' (MacLeod, Rose, & Williams, 1993, p. 443). They were curious to determine whether the pessimism associated with hopelessness was characterized by negative expectations of the future, or the inability to think positively about the future, or whether these two representations were functionally equivalent. To investigate this, they devised the future-thinking task, in which participants are asked to think of potential future experiences that (1) they are looking forward to and (2) are worried about (see MacLeod *et al.*, 1993; MacLeod, Pankhania, Lee, & Mitchell, 1997). Their findings demonstrated that the presence of negative future thinking is not functionally equivalent to the absence of positive future thinking (MacLeod *et al.*, 1993). Parasuicides (defined as individuals who engage in deliberate self-harm irrespective of intention; see O'Connor, Sheehy, *et al.*, 2000), when compared with controls or depressed individuals who are not suicidal, are impaired in their ability to generate positive thoughts for the future but do not differ in terms of the number of negative thoughts that they are worried about (MacLeod *et al.*, 1997). Therefore, the first aim of this study was to independently replicate MacLeod's findings that suicidal individuals, relative to controls, are impaired in their ability to generate positive future thoughts but do not differ in the frequency of negative future thinking.

Perfectionism and suicidal risk

Recent research has looked at achievement-based vulnerabilities and socially based vulnerabilities—perfectionistic tendencies—with respect to depression (Hewitt, Flett, & Ediger, 1996) and suicidality (Dean & Range, 1999; Flett, Hewitt, Blankstein, & Mosher, 1995; Hewitt, Flett, & Weber, 1994), although little work has focused on individuals who have attempted suicide (Hewitt, Norton, Flett, Callander, & Cowan, 1998). Perfectionism is most often represented as a multidimensional construct (Flett *et al.*, 1995), and this is reflected in the development of the widely used Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1996). The MPS has three dimensions: socially prescribed perfectionism (MPS-Social), self-oriented perfectionism (MPS-Self), and other-oriented perfectionism (MPS-Other). The MPS-Social dimension taps beliefs about the excessive expectations we perceive significant others have of us, whereas the MPS-Self dimension focuses on the standards we set for ourselves. Finally, MPS-Other assesses the extent to which we possess high expectations and standards for other people's behaviour.

The research findings have been consistent in their support for the role of socially prescribed perfectionism—higher levels of social perfectionism are associated with greater hopelessness and increased suicidal ideation (Dean, Range, & Goggin, 1996; Hewitt, Flett & Turnbull-Donovan, 1992; Hewitt, Newton, Flett, & Callander, 1997). In addition, among a matched group of alcoholics, those with a history of a suicide attempt reported greater levels of socially prescribed perfectionism than non-attempters (Hewitt *et al.*, 1998). Conversely, the evidence in support of self-oriented perfectionism has been mixed: some studies with psychiatric inpatients have found evidence for a positive association with suicidal threat (Hewitt *et al.*, 1994) and others have not

(Hewitt *et al.*, 1992). Finally, MPS-Other may not be so destructive: there is evidence to suggest that it may buffer against suicidal attempts. Hewitt *et al.* (1998) found in an alcoholic inpatient sample that the suicide attempters reported lower levels of MPS-Other than those patients without a suicidal history.

As noted above, there is a dearth of studies that have investigated perfectionism and actual suicide attempts. To our knowledge, only one other study (Hewitt *et al.*, 1998) has investigated the relationship between these dimensions of perfectionism and attempted suicide. Hewitt *et al.*'s sample comprised in-patients of a residential treatment centre diagnosed with severe alcoholism, and therefore, their findings may not be generalizable to the general hospital parasuicide population. Furthermore, the mean number of months since the suicide attempt in Hewitt *et al.*'s study was 43.24 ($SD = 63.90$), so we aimed to explore, for the first time, perfectionism within an acute sample of parasuicide patients. Patients admitted via an accident and emergency department to a general hospital, presenting with a parasuicidal episode, were recruited and compared with two matched control groups (hospital and community controls) on a battery of psychological measures.

The conceptualization of parasuicide as driven by social (and self-) approval coupled with this inability to think positively about the future is consistent with two models of suicidal behaviour. The first, Baumeister's (1990) escape from self model, posits that failure to attain (either self- or) socially imposed unrealistic standards stimulates a chain-like process including self-blame, negative self-awareness, negative affect, and a desire to escape painful self-awareness. This leads to disinhibition of the constraints of suicidal behaviour which renders suicide more acceptable and likely. In the second model (The cry of pain hypothesis), Williams and Pollock (Williams, 1997; Williams & Pollock, 2000, 2001) propose that suicidal behaviour is reactive, a response to a stressful situation that has three components: defeat, no escape, and no rescue. This response is affected by biases in information processing and memory deficits (e.g. impaired positive future thinking; see O'Connor, in press).

Consequently, we hypothesized that socially prescribed perfectionism and positive future thinking would enhance our ability to discriminate between the parasuicides and controls beyond that explained by the traditional measures of affect (i.e. hopelessness, depression, and anxiety). As this is the first study to investigate positive future thinking, hopelessness, and perfectionism together, we also aimed to tentatively explore the relationships between these variables. One would postulate that perceived unrealistic standards set by others would contribute to feelings of defeat and that the lack of positive thoughts for the future would increase the sense of no rescue. Hence, we hypothesized that socially prescribed perfectionism would be positively correlated with hopelessness but negatively correlated with positive thoughts for the future in the parasuicide sample. Consonant with the notion that people with other-oriented perfectionism attribute blame to others (Hewitt *et al.*, 1998), which could buffer against hopelessness, we hypothesized that other-oriented perfectionism would correlate positively with positive future thinking and negatively with hopelessness. Given the inconsistent findings in the literature (see Shafran & Mansell, 2001), we did not formulate a hypothesis associated with self-oriented perfectionism.

Method

Participants

In total, 65 participants took part in this study: 22 parasuicide patients (11 men and 11 women), 22 hospital controls (12 men and 10 women), and 21 community controls (9 men and 12 women). All parasuicide patients presenting to one hospital in the west of Scotland with an episode of deliberate self-harm (ICD codes X60-X84) were considered for inclusion in the study. However, only those patients who were admitted overnight, via the Accident & Emergency department, to the acute receiving wards were included. During the study period, 23 parasuicides were assessed the day following admission. This did not represent a consecutive sample; rather, it reflects the practical limitations of recruiting via a general hospital. Nevertheless, approximately 80% of patients who were approached agreed to participate and were similar in terms of age, gender, and SES (socio-economic status) to those who did not take part in the study. One patient was omitted from the final analysis as a result of extensive missing data. Twenty-two controls were matched for age, sex, marital, and socio-economic status, and were recruited from the same acute receiving wards as the parasuicides, presenting with physical problems. An additional group of participants (community controls $N = 21$) was recruited via the University participants' pool and was also matched, as closely as possible, to the parasuicide group.

The mean ages of the groups did not differ significantly, $F(2, 62) = .417, ns$: 35.1 years for the parasuicides ($SD = 10.8$), 35.8 years for the hospital controls ($SD = 10.3$), and 32.9 years for the community controls ($SD = 11.5$). There were comparable numbers of men and women in each of the groups ($\chi^2 = .595, df = 2, ns$), and they did not differ in terms of socio-economic status (as measured by occupation $\chi^2 = 7.98, df = 4, ns$) or marital status $\chi^2 = 1.03, df = 4, ns$).

Materials and procedure

All participants were approached in the acute receiving ward and invited to participate in the study. The researcher gave a brief introduction outlining the nature of the assessment and highlighted that participation was voluntary and confidential, and that refusal would not interfere with their treatment protocol. Ethical approval had been obtained from the University Hospital Trust and the Department of Psychology. All those who participated signed a written consent form.

The future-fluency task was always administered first to reduce contamination effects but the order of presentation of the other measures was counterbalanced. Demographic details were obtained from the hospital medical records and the initial interview with the participants.

Measures

Depression and anxiety

The Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) consists of 14 questions, seven corresponding to the anxiety subscale and seven corresponding to the depression subscale. Items are rated on a 0-3-point scale indicating the strength of agreement with each item. The maximum score for each subscale is 21. The HADS is a reliable and valid measure of affect (Bjelland, Dahl, Haug & Neckermann, 2002).

Hopelessness

The Beck Hopelessness Scale (BHS; Beck, Weissman, Lester, & Trexler, 1974) is a 20-item (true/false) scale with a maximum score of 20. Respondents are asked to indicate either agreement or disagreement with statements that assess pessimism for the future (e.g. 'I look forward to the future with hope and enthusiasm'). Higher scores represent elevated hopelessness. This is a reliable and valid measure that has been shown to predict eventual suicide (Young, Halper, Clark, Scheftner, & Fawcett, 1992).

Perfectionism

The MPS (Hewitt & Flett, 1996) is a 45-item measure of perfectionism, with 15 questions assessing each of three dimensions of perfectionism: (1) MPS-Self, defined as a strong motivation to be perfect, all-or-nothing thinking and self-reported high achievement expectations (e.g. 'One of my goals is to be perfect in everything I do'); (2) MPS-Social assesses the degree of belief that others hold unrealistically high expectations of one's behaviour and that they would only be satisfied with these standards (e.g. 'The people around me expect me to succeed at everything I do'); and (3) MPS-Other is the degree to which an individual sets unrealistic standards for others (e.g. 'If I ask someone to do something, I expect it to be done flawlessly'). Respondents are asked to rate each statement on a 7-point Likert-type scale ranging from 1 (disagree) to 7 (agree). Higher scores on each scale represent greater levels of perfectionism. The MPS has been shown to exhibit acceptable test-retest reliability and construct validity (Hewitt & Flett, 1991).

Future thinking

The future-thinking task FTT; MacLeod *et al.*, 1998) requires participants to think of potential future experiences across three time periods—the next week (including today), the next year, and the next 5–10 years. At the end of each time period, participants are re-presented with the items and asked to rate each one in terms of how likely they think it is to happen (on a 7-point scale anchored by 1 = not at all likely and 7 = extremely likely) and, if it did happen, how they would feel at the time (−3 = very negative and +3 = very positive). This is completed for positive and negative future thoughts. On each occasion, participants have 1 min to think of future experiences for a given time period; this is repeated until all six time \times valence periods are assessed. Thus the future thinking measure is a composite score based on the number of items generated \times mean likelihood ratings for those items \times mean pleasure ratings for those items (see MacLeod *et al.*, 1998). Before administration of FTT, all participants complete the standard verbal fluency task (Lezak, 1976)—to control for general cognitive fluency—in which they have to generate as many words as possible to three letters (F, A, S), with 1 min allowed per letter.

Results

A series of 2×3 (gender \times group) ANOVAs were conducted to determine whether parasuicides differed from controls and to investigate potential gender interactions. There were two main effects of gender and no interactions: women reported significantly higher levels of hopelessness, $F(1, 58) = 4.327, p < .05$, and higher levels of other-oriented perfectionism than men, $F(1, 58) = 5.11, p < .05$. The groups differed

significantly in hopelessness, $F(2, 58) = 10.03, p < .001$, depression, $F(2, 58) = 19.74, p < .001$, anxiety, $F(2, 58) = 12.17, p < 0.001$, socially prescribed perfectionism, $F(2, 58) = 3.80, p < .05$, and positive future thinking, $F(2, 58) = 4.02, p < .05$, in the predicted directions (see Table 1). There were no significant differences in self-oriented perfectionism, other-oriented perfectionism, or negative future thinking.

Table 1. Mean scores (standard deviations in parentheses) for variables by group and levels of significance

Variable	Parasuicide (<i>N</i> = 22)	Hospital controls (<i>N</i> = 22)	Community controls (<i>N</i> = 21)	<i>F</i>	<i>p</i> ^a
Hopelessness	11.76 (5.74)	6.55 (5.17)	4.95 (4.50)	10.03	.001
Depression	10.68 (5.27)	6.45 (4.13)	2.86 (2.20)	19.74	.001
Anxiety	13.91 (4.47)	9.36 (4.44)	7.76 (3.81)	12.17	.001
Positive future thinking	120.84 (73.32)	126.28 (88.42)	193.43 (93.81)	4.02	.05
Negative future thinking	-150.66 (130.96)	-141.186 (106.86)	-177.01 (131.13)	.484	ns
Self-oriented perfectionism	63.36 (20.59)	63.82 (25.14)	64.29 (21.82)	.009	ns
Socially prescribed perfectionism	60.82 (15.44)	48.68 (15.64)	51.29 (14.95)	3.80	.05
Other-oriented perfectionism	51.14 (14.63)	54.23 (16.05)	54.19 (11.72)	.358	ns

^a Main effects from 2×3 (gender \times group) ANOVAs are reported here.

Post hoc Bonferroni tests revealed that the parasuicides differed significantly from the hospital controls ($p < .01$) and community controls ($p < .001$) on measures of hopelessness, depression and anxiety, as expected. The pattern was different on measures of socially prescribed perfectionism and positive future thinking. The parasuicides were significantly more socially prescribed than the hospital controls ($p < .05$) but not more so than the community controls, and they were significantly impaired in positive future thinking when compared with the community controls ($p < .05$) but not by comparison with the hospital controls.

To supplement the ANOVAs and to determine whether perfectionism and future thinking are significant discriminators when considered along with hopelessness, depression, and anxiety, a direct discriminant function analysis was carried out. All the variables described in Table 1 were entered together as predictors of group membership, i.e. parasuicides vs. hospital controls vs. community controls. As there were three groups two discriminant functions were derived, yielding a significant combined chi-square (Wilks' $\lambda = .447$, $\chi^2(16) = 47.07, p < .001$). After removal of the first function, the association between groups and predictors was approaching significance (discriminant function 2: Wilks' $\lambda = .787$, $\chi^2(7) = 14.04, p = .05$). The first and second discriminant functions accounted for 73.7% and 26.3% of the between-group variability, respectively; the correlations of predictor variables with discriminant functions are shown in Table 2. Consensus is lacking with respect to how high correlations (loadings) must be to be interpreted as statistically meaningful; we adhered to Comrey and Lee's (1992) guidance, that only variables with loadings greater than .33 should be interpreted (see Tabachnick & Fidell, 2001). A loading of .33 translates into 10% of variance explained. The weighted loadings described in Table 2 illustrate that socially prescribed perfectionism and positive future thinking as well as depression,

Table 2. Results of discriminant function analysis and classification matrix

	Correlations of predictor variables with discriminant functions		Classification matrix					
			Predicted group membership					
	First	Second	Parasuicides N (%)	Hospital controls N (%)	Community controls N (%)	Total N (%)		
Depression	.909	-.192						
Anxiety	.716	.118						
Other-oriented perfectionism	-.155	-.097						
Self-oriented perfectionism	-.019	.006	Parasuicides N (%)	16 (72.7)	4 (18.2)	2 (9.1)	22 (100)	
Positive future thinking	-.365	.449	Original grouped cases	Hospital controls N (%)	4 (18.2)	14 (63.6)	4 (18.2)	22 (100)
Socially prescribed perfectionism	.352	.364		Community controls N (%)	2 (9.5)	3 (14.3)	16 (76.2)	21 (100)
Negative future thinking	.082	-.197						

anxiety, and hopelessness, loaded on to the first discriminant function—they all had pooled within-group correlations with the standardized canonical function that were greater than .33. With respect to the second discriminant function, given its marginal significance ($p = .05$) and the difficulty of interpretation, we are not confident of its reliability and propose to ignore it and focus on the first discriminant function (see Table 1 for the variable mean scores by group).

The discriminant analysis successfully classified the participants into their respective groups. Almost 71% (70.8%) of the total sample were classified correctly, compared with approximately 33% who would have been correctly classified by chance alone. With respect to parasuicides, 72.7% were classified correctly, with 18.2% of those misclassified being allocated to the hospital control group (see Table 2).

Planned bivariate zero-order correlations were calculated for the parasuicide group only. They revealed that positive future thinking was negatively associated with hopelessness ($r = -.435, p < .05$) but negative future thinking was not ($r = -.015, ns$). Positive future thinking also correlated positively with self-oriented ($r = .427, p < .05$) and other-oriented perfectionism ($r = .400, p < .05$). However, socially prescribed perfectionism was not correlated with any variable other than the perfectionism subscales. Partial correlations controlling for self-oriented and other-oriented perfectionism were carried out to investigate whether the effect of socially prescribed perfectionism was being suppressed. These yielded significant associations between socially prescribed perfectionism and (1) positive future thinking ($r = -.38, p < .05$) and (2) hopelessness ($r = .47, p < .01$) in the predicted directions.

Discussion

The study yielded evidence in support of the three aims. The first set of analyses further substantiated MacLeod's findings, albeit that the effect was not as strong as previously reported (MacLeod *et al.*, 1993, 1997, 1998): the parasuicides reported significantly fewer future positive thoughts than the community controls, but not the hospital controls, with no differences in negative future thinking. It has been hypothesized elsewhere (O'Connor, Connery, *et al.*, 2000) that this may be an artefact of the hospital controls characteristic of the recruiting hospital. As a result of the hospital's catchment area, some of the hospital controls presented with quite serious physical problems (e.g. intravenous drug abuse) rather than the minor physical problems reported in MacLeod's studies. It is reasonable to speculate that they might represent another group of patients who have less positive thoughts for the future. Nevertheless, the central role of impaired positive future thinking in the suicidal process is supported by the ANOVA and discriminant function analysis. When considered along with hopelessness, depression and anxiety, positive future thinking enhanced the classification of participants into their respective groups. This study adds to the growing body of evidence highlighting the importance of positive cognitions in psychological research and therapy (see MacLeod & Moore, 2000). To this end, behavioural and cognitive techniques have been suggested, to train patients to encode and access particular memories (MacLeod & Moore, 2000) and to develop positive schemas (Padesky, 1994). It is anticipated that through such interventions, at-risk individuals may be able to access positive memories more frequently, with greater speed and specificity.

The findings extend previous research on perfectionism (Dean *et al.*, 1996; Hewitt *et al.*, 1998) and demonstrate that socially prescribed perfectionism uniquely differenti-

ates acute patients presenting with a parasuicidal episode from matched controls. They suggest that the detrimental effect of socially prescribed perfectionism on psychological well-being is not explained in terms of psychological distress, and the correlational analyses provide some preliminary data to support one possible mechanism to explain its effect. After controlling for self- and other-oriented perfectionism, socially prescribed perfectionism was negatively correlated with positive future thinking. It may be that the tendency towards social perfectionism reduces the likelihood that an individual encodes or retrieves positive future events. This is not surprising, given that socially prescribed perfectionism has been characterized as being driven by the fear of failure or by the avoidance of punishment (Deci & Ryan, 1985). Therefore, it is reasonable to speculate that the fear of failure biases future expectations away from positive events, as the individual anticipates that they will not meet the expectations of others. Future research should investigate these postulations further and attempt to develop treatments to modify perfectionism (e.g. Antony & Swinson, 1998).

The correlational analyses also suggest that Hewitt *et al.*'s (1998) finding that other-oriented perfectionism may not be destructive was not a statistical artefact. Although it did not emerge as a main effect, other-oriented perfectionism correlated positively with positive future thinking and negatively with hopelessness in the parasuicide group. This fits with Baumeister's (1990) model of escape from self and the notion that focus directed away from self-scrutiny, in some circumstances, is beneficial. It may be that individuals high on other-oriented perfectionism, when under stress, do not experience as much of a reduction in positive future thinking as those low on this construct. This is also consonant with the cry of pain hypothesis (Williams & Pollock, 2000, 2001): those who are less expectant of others but believe that significant others have unrealistically high expectations for them would be more likely to interpret negative life events as defeat and failure. This represents another strand of research yet to be explored.

Finally, our initial ANOVAs supported Hewitt *et al.* (1992)'s finding that self-oriented perfectionism did not differentiate between those who are suicidal and those who are not. However, as was evident from the correlations, positive future thinking was positively correlated with self-oriented perfectionism in the parasuicide group. Moreover, its effect seems contrary to what would have been predicted. Rather than higher levels of personal- or self-standard setting and appraisal being associated with impaired positive future thinking, higher levels of self-oriented perfectionism were correlated with more positive thoughts for the future. One possible explanation for this unexpected finding is that self-oriented perfectionism is tapping issues around gaining control over daily hassles. Consider the following two items which measure self-oriented perfectionism: 'I strive to be as perfect as I can be' and 'I do not have very high goals for myself' (reverse-scored). A positive response on the former and a negative response on the latter item could suggest that the individual is more active in negotiating goals or tasks and in gaining control. It is possible that self-oriented perfectionism is assessing the drive for success and that, in good measure, this is not aversive. A word of caution is necessary, though. The correlational analyses ought to be replicated to rule out any accusations of Type I error. It would also be beneficial to determine prospectively whether measures of socially prescribed perfectionism and positive future thinking can discriminate, with any success, between those who do and those who do not embark on suicidal careers, and whether lower levels of self- and other-oriented perfectionism predict more positive thoughts for the future at another point in time.

In conclusion, it seems that social perfectionism and positive future thinking are

implicated, to some degree, in suicidal behaviour. What remains to be clarified is which components of perfectionism are pertinent to this suicide risk and how they relate to future thinking and hopelessness. While these relationships are not straightforward, the evidence outlined here suggests that the social dimensions of perfectionism will provide the most fruitful line of enquiry.

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