Perfectionism and Coping with Daily Failures:

Positive Reframing Helps Achieve Satisfaction at the End of the Day

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Abstract

Differentiating perfectionistic strivings and perfectionistic concerns, the present study examined how perfectionism predicts what coping strategies people use when dealing with failures, and how perfectionism and coping influence people's satisfaction. A sample of 149 students completed daily reports for 3 to 14 days reporting the most bothersome failure they experienced during the day, what strategies they used to cope with the failure, and how satisfied they felt at the end of the day. Multilevel regression analyses showed that perfectionistic concerns predicted more frequent use of self-blame, less frequent use of active coping and acceptance, and higher satisfaction at the end of the day whereas perfectionistic strivings predicted less frequent use of self-blame and higher satisfaction. Whereas positive reframing, acceptance, and humor predicted higher satisfaction for all students, further analyses showed that positive reframing coping was particularly helpful for students high in perfectionistic concern. The findings suggest that accommodative coping strategies are generally helpful in dealing with personal failures, with positive reframing being a coping strategy that works particularly well for people high in perfectionistic concerns (who are prone to dissatisfaction) to achieve higher satisfaction at the end of the day.

Keywords: personality; coping; subjective well-being; perfectionism; social support; avoidance; secondary control; multilevel random coefficient analyses

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Perfectionism is a personality disposition characterized by exceedingly high standards for performance accompanied by tendencies for overly critical self-evaluations of one's behavior (Flett & Hewitt, 2002; Frost, Marten, Lahart, & Rosenblate, 1990). Consequently, perfectionists seldom see themselves fully achieving their standards, and so they are often dissatisfied with their achievements, with themselves, and with their lives. Research on perfectionism, however, has demonstrated that perfectionism is not a one-dimensional characteristic. Instead, two major dimensions of perfectionism should be differentiated—perfectionistic strivings and perfectionistic concerns—of which only the perfectionistic concerns dimension is associated with lower satisfaction with life. Research on perfectionism and affect has shown that how people cope with daily events predicts how positive or negative they feel at the end of the day. However, people high in perfectionistic strivings and people high in perfectionistic concerns may use different coping strategies to different effect. Consequently, the question arises which coping strategies are used by people who are either high or low in the two dimensions of perfectionism, and how coping affects how they feel at the end of the day.

Perfectionism

Early psychological conceptions (e.g., Burns, 1980) regarded perfectionism as a one-dimensional personality characteristic. Psychological theory and research, however, have since progressed to a more differentiated view of perfectionism as a multidimensional and multifaceted characteristic (Frost et al., 1990; Hewitt & Flett, 1991: see Enns & Cox, 2002, for a review). Moreover, cumulative evidence indicates that two major dimensions of perfectionism should be differentiated (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993; Stoeber & Otto, 2006). Following Stoeber and Otto (2006), we will refer to these dimensions as "perfectionistic strivings" and "perfectionistic concerns."

The perfectionistic strivings dimension comprises those facets of perfectionism that

capture perfectionistic personal standards and a self-oriented striving for perfection. This dimension has been found to be related to positive characteristics, processes, and outcomes such as conscientiousness, endurance, positive affect, and academic performance. In comparison, the perfectionistic concerns dimension comprises those facets of perfectionism that capture concern over mistakes, doubts about actions, and concern over others' evaluation of one's performance. This dimension has been found to be related to negative characteristics, processes, and outcomes such as neuroticism, low self-esteem, negative affect, anxiety, depression, and suicidal ideation (see Stoeber & Otto, 2006, for a comprehensive review).

Perfectionistic strivings and perfectionistic concerns, however, are usually significantly correlated: Many people high in one dimension of perfectionism are also high in the other dimension (e.g., Dunkley, Zuroff, & Blankstein, 2003; R. W. Hill et al., 2004). Consequently, the specific relationships of the two dimensions are often masked by the high overlap between the two dimensions. This holds in particular for perfectionistic strivings that often show positive relationships with positive characteristics, processes, and outcomes only after the overlap with perfectionistic concerns has been taken into account, for example, by examining partial correlations or by entering the two dimensions simultaneously into regression analyses. But also perfectionistic concerns show clearer positive relationships with negative characteristics, processes, and outcomes after the overlap with perfectionistic strivings has been taken into account (R. W. Hill, Huelsman, & Araujo, 2010; Stoeber & Otto, 2006).

Perfectionism, Satisfaction, and Coping

The differentiation between perfectionistic strivings and perfectionistic concerns is important also when regarding the relationship between perfectionism and satisfaction. Perfectionism has long been associated with an inability to experience satisfaction because perfectionists have a tendency to believe that they could have (and should have) done better, no matter what they actually achieved (see Besser, Flett, & Hewitt, 2004, for a review). Here, however, perfectionistic strivings and perfectionists concerns show marked differences.

Regarding satisfaction with life, studies investigating the two dimensions of perfectionism found that only perfectionistic concerns were associated with lower satisfaction, whereas perfectionistic strivings were associated with higher satisfaction (e.g., Bergman, Nyland, & Burns, 2007; Chang, Watkins, & Banks, 2004). Moreover, studies on the relationships between perfectionism and domains of life satisfaction found that perfectionist personal standards (a defining facet of perfectionistic strivings) were associated with higher satisfaction with oneself and with the central areas of one's life—family, friends, school, living environment—whereas discrepancy feelings (a facet closely related to perfectionistic concerns) were associated with lower satisfaction (Gilman & Ashby, 2003; Gilman, Ashby, Sverko, Florell, & Varjas, 2005). Furthermore, the two dimensions of perfectionism have shown differential relationships with how satisfied people are with their achievements. A study on perfectionism and students' satisfaction with their grade point average (GPA) found discrepancy to be uncorrelated with GPA, but negatively correlated with GPA satisfaction (Grzegorek, Slaney, Franze, & Rice, 2004). This finding indicates that students high in perfectionistic concerns are less satisfied with their achievements, regardless of how good or bad their achievements actually are (see also Stoeber & Yang, 2010).

One reason why perfectionistic concerns are associated with lower satisfaction may be that people high in perfectionistic concerns fail to use coping strategies that help them successfully deal with the adversities of life, and instead use coping strategies that are more harmful than helpful (e.g., Dunkley et al., 2003; Dunn, Whelton, & Sharpe, 2006; Rice & Lapsley, 2001; Stoeber & Rennert, 2008). Moreover, for people high in perfectionistic concerns, some coping strategies may be more helpful whereas others may be less helpful when compared to people low in perfectionistic concerns (Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Dunkley et al., 2003).

Studies on perfectionism and coping have accumulated converging evidence that the dimensions and facets of perfectionistic strivings and perfectionistic concerns show differential relationships with different forms of coping (e.g., Dunkley & Blankstein, 2000; Dunkley et al.,

2000; Dunkley et al., 2003; Dunn et al., 2006; A. P. Hill, Hall, & Appleton, 2010; Gaudreau & Antl, 2008; Stoeber & Rennert, 2008). Most of these studies have investigated coping *styles*, that is, individuals' preferred strategies of coping with stress across different situations or in similar situations across time (Compas, 1987). Investigating coping by assessing coping styles has its limitations, however. Coping styles are usually assessed by asking people how they generally cope with adverse events, a method that is retrospective and relies heavily on accurate recollection and aggregation of coping efforts over an undetermined period of time—which is something people are not particularly good at (e.g., Todd, Tennen, Carney, Armeli, & Affleck, 2004). Moreover, coping styles are usually assessed without making reference to specific events. Because people may cope differently with different events (a failure to achieve one's personal ambitions may activate different coping strategies than the illness or death of someone close), asking people how they generally cope with adverse events may not be predictive of how people cope with specific challenges, threats, failures, and losses.

Perfectionism and Daily Coping

One way to circumvent these problems is to study how people cope with specific events and use diary methods to record coping soon after it occurred. Reducing the amount of time between the event (coping) and the report of the event (assessment of coping) decreases bias and selectivity in the recall of events and thus gives a more accurate assessment of the events and the associated psychological processes (Bolger, Davis, & Rafaeli, 2003). Moreover, diary methods are well suited for multilevel analyses (e.g., Raudenbush & Bryk, 2002) to investigate how individuals' personality affect daily psychological processes and outcomes (Nezlek, 2001). Finally, diary studies investigating daily coping using a within-persons design may provide a much richer picture of how coping works and what coping strategies are helpful for individuals than studies that employ between-persons design only (Tennen, Affleck, Armeli, & Carney, 2000). With this, multilevel analyses of diary data provide for a more accurate assessment of coping and a more comprehensive investigation of how the two dimensions of perfectionism differentially affect

coping processes and coping outcomes, because they allow for individual variation in the relationship between perfectionism, coping, and coping outcomes.

To date, only one study on perfectionism and coping has used diary methods and investigated the responses with multilevel analyses (Dunkley et al., 2003). The study examined how perfectionistic strivings and perfectionistic concerns predicted daily coping and how coping predicted positive and negative affect at end of the day. A sample of university students completed daily reports for seven days. At the end of each day, students provided a brief description of "the most bothersome event or issue of the day" (p. 239) and then indicated how stressful the event was, how they coped with the event, and how they felt at the end of the day. Using selected strategies from two widely used coping inventories—the COPE (Carver, Scheier, & Weintraub, 1989) and the Coping Inventory for Stressful Situations (Endler & Parker, 1990)—Dunkley and colleagues found that the effects different coping strategies had on positive and negative affect at the end of the day depended on participants' level of perfectionistic strivings and perfectionistic concerns. For example, the positive relationship of problem-focused coping (active coping, planning, suppression of competing activities) and the negative relation of avoidant coping (denial, behavioral and mental disengagement) and positive affect were significant only in students low in perfectionistic concerns. In students high in perfectionistic concerns, more frequent use of problem-focused coping and less frequent use of avoidant coping did not lead to increased positive affect at the end of the day. However, one coping strategy from the COPE was helpful for all students—and particularly for those high in perfectionistic concerns: positive reinterpretation coping. Positive reinterpretation coping showed a main effect on positive affect, but there was an additional significant interaction with perfectionistic concerns. When this interaction was further analyzed, results showed that the positive effect that positive reinterpretation had on positive affect was greater in students high in perfectionistic concerns than students low in perfectionistic concerns, suggesting that positive reinterpretation is

a particularly helpful coping strategy for people high in perfectionistic concerns when dealing with negative events, as it helps them achieve higher levels of positive affect at the end of the day.

The findings of Dunkley et al.'s (2003) study have important implications as they show what coping strategies people use to deal with adverse events that affect their well-being (cf. Coyne & Racioppo, 2000) and that diary studies are an effective way to investigate how coping affects people' well-being (Tennen et al., 2000). In addition, they provide first evidence that individual differences in perfectionism influence how people cope with daily problems and how their coping affects their well-being at the end of the day. In particular, they indicate that the effectiveness of people's coping strategies differ depending on people's level of perfectionistic strivings and perfectionistic concerns.

However, Dunkley et al.'s (2003) study had some limitations. First, Dunkley and colleagues did not control for the overlap between perfectionistic strivings and perfectionistic concerns, despite the fact that the perfectionism dimensions showed a correlation of $r = .61$ that may have masked any positive effects of perfectionistic strivings (R. W. Hill et al., 2010; Stoeber & Otto, 2006). For example, perfectionistic strivings showed no positive relationship with positive affect at the end of the day, as would have been expected from previous studies (see Stoeber & Otto, 2006). Instead, perfectionistic strivings showed a small positive correlation with negative affect. Second, the finding that positive reinterpretation was a coping strategy that was particularly helpful for people high in perfectionistic concerns was unexpected and did not receive much attention from the authors. However, if replicated, it may have important implications for clinical and counseling psychology because people high in perfectionistic concerns have been shown to be "difficult" clients and often do not respond well to treatment and intervention (e.g., Blatt & Zuroff, 2005). Demonstrating that positive reinterpretation is a strategy that works well for people high in perfectionistic concerns would make an important addition to the literature. Consequently, it is important to replicate Davey et al.'s finding.

The Present Study

The aim of the present study was to replicate and expand on Dunkley et al.'s (2003) findings and investigate how individual differences in perfectionistic strivings and perfectionistic concerns predict how students cope with daily stress and how this makes them feel at the end of the day. Regarding stressful daily events, we examined events that we expected to be particularly relevant for perfectionistic students, namely failures to achieve one's standards (e.g., Besser et al., 2004; Bieling, Israeli, Smith, & Antony, 2003). Consequently, we examined how students coped with the daily failures they found most bothersome. Regarding coping, we examined the 14 coping strategies of the Brief COPE (Carver, 1997) which comprise all coping strategies that Carver considered central when developing a brief version of the COPE. Regarding how students feel at the end of the day, we examined satisfaction at the end of the day. Like positive affect, satisfaction is a central aspect of subjective well-being (e.g., Diener, Suh, Lucas, & Smith, 1999). Consequently, we used satisfaction at the end of the day as the criterion when exploring which coping strategies were helpful in dealing with daily failures.

Based on previous theory and research on perfectionism and coping, we expected perfectionistic strivings and problem-focused coping strategies to predict higher levels of satisfaction at the end of the day, and perfectionistic concerns and avoidant coping strategies to predict lower levels of satisfaction. Moreover, in line with Dunkley et al.'s (2003) findings, we expected perfectionism to moderate the relationships between coping and satisfaction. Because perfectionistic concerns have shown to have a strong negative impact on subjective well-being, we were particularly interested in replicating Dunkley et al.'s findings that positive reinterpretation coping is a particularly helpful strategy for people high in perfectionistic concerns. Finally, because Dunkley et al. (2003) investigated only selected coping strategies, we wanted to explore whether further coping strategies would show different effects depending on individual differences in perfectionism.

Method

Participants

A sample of 149 students (33 male, 116 female), recruited from the student body of the University of Kent, completed measures of perfectionism at an initial session followed by daily reports of failures, coping, and satisfaction for 3 to 14 days. Mean age of students was 20.8 years (*SD* = 2.8; range = 18-32 years). The study was approved by the School of Psychology's ethics committee and complied with the British Psychological Society's code of conduct and ethical guidelines (British Psychological Society, 2005). Students who completed the study received a participant fee of £20 (approximately US $32).

Procedure

Students were recruited via flyers and posters distributed around campus and via postings on the university's student jobs webpage. In these, the study was advertised as a diary study investigating the relationships between personal standards, coping, and well-being. Students were advised that, except for the introductory assessment, the study would be run online so they needed Internet access at home or in their dormitory. Finally, the name of the research assistant (RA) running the study and her email address were provided.

Students who wanted to participate in the study sent an email to the RA. The RA then invited students individually to the lab for an introductory session during which they completed an informed consent form, the perfectionism measures, and a paper-and-pencil version of the daily report which they would be asked to complete online each evening for the next 14 days. The paper-and-pencil version of the daily report was only used as a "test run" (to allow students to ask questions and the RA to make sure that all procedures, instructions, and items were fully understood) and was not included in the analyses. The remainder of the study was conducted online via the School of Psychology's secure Questionnaire Management System (QMS). To access the questionnaire, students logged onto the QMS using their university login and password. The QMS then presented the online questionnaire page by page. If students missed an

item, they were prompted to respond to the item before they were presented with the next page

to avoid missing data. To ensure confidentiality, only the authors and the RA had access to

students' login. All students registered with the university were eligible to participate.

Initially, 175 students signed up for the study and completed the paper-and-pencil

measures, but only 149 completed at least three daily reports ($M = 11.9$; $SD = 2.9$; median =

13.0; mode = 14; range = 3-14). While multilevel modeling would have allowed for the inclusion

of all students who completed at least one daily report, three daily reports are needed to compute

a variable slope for each student (cf. Nezlek, 2001; see also Analytic Strategy below).

Consequently, we included in our analyses only students with at least three daily reports. To

examine whether the 149 students included in our analyses (completers) differed from the 26

students who did not complete at least three reports (noncompleters) on the measures of the

initial session, we computed a χ^2 test with gender and t-tests with age and perfectionism

(perfectionistic strivings, perfectionistic concerns) comparing completers and non-completers.

None of these tests was significant (all ps > .19) suggesting that the students included in our

analyses did not differ significantly from those excluded.

Measures

Perfectionism. To measure the two dimensions of perfectionism, perfectionistic strivings

and perfectionistic concerns, we combined five scales from the Frost Multidimensional

Perfectionism Scale (FMPS; Frost et al., 1990) and the Multidimensional Perfectionism Scale

(MPS; Hewitt & Flett, 2004). All scales were presented with a seven-point answer scale from

strongly disagree (1) to *strongly agree* (7) adopted from the MPS. Following previous studies (e.g.,

Dunkley et al., 2000; Enns, Cox, Sareen, & Freeman, 2001), perfectionistic strivings were

measured using FMPS Personal Standards (7 items; e.g., "I have extremely high goals";

Cronbach's α = .79) and MPS Self-Oriented Perfectionism (15 items; "I strive to be as perfect as

I can be"; α = .91); and perfectionistic concerns were measured using FMPS Concern over

Mistakes (9 items; e.g., "People will probably think less of me if I make a mistake"; α = .88),

FMPS Doubts about Action (4 items; "Even when I do something very carefully, I often feel that it is not quite right"; $\alpha = .75$), and MPS Socially Prescribed Perfectionism (15 items; "People expect nothing less than perfection from me"; $\alpha = .85$).

To confirm that the scores from the five perfectionism scales—Personal Standards (PS), Self-Oriented Perfectionism (SOP), Concern over Mistakes (CM), Doubts about Action (DA), and Socially Prescribed Perfectionism (SOP)—formed the two expected dimensions (perfectionistic strivings, perfectionistic concerns), we used Amos 17 (Arbuckle, 2008) to conduct a confirmatory factor analysis setting (a) PS and SOP as indicators of the first factor and (b) CM, DA, and SPP as indicators of the second factor (see Stoeber & Otto, 2006). The model showed a very good fit ($\chi^2[4] = 5.43$, $p = .25$; CFI $> .99$; RMSEA $< .05$). Moreover, the fit was significantly better than that of a one-factor model ($\chi^2[5] = 84.75$, $p < .001$; CFI $= .78$; RMSEA $= .33$) as confirmed by a chi-square difference test, $\chi^2_{\text{diff}}(1) = 79.32$, $p < .001$.[1] Consequently, following Enns et al. (2001), we standardized the scores giving all components equal weight and then combined (a) the standardized PS and SOP scores to measure perfectionistic strivings and (b) the standardized CM, DA, and SPP scores to measure perfectionistic concerns. In line with previous findings (e.g., Dunkley et al., 2003), perfectionistic strivings and perfectionistic concerns were significantly correlated, $r = .56$, $p < .001$. Therefore, we controlled for the two dimensions' overlap in all our analyses.

Daily failures. Each daily report started with a section headed "Today's Achievements and Nonachievements" and the following paragraph.[2]

> Life isn't perfect, and there are always some major or minor things which do not turn out as planned. Consequently, at the end of the day, we seldom have achieved each and everything we set out to do for the day. Looking back at your day, please take a moment to reflect on what you did achieve to your full satisfaction today—and what you failed to achieve to your full satisfaction.

Then students were asked to write down their "most bothersome nonachievement of the day" and to provide a brief description of this failure describing what happened (or failed to happen), where it happened (or failed to happen), and who besides themselves was involved (or failed to get involved).

In addition, students categorized the failure by indicating the main category it belonged to using 10 predefined categories: work (38.4% of all failures fell in this category), social (15.3%), personal chores (12.9%), own health (9.6%), household (8.1%), money/financial (7.7%), recreation (7.6%), spouse/companion (3.5%), family/children (2.7%), and other (9.0%).

Stressfulness. To measure how stressful the most bothersome failure of the day was, we used four items that had demonstrated high reliability in a previous study on coping with failures (Stoeber, 2008) asking students how (a) "bothersome," (b) "upsetting," (c) "unpleasant," (d) and "stressful" the failure was. Each item was answered on a five-point scale with the response categories *not at all* (0), *slightly* (1), *moderately* (2), *very much* (3), and *extremely* (4). As in the previous study, the four items were combined to one measure of stressfulness.

Coping. To measure how students coped with daily failures, we used the Brief COPE (Carver, 1997). The Brief COPE is a widely-used 28-item questionnaire to assess coping in situations in which the assessment protocol does not permit the use of the full 60-item version of the COPE (Carver et al., 1989). The 28 items assess 14 coping strategies (see Table 1) each with two items. Research supports the reliability and validity of the Brief COPE (e.g., Carver, 1997). Moreover, there is evidence from confirmatory factor analysis for the factorial validity of the Brief COPE indicating that the 14 coping strategies form separate factors (Muller & Spitz, 2003). For the present study, all items were reworded from present to past tense (e.g., "I turned to work or other activities to take my mind off things") to match the diary report's format. Instructions asked students how they dealt with the failure followed by the item section. This section started with the prefix "When realizing my nonachievement, ..." after which the 28 Brief COPE items were listed. Participants responded to each item on a four-point scale with the categories *I did not*

do this at all (0), *I did this a little* (1), *I did this a medium amount* (2), and *I did this a lot* (3) adopted from

the COPE (Carver et al., 1989). Note that the answer scale has an absolute zero point (0 = *I did*

not do this at all) which allowed us to determine whether students used a coping strategy (see Table

2).

   Satisfaction. To measure satisfaction at the end of the day, a single item was used as is

common practice in diary studies (e.g., Kashdan & Steger, 2007; Oishi, Diener, Suh, & Lucas,

1999). The item read "Regarding your day, how satisfied are you with your day today?"

Participants answered on a five-point scale with the categories *very little or not at all* (0), *a little* (1),

moderately (2), *quite a bit* (3), and *very much* (4).

Analytic Strategy

   To analyze how perfectionistic strivings and perfectionistic concerns predicted daily

coping and satisfaction at the end of the day, we conducted multilevel regression analyses

(Nezlek, 2001; Raudenbush & Bryk, 2002). The analyses involved variables at two levels: daily

experiences (Level 1; each observation is specific to a participant and varies over days) and

perfectionism (Level 2; each observation is specific to that participant, and constant over days).

Our analytic strategy comprised two steps. In the first step, we investigated how perfectionism

predicted students' daily experiences, that is, how stressful students found the most bothersome

failure of the day, how they coped with this failure, and how satisfied they were at the end of the

day. In the second step, we investigated how students' perfectionism (Level 2) and use of coping

on that day (Level 1) predicted students' satisfaction at the end of the day (Level 1) by

simultaneously entering (a) the two perfectionism dimensions (Level 2), (b) coping (Level 1), and

(c) the interactions of the two perfectionism dimensions with coping (Level 2 × Level 1) in a

multilevel regression analyses.

   For the analyses we conducted in the first step, the simplified regression equation was Y

= B1 (perfectionistic strivings) + B2 (perfectionistic concerns). Each variable from the daily

reports (stressfulness; coping ; satisfaction) was used in turn as the dependent variable (Y).

Perfectionistic strivings and perfectionistic concerns were entered simultaneously to control for the overlap between the two dimensions of perfectionism. Consequently, B1 and B2 represent the unique effects that the two dimensions of perfectionism had on the daily experiences (see R. W. Hill et al., 2010). Table 1 shows the results.

For the analyses we conducted in the second step, the simplified regression equation was Satisfaction = B1 coping + B2 (perfectionistic strivings) + B3 (perfectionistic concerns) + B4 (perfectionistic strivings × coping) + B5 (perfectionistic concerns × coping). In this equation, a significant main effect of coping (B1) indicates that how satisfied participants are at the end of the day is affected by the use of this coping strategy when dealing with the daily failure. Significant main effects of perfectionistic strivings (B2) and perfectionistic concerns (B3) indicate that the two dimensions of perfectionism predict satisfaction at the end of the day. Finally, significant interaction effects of perfectionistic strivings × coping (B4) and perfectionistic concerns × coping (B5) indicate that perfectionistic strivings and perfectionistic concerns moderated the effect that the coping strategy had on satisfaction at the end of the day. (When interpreting these effects, note that the B1 to B5 values indicate unique effects: they represent the unique contribution each predictor made while taking the contribution of all other predictors, including the interactions, into account.) Table 2 shows the results.

All multilevel analyses were conducted with SAS 9.1 using the PROC MIXED module (see Singer, 1998, for an overview). Perfectionistic strivings and perfectionistic concerns were entered as centered variables using grand-mean centering (see Nezlek, 2001; Raudenbush & Bryk, 2002). Coping was left uncentered because coping was measured on scale with a meaningful natural zero point (0 = *I did not do this at all*; cf. Enders & Tofighi, 2007; see Raudenbush & Bryk, 2002, for a discussion of measures with natural zero points), and we wanted the slopes to represent how much using a particular coping strategy, relative to this absolute zero point, increased (or decreased) satisfaction at the end of day. Consequently, when analyzing the effects

of the coping strategies (Table 2), we included only students who had used the respective coping strategy at least once in the 3-14 days (see Table 2, Users).[3]

Results

Following our analytic strategy, we first investigated how the two dimensions of perfectionism predicted the experiences in the students' daily reports (see Table 1). While perfectionism did not explain any variance in stressfulness (the day's most bothersome failures were equally stressful for all students, irrespective of their levels of perfectionistic strivings and concerns), the findings regarding coping and satisfaction were in line with previous findings. Perfectionistic concerns predicted less frequent use of active coping and acceptance coping, and more frequent use of self-blame coping. Moreover, perfectionistic concerns predicted lower satisfaction at the end of the day. In contrast, perfectionistic strivings predicted less frequent use of self-blame coping and higher satisfaction at the end of the day.

Next, we investigated our hypothesis that satisfaction at the end of day is a function of coping with the day's most bothersome failure, the two perfectionism dimensions, and the interaction between coping and the two perfectionism dimensions (Table 2). Regarding the coping strategies, using social support (both emotional and instrumental support), denial, venting, behavioral disengagement, and self-blame coping had negative effects on satisfaction at the end of the day: the more students used these coping strategies in dealing with the day's most bothersome failure, the less satisfied they felt at the end of the day. In contrast, positive reframing (i.e., the Brief COPE strategy which corresponds to positive reinterpretation in the full COPE), acceptance, and humor coping had positive effects on satisfaction: the more students used these coping strategies in dealing with failures, the more satisfied they felt at the end of the day.

However, the positive effect of positive reframing coping on satisfaction was qualified by an interaction with perfectionistic concerns, indicating that perfectionistic concerns moderated the effect of positive reframing coping on students' satisfaction at the end of the day. To examine

the nature of this effect, we plotted an interaction graph (see Figure 1) with satisfaction at the end of the day as a function of the use of positive reframing coping for students high in perfectionistic concerns (+1 SD above the mean, labeled "High PC") and students low in perfectionistic concerns (–1 SD below the mean, labeled "Low PC"). We tested the regression slopes for significance following the procedures provided by Preacher, Curran, and Bauer (2006). Results showed that, while the slope of positive reframing coping was significantly different from zero for all students, it was steeper for students high in perfectionistic concerns ($B = 0.32$, $t[1775] = 4.98$, $p < .001$) than for students low in perfectionistic concerns ($B = 0.13$, $t[1775] = 2.10$, $p < .05$). Thus, replicating Dunkley et al.'s (2003) finding, positive reframing coping was particularly helpful for students high in perfectionistic concerns to achieve a higher satisfaction at the end of the day. The more these students used positive reframing to deal with the most bothersome failure of the day, the more satisfied they felt at the end of the day.

In addition, results showed a significant interaction of self-distraction coping and perfectionistic strivings (see again Table 2). When this interaction was plotted (see Figure 2) and the slopes examined for students high in perfectionistic strivings (+1 SD above the mean, labeled "High PS") and students low in perfectionistic strivings (–1 SD below the mean, labeled "Low PS"), results showed that the slope of self-distraction was significantly different from zero only for students high in perfectionistic strivings ($B = –0.13$, $t[1771] = –2.81$, $p < .01$), but not for students low in perfectionistic strivings ($B = 0.03$, $t[1771] = 0.54$, ns). Moreover, the slope for students high in perfectionistic strivings was negative. Thus, self-distraction was a counterproductive coping strategy for students high in perfectionistic strivings: the more these students used self-distraction to cope with the day's most bothersome failure, the less satisfied they felt at the end of the day.

Finally, we attempted replicating the effects Dunkley et al. (2003) found for problem-focused coping and avoidant coping. Note, however, that (a) the Brief COPE does not include all the coping strategies of the full COPE and (b) in the Brief COPE, each coping strategy is

measured with only two items instead of four (cf. Carver, 1997; Carver et al., 1989). Consequently, our analyses do not represent an exact replication of Dunkley et al.'s (2003) analyses. To measure problem-focused coping we combined active coping and planning, and to measure avoidant coping we combined denial and behavioral disengagement. Then we repeated the analyses reported in Tables 1 and 2 for the combined coping strategies. Results showed that neither dimension of perfectionism predicted the use of problem-focused coping (perfectionistic strivings: $B = 0.09$, $t[151] = 1.63$, ns; perfectionistic concerns: $B = -0.10$, $t[151] = 1.62$, ns), and only perfectionistic concerns predicted higher levels of avoidant coping ($B = 0.08$, $t[143] = 2.09$, $p < .05$), but not perfectionistic strivings ($B = -0.05$, $t[141] = 1.30$, ns). Moreover, avoidant coping had a significant negative effect on satisfaction at the end of the day ($B = -0.25$, $t[99] = 4.33$, $p < .001$), whereas problem-focused coping had no effect ($B = -0.01$, $t[128] = 0.19$, ns). Finally, neither dimension of perfectionism showed a significant interaction with problem-focused coping (coping × perfectionistic strivings : $B = -0.02$, $t[129] = 0.47$, ns; coping × perfectionistic concerns: $B = 0.08$, $t[124] = 1.60$, ns) or avoidant coping (coping × perfectionistic strivings: $B = 0.01$, $t[98] = 0.12$, ns; coping × perfectionistic concerns: $B = -0.01$, $t[80] = 0.19$, ns) in predicting satisfaction at the end of the day. Thus, Dunkley et al.'s finding that perfectionism moderated the effects of problem-focused coping and avoidant coping were not replicated regarding satisfaction at the end of the day.

Discussion

The present diary study investigated how perfectionism affects coping with daily failures and satisfaction at the end of the day. In this, two main dimensions of perfectionism were differentiated—perfectionistic strivings (comprising perfectionist standards and self-oriented perfectionism) and perfectionistic concerns (comprising perfectionist concern over mistakes, doubts about action, and socially prescribed perfectionism)—and their overlap controlled for to investigate their specific effects (Stoeber & Otto, 2006). When daily reports were analyzed with multilevel regression analyses, results showed that perfectionistic strivings predicted less frequent

use of self-blame coping and higher satisfaction at the end of the day. In contrast, perfectionistic concerns predicted less frequent use of active coping and acceptance coping, more frequent use of self-blame coping, and lower satisfaction. Further results showed that that avoidant and emotion-focused coping strategies (denial, behavioral disengagement, venting, self-blame) predicted lower satisfaction at the end of the day, as did social support strategies (using emotional support, using instrumental support) which corroborates previous research showing that social support is not always helpful, but may have negative effects (e.g., Bolger & Amarel, 2007; Buunk & Hoorens, 1992; Carver & Scheier, 1994). Moreover, self-distraction had a negative effect on satisfaction, however, only for students high in perfectionistic strivings: the more these students used self-distraction coping in dealing with the most bothersome failure of the day, the less satisfied they felt at the end of the day.

Three coping strategies predicted higher satisfaction at the end of the day: positive reframing, acceptance, and humor. The effect of positive reframing, however, was qualified by an interaction with perfectionistic concerns. Replicating and expanding on Dunkley et al.'s (2003) findings that positive reinterpretation coping was particularly helpful for people high in perfectionistic concerns predicting higher increased affect, the present study found that positive reframing coping was particularly helpful for students high in perfectionistic concerns predicting increased satisfaction: the more students high in perfectionistic concerns used positive reframing coping to deal with the day's most bothersome failure, the more satisfied they felt at the end of the day. What is more, at high levels of positive reframing coping, their degree of satisfaction reached the same level as those of students low in perfectionistic concerns.

The present findings have important implications for research on perfectionism as they provide further evidence that is important to differentiate between two dimensions, perfectionistic strivings and perfectionistic concerns, when regarding individual differences in perfectionism (Frost et al., 1993; Stoeber & Otto, 2006). Moreover, while the present findings did not replicate all findings of Dunkley et al. (2003), they corroborate previous studies that found

differential relationships of the two dimensions with coping and subjective well-being (e.g., Dunkley et al., 2003; Dunn et al., 2006; Rice & Lapsley, 2001; Stoeber & Rennert, 2008).

Previous research has established that only perfectionistic concerns show positive relationships with negative processes and outcomes (and negative relationships with positive processes and outcomes). In contrast, perfectionistic strivings show positive relationships with positive processes and outcomes (and negative relationships with negative processes and outcomes), particularly when the overlap with perfectionistic concerns is controlled for (R. W. Hill et al., 2010; Stoeber & Otto, 2006). The present findings demonstrate that this pattern also holds for coping with daily failures and satisfaction at the end of the day. Regarding satisfaction at the end of the day, we found that perfectionistic concerns predicted lower satisfaction at the end of the day. In contrast, perfectionistic strivings predicted higher satisfaction, thus dovetailing with findings from previous studies that showed perfectionistic strivings and its facets to be positively related to satisfaction with life (e.g., Chang et al., 2004; Gilman et al., 2005). Whereas researchers in clinical psychology often adhere to the view that perfectionism is characterized by an inability to experience satisfaction (see Besser et al., 2004, for a review), the present findings indicate that this characterization is valid only for the concerns dimension of perfectionism, but not for the strivings dimension. In addition, perfectionistic concerns predicted less frequent use of active coping and acceptance coping, which are problem-focused coping strategies that are considered adaptive (active coping, when the stressor is controllable; acceptance, when it is not; Lazarus & Folkman, 1984), and more frequent use of self-blame coping which is a coping strategy that is clearly maladaptive (e.g., Dunkley et al., 2003). In contrast, perfectionistic strivings predicted less frequent use of self-blame, which provides further evidence for the different, often opposite relationships of perfectionistic strivings and perfectionistic concerns summarized by Stoeber and Otto (2006).

Furthermore, the present finding that positive reframing was particularly helpful for students high in perfectionistic concerns has important implications for counseling psychology

because it suggests that even people high in perfectionistic concerns, who have a tendency to be dissatisfied no matter what they achieve (Stoeber & Yang, 2010), are able to experience high levels of satisfaction if they use positive reframing coping when dealing with perceived failures. Therefore, when advising people high in perfectionistic concerns how to cope with the negative aspects of perfectionism (e.g., Antony & Swinson, 1998; Pleva & Wade, 2007), a helpful recommendation would be to try to find positive aspects in the outcomes they regard as "failures," and reframe the outcomes in a more positive way, for example, by focusing on what has been achieved, rather than on what has not been achieved.

In comparison, it is less clear what to make of the interaction effect of self-distraction and perfectionistic strivings and the finding that self-distraction coping was counterproductive for students high in perfectionistic strivings leading to decreased satisfaction. It suggests that, for people high in perfectionistic strivings, coping with personal failures by means of self-distraction (trying to think less about the stressor, for example, by turning to work or other activities such as watching TV, reading, shopping) has negative effects on their subjective well-being. Why this is the case, we can only speculate. One possibility is that people high in perfectionistic strivings have difficulties disengaging from unattainable goals (O'Connor & Forgan, 2007) and consequently, when trying not to think about the day's most bothersome failure, are less successful in achieving self-distraction. However, because the interaction effect was unexpected, the finding needs to be replicated before further conclusions can be drawn.

Finally, the present findings have important implications for coping research because they demonstrate that coping does have effects when positive outcomes are regarded and advanced methods and designs are used to investigate coping.[4] In a spirited debate published in the *American Psychologist*, Coyne and Racioppo (2000) lamented the lack of progress in explaining the psychological mechanisms through which people manage stress effectively. Moreover, it was lamented that coping research offered very little to clinicians and clinical researchers (Coyne & Racioppo, 2000; Somerfield & McCrae, 2000). One reason put forward for the alleged lack of

progress in coping research was the limitations of coping assessment techniques. In particular, Tennen et al. (2000) argued that coping investigators have relied too heavily on between-persons designs and analyses. They contended that the study of day-to-day coping using within-persons designs and analyses would provide a better approach to examine how coping works. In addition, Folkman and Moskowitz (2000) argued that coping investigators have focused too much on negative outcomes, and that the lack of progress may partly be attributed to the lack of attention given to the role of positive outcomes in the coping process.

The present findings have direct bearings on this debate as they show that, when investigating day-to-day coping using a within-persons design focusing on positive outcomes, coping helps people manage stress effectively. In particular, the present findings indicate that positive reframing, acceptance, and humor are coping strategies that help people deal with personal failures: the more students used these coping strategies in dealing with the day's most bothersome failure, the better they felt at the end of the day. It is noteworthy that all three coping strategies can be considered accommodative or secondary-control coping strategies (see Carver et al., 1989; Morling & Evered, 2006; Skinner, Edge, Altman, & Sherwood, 2003) because they represent attempts to adapt or adjust to the stressor, compared to attempts to control the stressor itself as do primary-control coping strategies (e.g., active coping). With this, the present findings indicate that, when dealing with personal failures, accommodative or secondary-control coping strategies that help people to flexibly adjust themselves to the existing realities have positive effects on people's well-being—which should be of interest not only to personality and counseling psychology, but also to clinicians and clinical researchers.

The present study, however, has a number of limitations. First, the study cannot make strong claims about the causal direction of effects. While the diary method provided for a more direct measure of the constructs of interest than is possible with traditional methods (Bolger et al., 2003), all daily reports were completed at the end of the day asking participants how they coped with the most bothersome failure of the day and how satisfied they were when reflecting

back on their day. It is possible that how satisfied participants felt at the end of the day influenced how they remembered their coping with the failure. Consequently, to obtain data that would make a better case for causal relationships, future studies may profit from momentary assessment methods such as portable devices to repeatedly assess coping and satisfaction during the day using, for example, hand-held computers (e.g., Schwartz, Neale, Marco, Shiffman, & Stone, 1999) or mobile phones (e.g., Reid et al., 2009). Second, our study focused on daily failures (termed "nonachievements") instead of major failures following the tradition of stress research which found that "daily hassles" often have a greater impact on people's stress levels than major life events (e.g., DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982; Kanner, Coyne, Schaefer, & Lazarus, 1981). Future studies may want to examine how perfectionism affects daily coping with major life events (e.g., loss of a loved one) and major personal failures (e.g., failing an important university exam) that may require coping efforts over several days, weeks, or months, to further expand our knowledge of how perfectionism influences coping and subjective well-being. Third, the present findings may be restricted to coping with daily failures and how coping influences satisfaction at the end of the day. Future studies need to investigate whether positive reframing helps people (and particularly people high in perfectionistic concerns) to achieve not only short-term increases in satisfaction with the day, but also long-term increases in satisfaction with life which is a key indicator of subjective well-being (Diener et al., 1999).

Despite these limitations, the present findings contribute to our understanding of perfectionism because they provide further evidence on the dual nature of perfectionism demonstrating that perfectionism has a positive and a negative side. The positive side of perfectionism (represented by perfectionistic strivings) is mostly unproblematic. In fact, it may form part of a healthy striving for excellence (Shafran, Cooper, & Fairburn, 2002) and is often associated with positive characteristics, processes, and outcomes and higher levels of subjective well-being. The negative side of perfectionism (represented by perfectionistic concerns) is highly problematic and is consistently associated with negative characteristics, processes, and outcomes

and with lower levels of subjective well-being. However, as the present study and Dunkley et al.'s (2003) findings shows, it is possible for people to overcome the negativity associated with perfectionistic concerns and achieve increased subjective well-being when dealing with stressful events, by using positive reframing coping.

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Footnotes

[1]With a Mardia's coefficient of 2.15, the data showed only minor deviations from multivariate normality. Moreover, when we estimated model fit using bootstrapping (see Byrne, 2010), the results were virtually identical confirming that the two-factor model showed a very good fit (Bollen-Stine bootstrap $p = .27$) compared to the one-factor model (Bollen-Stine bootstrap $p < .001$).

[2]In the call for participants and all other materials that went out to participants (informed consent, questionnaires, daily reports, debriefing) we avoided using the term "failure" and instead used the term "nonachievement" which was explained to participants as "something that you set out to do, but failed to achieve." The reason for this was twofold: First, a diary study requires that all participants experience the target event every day at least once, but not all participants could be expected to experience failures—or something they would call "failure"—every day. However, all participants could be expected to experience some nonachievements every day. These nonachievements, however, may not be represented as failures, particularly when they concern minor things (e.g., not calling someone as promised, not making it to a meeting in time). Second, "nonachievement" does not have such a strong negative connotation as "failure." Therefore, using the term "nonachievement" should help avert potential participant defensiveness so that participants could be expected to report on daily failures more readily and more openly when they were framed as "nonachievements" rather than "failures."

[3]To investigate the possibility that time trends in the Level 1 data influenced the results, we additionally ran all analyses including a linear time trend. The results were quasi-identical to those without the time trend.

[4]We are indebted to an anonymous reviewer for making this point and directing us to the relevant literature.

Table 1

Daily Reports of Stressfulness, Coping, and Satisfaction at the End of the Day: Descriptive Statistics and Effects of Perfectionism

DV	M	SD	Perfectionism	
			Strivings	Concerns
Stressfulness	1.72	0.66	0.00	0.00
Coping strategy				
Active coping	1.28	0.59	0.09	–0.14*
Planning	1.21	0.58	0.09	–0.06
Positive reframing	1.08	0.65	0.03	–0.14
Acceptance	1.65	0.61	0.07	–0.14*
Humor	0.61	0.59	–0.10	0.04
Religion	0.18	0.44	0.12	–0.14
Using emotional support	0.65	0.55	-0.02	–0.01
Using instrumental support	0.66	0.53	–0.02	–0.01
Self-distraction	1.32	0.58	–0.06	0.10
Denial	0.26	0.33	–0.05	0.09
Venting	0.72	0.56	–0.07	0.09
Substance use	0.24	0.41	–0.11	0.12
Behavioral disengagement	0.52	0.46	–0.07	0.09
Self-blame	1.22	0.64	–0.17*	0.27***
Satisfaction	2.15	0.63	0.14*	–0.26***

Note. Analyses are based on 738-1784 diary entries from 60-149 participants as only participants who used the strategy at least once in the 3-14 days of the study were included in the calculations (see Method, Analytic Strategy and Table 2 for details). Perfectionism: Strivings = perfectionistic strivings, Concerns = perfectionistic concerns. DV = dependent variable. Stressfulness = stressfulness of the failure (answer scale from 0 [*not at all*] to 4 [*extremely*]). Coping dimension = coping with the failure (answer scale from 0 [*I did not do this at all*] to 3 [*I did this a lot*]). Satisfaction = satisfaction at the end of the day (answer scale from 0 [*very little or not at all*] to 4 [*very much*]). Note that M and SD are the means and standard deviations of the mean daily scores aggregated over the 3-14 days. The regression coefficients are unstandardized regression coefficients from the multilevel regression analyses (see Method for details; further details such as the models' variance components can be obtained from the first author upon request).

*p < .05. ***p < .001.

Table 2

Effects of Coping , Perfectionism, and Coping × Perfectionism on Satisfaction at the End of the Day

DV = Satisfaction	Users			Perfectionism		Coping × perfectionism	
Strategy	n	%	Coping	Strivings	Concerns	Coping × strivings	Coping × concerns
Active coping	149	100	0.04	0.15	–0.34***	–0.01	0.06
Planning	148	99.3	–0.05	0.19*	–0.36***	–0.03	0.08
Positive reframing	148	99.3	0.22***	0.09	–0.34***	0.03	0.12*
Acceptance	148	99.3	0.10*	0.08	–0.27*	0.02	0.02
Humor	134	89.9	0.08*	0.19*	–0.24**	–0.03	–0.03
Religion	60	40.3	–0.12	0.14	–0.27*	0.00	0.13
Using emotional support	139	93.3	–0.14***	0.17*	–0.29***	–0.03	0.05
Using instrumental support	140	94.0	–0.14***	0.15*	–0.32***	–0.01	0.08
Self-distraction	148	99.3	–0.05	0.26**	–0.33**	–0.09*	0.06
Denial	101	67.8	–0.23***	0.10	–0.22*	0.03	0.01
Venting	141	94.6	–0.20***	0.11	–0.21**	0.02	–0.03
Substance use	86	57.7	–0.09	0.24**	–0.22*	–0.02	–0.06
Behavioral disengagement	140	94.0	–0.14***	0.14	–0.23**	–0.01	0.00
Self-blame	148	99.3	–0.22***	0.05	–0.25**	0.04	0.04

[Table 2, continued]

Note. Analyses are based on 738-1784 diary entries from 60-149 participants (see Users) as only participants who used the strategy at least once in the 3-14 days of the study were included in the calculations (see Method, Analytic Strategy for details). Users = number (*n*) and percentage (%) of participants who used the coping strategy at least once in the 3-14 days. Perfectionism: Strivings = perfectionistic strivings, Concerns = perfectionistic concerns. DV = dependent variable; Satisfaction = satisfaction at the end of the day. Strategy = coping strategy used in the analysis of coping, perfectionism, and coping × perfectionism. The regression coefficients are unstandardized regression coefficients from the multilevel analyses (see Method, Analytic Strategy for details; further details such as the models' variance components can be obtained from the first author upon request).
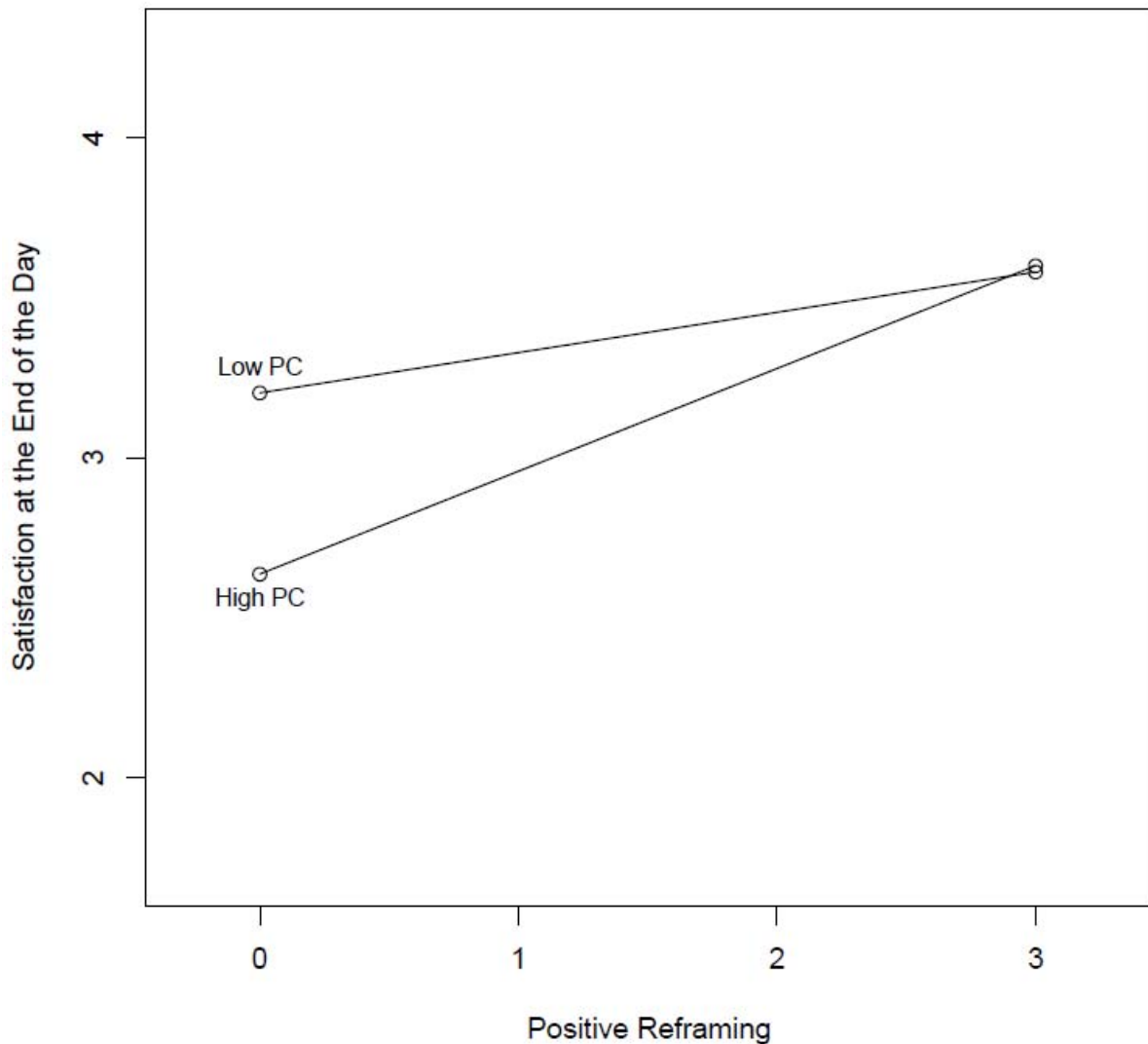*p < .05. **p < .01. ***p < .001.

Figure 1. Interaction plot for the effect of positive reframing × perfectionistic concerns on

satisfaction at the end of the day. High PC = high levels of perfectionistic concerns (+1 *SD*),

Low PC = low levels of perfectionistic concerns (–1 *SD*). Positive reframing: 0 =*I did not do*

this at all, 1 = *I did this a little*, 2 = *I did this a medium amount*, 3 = *I did this a lot*. Satisfaction at the

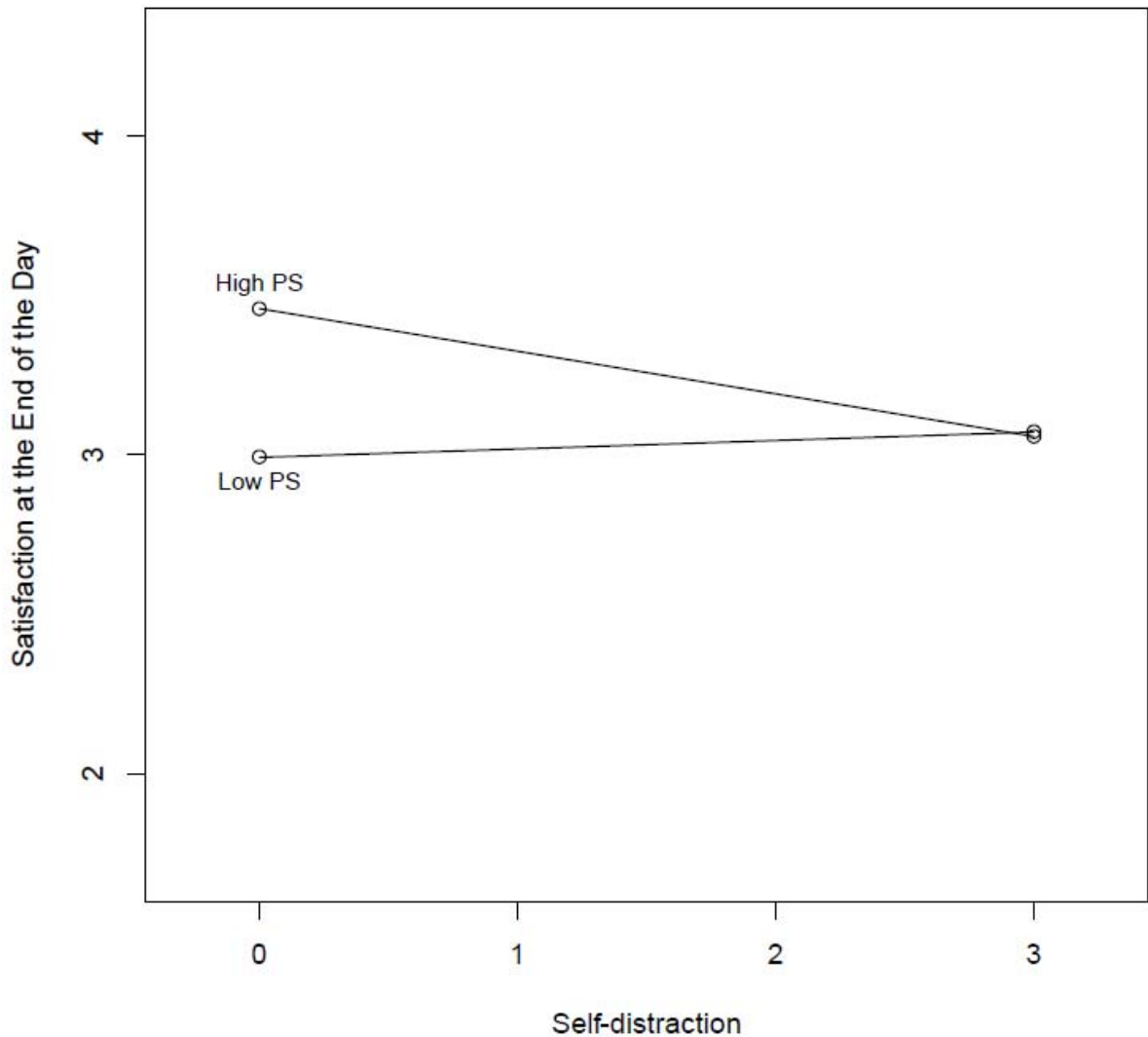end of the day: 2 = *moderately*, 3 = *quite a bit*, 4 = *very much*.

Figure 2. Interaction plot for the effect of self-distraction × perfectionistic strivings on satisfaction at the end of the day. High PS = high levels of perfectionistic strivings (+1 *SD*), Low PS = low levels of perfectionistic strivings (–1 *SD*). Self-distraction: 0 =*I did not do this at all*, 1 = *I did this a little*, 2 = *I did this a medium amount*, 3 = *I did this a lot*. Satisfaction at the end of the day: 2 = *moderately*, 3 = *quite a bit*, 4 = *very much*.