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Perfectionism and Negative Affect After Repeated Failure: Anxiety, Depression, and Anger

Joachim Stoeber
University of Kent
Natalia Schneider
University of Koblenz-Landau
Rimi Hussain and Kelly Matthews
University of Kent

Author Note

Joachim Stoeber, Rimi Hussain, and Kelly Matthews, School of Psychology, University of Kent, United Kingdom; Natalia Schneider, Faculty of Psychology, University of Koblenz-Landau, Germany

Natalia Schneider is now at the Department of Psychology II, University of Kaiserslautern, Germany.

Correspondence concerning this article should be addressed to Joachim Stoeber, School of Psychology, University of Kent, Canterbury, Kent CT2 7NP, United Kingdom. Phone: +44-1227-824196. E-mail: J.Stoeber@kent.ac.uk

Abstract

Perfectionists have shown increased negative affect after failure compared to nonperfectionists. However, little is known about how perfectionists react to repeated failure. This study investigated the effects of two forms of perfectionism—self-oriented perfectionism and socially prescribed perfectionism—on 100 university students' reactions to repeated failure (versus repeated success) examining three negative emotions: anxiety, depression, and anger. Results showed that socially prescribed perfectionism predicted increased anxiety, depression, and anger after initial failure and further increased anger after repeated failure. In contrast, self-oriented perfectionism predicted increased anxiety, but only after repeated failure. The findings suggest that both self-oriented and socially prescribed perfectionism are vulnerability factors predisposing individuals to react with increased negative affect after repeated failure.
Keywords: perfectionism; repeated failure; negative affect; anxiety; depression; anger

Introduction

Perfectionism is a personality disposition characterized by striving for flawlessness and setting exceedingly high standards of performance accompanied by overly critical evaluations of one's behavior (Flett & Hewitt, 2002; Frost, Marten, Lahart, & Rosenblate, 1990). Moreover, research has shown that perfectionists have shown stronger negative affective reactions to failure than nonperfectionists (e.g., Besser, Flett, & Hewitt, 2004). However, little is known how perfectionists react to *repeated* failure. Why would it be important to know more about how perfectionists react to repeated failure? Because perfectionists have exceedingly high standards and are overly self-critical, they experience more discrepancies between their expectations and the results they achieve than nonperfectionists (Slaney, Rice, Mobley, Trippi, & Ashby, 2001). Consequently, perfectionists will regard more of their achievements as failures and are thus likely to experience repeated failure more often than nonperfectionists. To know more about how perfectionists react to repeated failure may therefore be important to gain a better understanding of perfectionism.

Perfectionism, Vulnerability, and Negative Affect

Perfectionism, however, is not a unitary construct. Instead, perfectionism comes in different forms and is best conceptualized as a multidimensional disposition (Enns & Cox, 2002). Regarding multidimensional conceptualizations of perfectionism, one of the most

influential and widely researched models is Hewitt and Flett's (1991) model. With the recognition that perfectionism has personal and interpersonal aspects, the model differentiates two main forms of perfectionism: self-oriented and socially prescribed perfectionism.[1] Self-oriented perfectionism comprises internally motivated beliefs that striving for perfection and being perfect are important. Self-oriented perfectionists have exceedingly high personal standards, strive for perfection, expect to be perfect, and are highly self-critical if they fail to meet these expectations. In contrast, socially prescribed perfectionism comprises externally motivated beliefs that striving for perfection and being perfect are important to others. Socially prescribed perfectionists believe that others expect them to be perfect, and that others will be highly critical of them if they fail to meet these expectations.

According to the specific vulnerability hypothesis of perfectionism (Hewitt & Flett, 1993), both forms of perfectionism are maladaptive dispositions representing vulnerability factors when individuals are under stress (see also Flett, Hewitt, Blankstein, & Mosher, 1995). More recent findings, however, indicate that self-oriented perfectionists show greater resilience to stress compared to socially prescribed perfectionists (Klibert et al., 2014), confirming that socially prescribed perfectionism is the more maladaptive form of perfectionism compared to self-oriented perfectionism (cf. Lo & Abbott, 2013).

Research on how the two forms of perfectionism are related to negative affect confirms this view. In this, the findings for anxiety, depression, and anger are of particular relevance because they are not only exemplars of negative affect that indicate psychological maladjustment, but are also risk factors for cardiovascular disease (Suls & Bunde, 2005). Both self-oriented and socially prescribed perfectionism have shown positive correlations with anxiety, depression, and anger. However, socially prescribed perfectionism has shown the larger and more significant correlations across studies (e.g., Frost, Heimberg, Holt, Mattia, & Neubauer, 1993; Hewitt et al., 2002; Hewitt & Flett, 1991; see Hewitt & Flett, 2004, for a review). In contrast, self-oriented perfectionism has shown consistent positive correlations only with anxiety—indicating that self-oriented perfectionists are particularly prone to experience anxiety—whereas the positive correlations with anger and depression were usually smaller and

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[1]The model differentiates a third form, other-oriented perfectionism, capturing individual differences in having perfectionistic standards for others. Because we did not expect this form to predict reactions to personal failure, it was not further regarded.

often nonsignificant (e.g., Dunkley & Blankstein, 2000; Frost et al., 1993; Hewitt & Flett, 1991). This suggests that, when it comes to negative affect, socially prescribed perfectionism is the more maladaptive form making individuals more vulnerable to experiences of anxiety, depression, and anger than self-oriented perfectionism.

Perfectionism and Affective Reactions to Failure

Regarding perfectionism and negative affective reactions to failure, most studies so far have focused on self-conscious affect. The findings show that both self-oriented and socially prescribed perfectionism predicted increased shame and embarrassment after failure, but only socially prescribed perfectionism predicted increased guilt (e.g., Stoeber, Kempe, & Keogh, 2008; Stoeber, Kobori, & Tanno, 2013; Stoeber &Yang, 2010), corroborating that both forms of perfectionism are vulnerability factors but socially prescribed perfectionism more so than self-oriented perfectionism.

In contrast, only two studies have investigated negative reactions to failure regarding anxiety, depression/dysphoria, and anger/hostility (Besser et al., 2004; Besser, Flett, Hewitt, & Guez, 2008). Unfortunately, the studies' findings did not show a clear pattern. Both studies confronted participants with a cognitive task followed by negative ("Sorry, your performance is below average") or positive ("Well done, your performance is above average") bogus feedback and examined participants' affective reactions. In the first study (Besser et al., 2004), perfectionism showed no interactions with feedback. Self-oriented perfectionism predicted increased anxiety, dysphoria, and hostility regardless of the feedback (positive or negative) participants received. Even more surprisingly, socially prescribed perfectionism did not predict any changes in negative affect. In the second study (Besser et al., 2008), socially prescribed perfectionism did show an interaction with feedback in predicting negative affect. However, the effect was restricted to anxiety and qualified by an interaction with confidence. Socially prescribed perfectionism predicted increased anxiety after negative feedback only in participants who had high confidence in their task performance before the cognitive task was presented. In participants who had low confidence, socially prescribed perfectionism predicted increased anxiety after positive feedback.

Limitations of Previous Studies and Open Questions

Whereas Besser and colleagues' studies make an important contribution to research on perfectionism and affective reactions to failure, as they are the first to go beyond self-conscious

affect, they are limited. First, they did not find the expected perfectionism–feedback interactions. One reason for this may be the bogus feedback they used. Participants high in perfectionism (having exceedingly high standards and being overly self-critical) may have perceived not only the negative feedback as a failure, but also the positive feedback because having performed "above average" may not have been good enough for them. Second, the studies did not investigate repeated failure. Consequently, the question remained whether self-oriented and socially prescribed perfectionism show differences in the prediction of negative affect after repeated failure.

So far, only one study has investigated how the two forms of perfectionism predict negative affect after repeated failure by examining how athletes responded to repeated negative performance feedback in a muscular endurance task (Hill, Hall, Duda, & Appleton, 2011). Neither self-oriented nor socially prescribed perfectionism predicted increased negative affect in response to initial or repeated failure, suggesting that perfectionism had no effects on affective reactions to repeated failure. However, the study did not have a control group (e.g., a group who received repeated success feedback) against which to compare the effects of perfectionism after repeated failure making it difficult to interpret the nonsignificant findings.

The Present Study

Against this background, the aim of the present study was to provide a first investigation of how self-oriented and socially prescribed perfectionism predict negative affective reactions to repeated failure (compared to repeated success) regarding anxiety, depression, and anger. To clearly differentiate failure and success, we used a cognitive task and manipulated the feedback such that participants in the failure group were told that they only got 20% of the answers correct whereas participants in the success group were told that they got 80% correct (cf. Stoeber, Hutchfield, & Wood, 2008). In line with the specific vulnerability hypothesis of perfectionism and previous findings on perfectionism and self-conscious affect after failure, we expected both forms of perfectionism to represent vulnerability factors predicting negative affective reactions to initial and repeated failure.

Method

Participants

A sample of 100 students (50 male, 50 female) was recruited at the first author's university using the School of Psychology's Research Participation Scheme (RPS). Mean age of

students was 21.35 years (*SD* = 3.11; range: 18-45 years). Students volunteered to participate in the study for RPS credits or a raffle for £50 (~US $80). The study was approved by the relevant ethics committee and followed the code of ethics and conduct of the British Psychological Society (2009).

Measures

Perfectionism. To measure the two forms of perfectionism, we used the subscales of the Multidimensional Perfectionism Scale (Hewitt & Flett, 2004) capturing self-oriented perfectionism (15 items; e.g., "I demand nothing less than perfection of myself") and socially prescribed perfectionism (15 items; e.g., "People expect nothing less than perfection from me"). Participants responded to all items on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

Anxiety, depression, and anger. To measure anxiety, we used Marteau and Bekker's (1992) six-item short form of the state scale of the State–Trait Anxiety Inventory (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983; e.g., "I am worried"). To measure depression, we used the eight-item depression subscale from Shacham's (1983) shortened version of the Profile of Mood States (McNair, Lorr, & Droppleman, 1971; e.g., "unhappy") with "I feel" added (e.g., "I feel unhappy") so that the items had the same format as the anxiety items. To measure anger, we used the five-item Feeling Angry subscale of the State–Trait Anger Expression Inventory (Spielberger, 1999; e.g., "I feel angry"). Participants responded to all items on a scale from 1 (*not at all*) to 4 (*very much so*).

Procedure

Stratified by gender, participants—unaware of the deception (bogus feedback) involved in the study—were randomly allocated to one of two experimental conditions: repeated failure (*n* = 52; 26 male, 26 female) or, as a control condition, repeated success (*n* = 48; 24 male, 24 female).[2] To manipulate failure and success, participants were presented with two sets of 10 figure pairs from Peter and Battista's (2008) library of mental rotation figures with the task to decide whether the two figures in each pair were the same. Afterwards, they received feedback on their performance. To make the feedback credible, figures were selected that were very difficult to compare so participants could not tell how many pairs they classified correctly. (Information on the figures presented is available from the first author on request.)

[2]The unequal numbers (52 vs. 48) resulted from inadvertently allocating two participants intended for the success condition to the failure condition.

In both conditions, participants first completed the perfectionism measure. Then they were seated in front of a computer and, after receiving task instructions and one pair to practice, were presented with the first set of 10 figure pairs. For each pair, participants had to indicate whether the figures were the same ("yes" or "no") by pressing designated keys on a keyboard. After they finished with the first set, the screen presented a test score and asked the participant to call the experimenter, who provided additional verbal feedback. In the failure condition, the screen read "You scored: 2/10 correct" and the experimenter said to the participant: "You have only 20% correct. This is a very low score. Sorry!". In the success condition, the screen read "You scored: 8/10 correct" and the experimenter said: "You have 80% correct. This is a very high score. Well done!". Afterwards participants completed the measures of anxiety, anger, and depression for the first time to assess their reactions to initial failure/success (T1).

Next the computer program presented participants with the second set of 10 figure pairs using the same task instructions. After participants finished the second set, the screen again presented a test score and asked the participant to call the experimenter, who again provided additional verbal feedback. In the failure condition, the screen read "You scored: 2/10 correct" and the experimenter said: "You again have only 20% correct. Again this is a very low score. Sorry!". In the success condition, the screen read "You scored: 8/10 correct" and the experimenter said: "You again have 80% correct. Again this is a very high score. Well done!". Afterwards participants completed the measures of anxiety, anger, and depression for the second time to assess their reactions to repeated failure/success (T2). Finally, participants were informed about the bogus feedback and debriefed.

The reason why participants were presented with exactly the same result and feedback at T1 and T2 (2/10 vs. 8/10 correct) was to keep failure and success constant across time to examine reactions to repeated failure and success (i.e., how participants experienced the *same* failure and success for a second time) instead of reactions to increased failure and success (e.g., 1/10 vs. 9/10 correct at T2) or decreased failure and success (e.g., 3/10 vs. 7/10 correct at T2).

Reliability of Scores and Manipulation Check

For all measures, scores were computed by averaging across items. With Cronbach's alphas between .82 and .96, all scores showed good reliability (Nunnally & Bernstein, 1994).

To examine if the manipulation was successful, we computed a 2 × 2 × 3 mixed-model ANOVA with feedback (failure, success) as between-participants factor and time (T1, T2) and

negative affect (anxiety, depression, anger) as within-participants factors. As intended, the main effect of feedback was highly significant (F[1, 98] = 33.22, $p < .001$) as was the interaction of feedback × time (F[1, 98] = 16.82, $p < .001$).[3] To follow up on these analyses, we computed 2 × 2 ANOVAs of feedback and time on the three emotions (see Table 1). All three ANOVAs showed significant feedback and feedback × time effects. As intended, anxiety, depression, and anger increased in the repeated failure condition and decreased in the repeated success condition.

Results

Reactions to Initial Failure

To examine participants' reactions to initial failure, we computed a series of moderated regression analyses (Aiken & West, 1991) with anxiety, depression, and anger at T1 as dependent variables (DVs). In all analyses, self-oriented and socially prescribed perfectionism were entered simultaneously to control for their overlap ($r = .40$, $p < .001$). Feedback was effect-coded in the direction of failure (+1 = failure, –1 = success). In Step 1, self-oriented perfectionism, socially prescribed perfectionism, and feedback were entered as predictors; and in Step 2 the interactions of self-oriented perfectionism × feedback and socially prescribed perfectionism × feedback were entered.

Whereas self-oriented perfectionism showed no significant interactions with feedback, socially prescribed perfectionism showed significant interactions in the prediction of anxiety, depression, and anger (see Table 2, Time 1). To further examine these interactions, we conducted simple slope analyses and plotted the interactions for participants high (+1 *SD*) and low (–1 *SD*) in socially prescribed perfectionism (Aiken & West, 1991). Results showed that socially prescribed perfectionism predicted increased anxiety across conditions (see Figure 1, Panel A). Participants high in socially prescribed perfectionism reported more anxiety than participants low in socially prescribed perfectionism both after failure ($\beta = .72$, $p < .001$) and after success ($\beta = .29$, $p < .05$), but—as the significant interaction indicated—the increase was larger after failure. In contrast, socially prescribed perfectionism predicted increased depression only after failure (see Panel B). Participants high in socially prescribed perfectionism reported more depression than participants low in socially prescribed perfectionism after failure ($\beta = .62$, $p < .001$), but not after success ($\beta = .06$, $p = .631$). The same held for anger. Socially prescribed

[3]When gender was included as an additional between-participants factor, all effects including gender were nonsignificant ($p > .05$). Hence, gender was not further regarded.

perfectionism predicted increased anger only after failure (see Panel C). Participants high in socially prescribed perfectionism reported more anger than participants low in socially prescribed perfectionism after failure ($\beta = .50$, $p < .001$), but not after success ($\beta = .07$, $p = .580$).

Reactions to Repeated Failure

To examine participants' reactions to repeated failure, we computed further moderated regression analyses with anxiety, depression, and anger at T2 as DVs controlling for participants' initial reactions (DVs at T1) in Step 1. This time, both self-oriented and socially prescribed perfectionism showed significant interactions with feedback (see Table 2, Time 2). Self-oriented perfectionism predicted increased anxiety after repeated failure (see Figure 2, Panel A). Participants high in self-oriented perfectionism showed increased anxiety after repeated failure ($\beta = .27$, $p < .01$), but not after repeated success ($\beta = .01$, $p = .917$) when compared to participants low in self-oriented perfectionism. In contrast, socially prescribed perfectionism predicted increased anger after failure (see Panel B). Participants high in socially prescribed perfectionism showed increased anger after repeated failure ($\beta = .20$, $p < .01$), but not after repeated success ($\beta = –.05$, $p = .451$) when compared to participants low in socially prescribed perfectionism.

Discussion

The aim of the present study was to investigate how self-oriented and socially prescribed perfectionism predicted negative affective reactions to repeated failure regarding three negative emotions: anxiety, depression, and anger. Results showed that the two forms of perfectionism predicted different reactions to initial and repeated failure. Self-oriented perfectionism predicted increased anxiety, but only after repeated failure. In contrast, socially prescribed perfectionism predicted increased anxiety, depression, and anger after initial failure, and further increased anger after repeated failure.

The present findings confirm that both forms of perfectionism are vulnerability factors, but socially prescribed perfectionism more so than self-oriented perfectionism. Socially prescribed perfectionists reacted to initial failure with increases in all three negative emotions investigated whereas self-oriented perfectionists seemed to be more resilient showing no increased negative affect in response to initial failure. This finding dovetails with previous findings indicating that socially prescribed perfectionists are less resilient than self-oriented perfectionists (Klibert et al., 2014). Moreover, it corroborates findings from previous studies indicating that socially

prescribed perfectionism is a more maladaptive form of perfectionism compared to self-oriented perfectionism (e.g., Hewitt & Flett, 2004).

However, both forms of perfectionism predicted negative affective reactions to repeated failure: Self-oriented perfectionism predicted increased anxiety, and socially prescribed perfectionism predicted (further) increased anger. This finding suggests that self-oriented perfectionists may show resiliency when experiencing single episodes of failure, but this resiliency is not sustained when experiencing repeated failure—to which self-oriented perfectionists react with increased anxiety. In social cognitive theory, anxiety is a negative emotion in which the self feels threatened and individuals who lack self-efficacy start to worry that they are unable to control the threat or cope with the associated negative emotions (Bandura, 1988). Self-oriented perfectionists are highly self-critical (Hewitt & Flett, 1991), and self-criticism has shown to predict decreases in self-efficacy after failure (Stoeber, Hutchfield, & Wood, 2008). Hence it is conceivable that, after experiencing repeated failure, self-oriented perfectionists felt threatened and lacked the self-efficacy to effectively cope with the situation, and consequently experienced increased anxiety. If perfectionists experience repeated failure more often than nonperfectionists, and self-oriented perfectionists react with increased anxiety to repeated failure, the present findings may help explain why self-oriented perfectionists generally report higher anxiety than nonperfectionists.

In contrast, socially prescribed perfectionists showed no resiliency and responded with increased negative affect after initial failure showing increases in anxiety, depression, and anger. Moreover, they showed further increased anger after repeated failure. In cognitive theories of emotion, anger is a negative emotion that arises when a person feels there is a violation of what "ought" to be with a focus on the blameworthiness of someone else's action (Ortony, Clore, & Collins, 1988). Whereas self-blame (blaming oneself for failings) is characteristic of self-oriented perfectionists, other-blame (blaming others for failings) is characteristic of socially prescribed perfectionists (Hewitt & Flett, 1991, 2004). If blaming others is a characteristic contributing to the rise of anger, and socially prescribed perfectionists felt that they ought not to fail repeatedly, this may explain why socially prescribed perfectionists reacted to repeated failure with increased anger after initial failure and further increased anger after repeated failure. Moreover, if perfectionists experience repeated failure more often than nonperfectionists, and socially prescribed perfectionists react with increased anxiety to repeated failure, this may

explain why—even though both self-oriented and socially prescribed perfectionism have shown positive correlations with anger—the correlations of socially prescribed perfectionism tend to be larger and more consistent across studies (Dunkley & Blankstein, 2000; Hewitt et al., 2002; Hewitt & Flett, 1991, 2004).

The present study has a number of limitations. First, we did not measure baseline levels of affect prior to the experimental manipulation. Whereas this does not affect the interpretation of the interaction effects on anxiety and anger after repeated failure (because anxiety and anger after initial failure served as a "baseline"), it may affect the interpretation of the interaction effects on anxiety, depression, and anger after initial feedback. Second, we did not conduct post-experimental interviews with the participants to check the credibility of the feedback. Future studies could therefore profit from including baseline measures and credibility checks to examine whether the present findings replicate when affective reactions to initial failure are compared against baseline levels and participants who found the repeated feedback suspicious are removed from the analyses. Finally, the present findings are limited to self-oriented and socially prescribed perfectionism. Consequently, future studies may want to investigate how the present findings replicate when other forms and dimensions of perfectionism (see Frost et al., 1990; Slaney et al., 2001) are regarded.

Despite these limitations, the findings of the present study make a significant contribution to the perfectionism literature by demonstrating that both self-oriented and socially prescribed perfectionism are vulnerability factors predisposing individuals to experience higher levels of negative affect after repeated failure compared to nonperfectionists. Because perfectionists have exceedingly high standards and are overly self-critical, they are prone to perceive their achievements as failures and thus are more likely to experience repeated failure more often than nonperfectionists. Understanding the affective consequences of repeated failure may therefore be an important pathway towards a better understanding of perfectionism and negative affect. Hence we hope that the present research will inspire further studies investigating how perfectionists react to repeated failure.

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Table 1

Manipulation Check

		Time 1		Time 2		*F*	
Negative affect	Feedback	*M*	(*SE*)	*M*	(*SE*)	Feedback	Feedback × time
Anxiety	Failure	2.21	(0.09)	2.29	(0.09)	22.25***	11.88***
	Success	1.79	(0.09)	1.57	(0.09)		
Depression	Failure	1.58	(0.07)	1.65	(0.08)	22.71***	10.04**
	Success	1.11	(0.08)	1.05	(0.09)		
Anger	Failure	1.65	(0.07)	1.79	(0.08)	34.53***	10.38**
	Success	1.13	(0.08)	1.06	(0.08)		

Note. $N = 100$ (failure: $n = 52$; success: $n = 48$). Time 1 = after initial failure/success; Time 2 = after repeated failure/success.
**$p < .01$. ***$p < 001$.

Table 2

Summary of Multiple Regressions

	Anxiety		Depression		Anger	
	ΔR^2	β	ΔR^2	β	ΔR^2	β
Time 1						
Step 1	.32***		.26***		.28***	
Self-oriented perfectionism (SOP)		–.11		–.09		–.01
Socially prescribed perfectionism (SPP)		.50***		.34***		.28**
Feedback		.32***		.40***		.45***
Step 2	.04		.07*		.05**	
SOP × feedback		–.09		–.05		.03
SPP × feedback		.22*		.28**		.22*
Time 2						
Step 1	.63***		.89***		.76***	
DV (Time 1)		.80***		.94***		.87***
Step 2	.07***		.01*		.03**	
SOP		.11		.02		.05
SPP		.02		.04		.06
Feedback		.28***		.10**		.20***
Step 3	.03**		.01*		.02**	
SOP × feedback		.13*		.03		.05
SPP × feedback		.07		.07		.13*

Note. $N = 100$ (failure: $n = 52$; success: $n = 48$). Time 1 (after initial failure/success) = analyses for DV at Time 1; Time 2 (after repeated failure/success) = analyses for DV at Time 2 controlling for DV at Time 1. DV (Time 1) = dependent variable at Time 1. Feedback was effect-coded as +1 = failure, –1 = success.
*$p < .05$. **$p < .01$. ***$p < 001$.

Figure Captions

Figure 1. Perfectionism and reactions to initial failure and success regarding anxiety (Panel A), depression (Panel B), and anger (Panel C). T1 = Time 1 (after initial failure/success).

Figure 2. Perfectionism and reactions to repeated failure and success regarding anxiety (Panel A) and anger (Panel B). T2 = Time 2 (after repeated failure/success).

Figure 1 Panel A

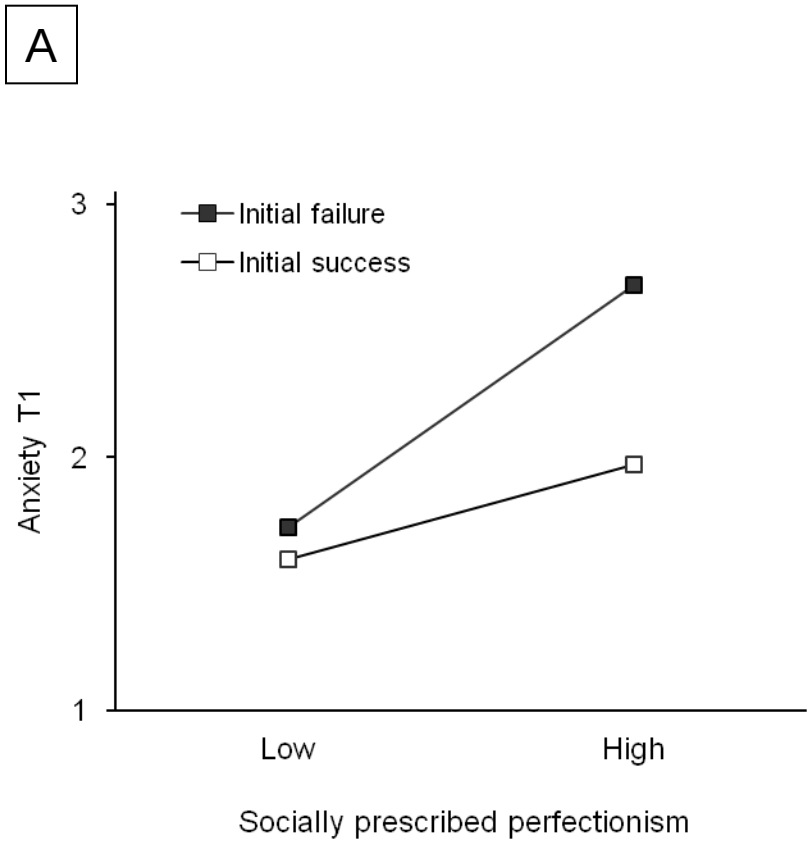

Figure 1 Panel B

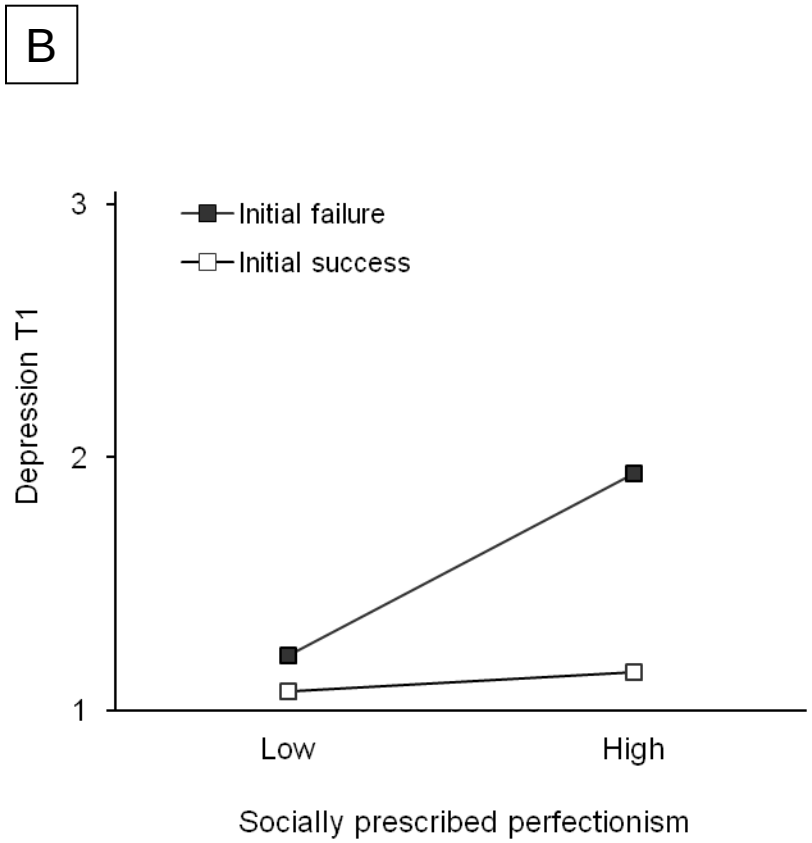

Figure 1 Panel C

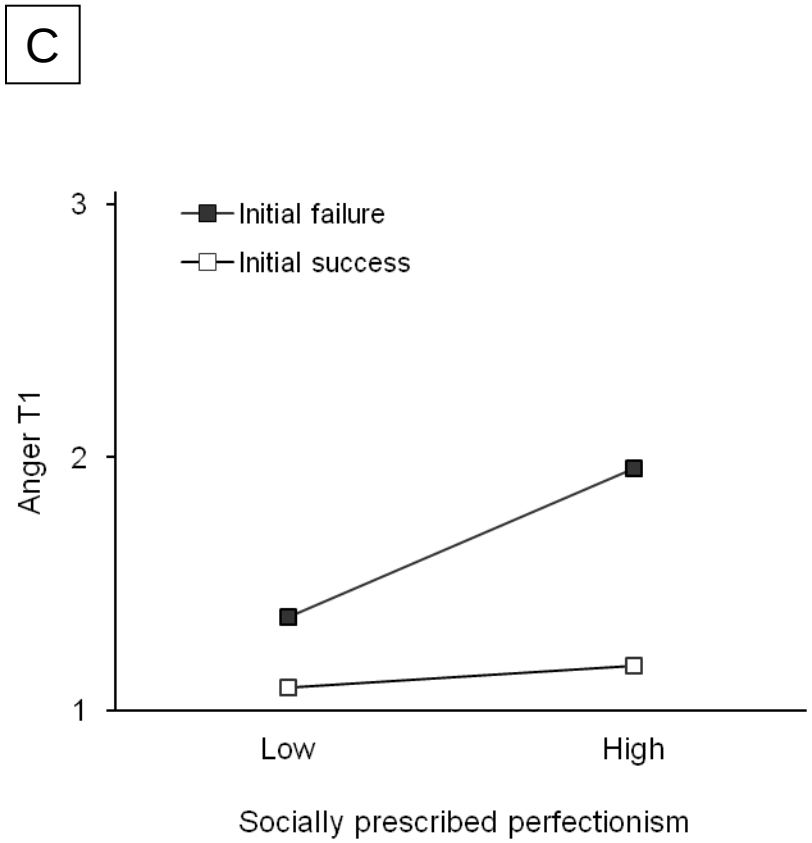

Figure 2 Panel A

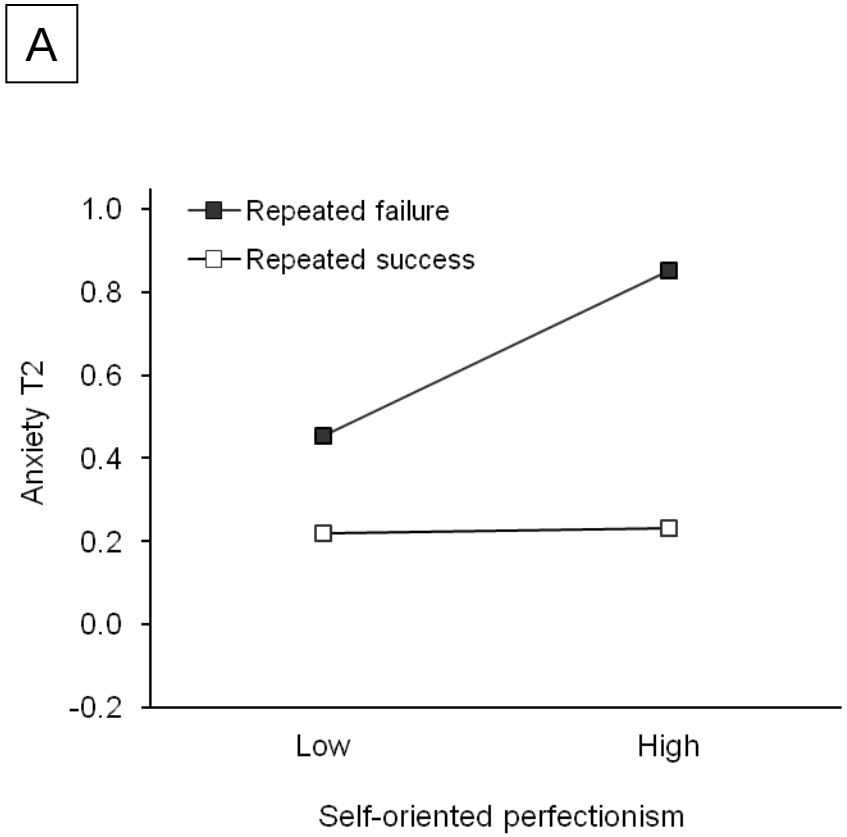

Figure 2 Panel B