Do You Want Me To Be Perfect?

Two Longitudinal Studies on Socially Prescribed Perfectionism,

Stress and Burnout in the Workplace

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Abstract

Stress and burnout in the workplace have a negative impact on organizations and customers and are estimated to cost the economy billions every year. To help identify employees at high risk, it is important to know what individual differences contribute to stress and burnout. Two longitudinal studies were conducted to examine whether individual differences in socially prescribed perfectionism (individuals' perceptions that others impose perfectionistic standards onto them) contribute to employees' role stress and predict increases in burnout symptoms (exhaustion, cynicism, and inefficacy). Study 1 investigated 69 employees working in healthcare service provision over a 6-month interval, and Study 2 investigated 195 school teachers over a 3-month interval. In both studies, socially prescribed perfectionism predicted longitudinal increases in role stress and inefficacy. Moreover, in Study 2, socially prescribed perfectionism also predicted longitudinal increases in exhaustion and cynicism. The findings indicate that individual differences in socially prescribed perfectionism may be a contributing factor to stress and burnout in the workplace.

Keywords: perfectionism; stress; burnout; employees; teachers; longitudinal

Introduction

Stress is a significant occupational hazard that can impair employees' physical health, psychological wellbeing, and performance (e.g., Griffin & Clarke, 2011). Alongside depression and anxiety, stress is one of the leading causes of employee absenteeism. In the United Kingdom for example, stress is estimated to cause over 11 million lost working days, costing society £3.7 (US $5.8) billion (Health and Safety Executive, 1999, 2010). In the National Health Service (NHS) alone, the largest employer in Europe, stress is estimated to account for over 30% of sickness absence, costing taxpayers £300-400 (US $470-630) million (NHS Employers, 2010; NHS Jobs, 2009). Moreover, in the education sector, stress alongside depression and anxiety is the leading cause of employee absenteeism, and school teachers have been shown to experience particularly high levels of stress on the job (Health and Safety Executive, 2000).

Role stress is one of the most widely researched forms of job stress (e.g., Jackson & Schuler, 1985). Role stress has two main aspects: role conflict and role ambiguity (Katz & Kahn, 1978; Rizzo, House, & Lirtzman, 1970). Role conflict occurs when employees are required to perform two or more incompatible behaviors, and role ambiguity occurs when employees are unclear as to what behaviors they are required to perform (Katz & Kahn, 1978). Role conflict and role ambiguity have been shown to be associated with higher levels of burnout and to predict increases in burnout over time (e.g., Lee & Ashforth, 1993; Örtqvist & Wincent, 2010; Peiró, González-Romá, Tordera, & Mañas, 2001; also see Cordes & Dougherty, 1993; Lee & Ashforth, 1996; Örtqvist & Wincent, 2006). Role conflict and role ambiguity also represent job demands in the job demands-resources model of job stress and employee burnout (Bakker, Demerouti, de Boer, & Schaufeli, 2003; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001).

Burnout is a psychological syndrome characterized by exhaustion, cynicism, and inefficacy (Schaufeli, Leiter, Maslach, & Jackson, 1996). Exhaustion refers to a depletion of

one's emotional resources; cynicism to a negative, detached, and depersonalized attitude towards one's work; and inefficacy to feeling incompetent at work and unable to solve problems that arise in one's work (Schaufeli et al., 1996; Schaufeli, Salanova, González-Romá, & Bakker, 2002). Although initially applied only to human service workers, burnout is now one of the most widely researched consequences of chronic and severe stress in employees from a range of different professions as well as students (e.g., Cooper, Dewe, & O'Driscoll 2001; Schaufeli, Martínez, Pinto, Salanova, & Bakker, 2002).

Burnout has a negative impact on employees, organizations, and customers. Burnout has been associated with higher levels of physical ill-health, negative perceptions of job characteristics, working excessively and compulsively, absenteeism, turnover, insomnia, depression, alcohol and drug abuse, negative affect, and marital and family problems, and with lower levels of work morale, quality of patient care, and positive affect (Hakanen, Schaufeli, & Ahola, 2008; Maudgalya, Wallace, Daraiseh, & Salem, 2006; Schaufeli, Bakker, van der Heijden, & Prins, 2009; Thoresen, Kaplan, Barsky, Warren, & de Chermont, 2003; see Schaufeli et al., 1996 for an overview). In terms of performance, the component exhaustion has been consistently associated with lower levels of objective ratings of in-role job performance, organizational citizenship behavior, and customer satisfaction (see Taris, 2006, for a review). In the education sector, school teachers are among those professionals with the highest levels of burnout on the job, and many teachers retire early because they feel burnt out (e.g., Cano-García, Padilla-Muñoz, & Carrasco-Ortiz, 2005; Enzmann & Kleiber, 1989; Farber, 1991; Hakanen, Bakker, & Schaufeli, 2006; Tang, Au, Schwarzer, & Schmitz, 2001).

Perfectionism, stress, and burnout

Research has shown that, in addition to contextual factors such as job demands and job resources (Demerouti et al., 2001), personality characteristics play an important role in employee

stress and burnout and may help predict who is at risk for developing stress and burnout in the workplace (e.g., Bakker, Van der Zee, Lewig, & Dollard, 2006; Cano-García et al., 2005).

One personality characteristic that has been closely associated with individual differences in stress and burnout is perfectionism. Perfectionism is characterized by striving for flawlessness, setting exceedingly high standards for performance, and overly critical evaluations of one's behavior (Flett & Hewitt, 2002; Frost, Marten, Lahart, & Rosenblate, 1990). Perfectionism is a common personality characteristic that can affect all domains of life but is most prevalent in the domain of work with between 53-58% of people reporting that they are perfectionistic at work (Stoeber & Stoeber, 2009; see also Slaney & Ashby, 1996). Perfectionism has been shown to explain variance in work-related outcomes above and beyond higher order personality traits (Clark, Lelchook, & Taylor, 2010). Moreover, perfectionism can be expected to be associated with role stress because role conflict involves perceived discrepancies between performance and expectations and because role ambiguity involves unclear performance standards, both of which are central to perfectionism (Hewitt & Flett, 1991; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Rizzo et al., 1970; Shafran, Cooper, & Fairburn, 2002).

One of the most widely researched models of perfectionism is Hewitt and Flett's (1991) which differentiates between two main forms of perfectionism: socially prescribed perfectionism and self-oriented perfectionism. Socially prescribed perfectionism comprises externally motivated beliefs that excessively high standards are expected by others and that acceptance by others is conditional on fulfilling these standards, and it is characterized by individuals' perceptions that others impose perfectionistic standards onto them. In contrast, self-oriented perfectionism comprises internally motivated beliefs that striving for perfection and being perfect are important, and it is characterized by having a "perfectionistic motivation" for oneself (Enns & Cox, 2002; Hewitt & Flett, 1991, 2004; Stoeber, Feast, & Hayward, 2009).

The present research focuses on socially prescribed perfectionism because socially prescribed perfectionism has been associated with higher levels of professional distress, intolerance of ambiguity, job dissatisfaction, and emotional, bio-behavioral, and physiological manifestations of stress whereas self-oriented perfectionism only showed associations with professional distress and intolerance of ambiguity (Flett, Hewitt, & Hallett, 1995; Wittenberg & Norcross, 2001). Also, in athletes, socially prescribed perfectionism has been associated with higher levels of burnout whereas self-oriented perfectionism was associated with lower levels (Appleton, Hall, & Hill, 2009; Hill & Appleton, 2011; Hill, Hall, Appleton, & Kozub, 2008; Hill, Hall, Appleton, & Murray, 2010). Three studies have examined the two forms of perfectionism and burnout in samples of employees from a range of occupations, and in these studies socially prescribed perfectionism was consistently associated with higher levels of burnout (Childs & Stoeber, 2010; Mitchelson & Burns, 1998; van Yperen, Verbraak, & Spoor, 2011). Only in one study (Childs & Stoeber, 2010) was self-oriented perfectionism associated with lower levels of two components of burnout: cynicism and inefficacy. In sum, whereas socially prescribed perfectionism has been consistently positively associated with stress and burnout in samples of employees and athletes, self-oriented perfectionism has shown a mix of positive, negative, and non-significant associations.

In addition to stress and burnout, socially prescribed perfectionism has also been shown to be consistently associated with a variety of indicators of psychological maladjustment such as anticipation of future hassles and negative social interactions, depression, various forms of anxiety, suicide ideation and suicide attempts, harsh self-criticism, exercise dependence and disordered eating, and martial maladjustment (Frost & DiBartolo, 2002; Goldner, Cockell, & Srikameswaran, 2002; Hall, Hill, Appleton, & Kozub, 2009; Haring, Hewitt, & Flett, 2003;

Hewitt & Flett, 1991, 2002; Hewitt, Flett, & Weber, 1994; Nepon, Flett, Hewitt, & Molnar, 2011; O'Connor, 2007; Stoeber et al., 2009; Tissot & Crowther, 2008).

Socially prescribed perfectionism is closely associated with maladjustment because socially prescribed perfectionists do not strive to attain their personal perfectionistic standards, but the perfectionistic standards they believe others—such as managers, coworkers, customers, and students and their parents—impose on them. Socially prescribed perfectionism should be associated particularly with role stress since a role includes expectations from others, and both socially prescribed perfectionism and role stress are underpinned by social expectations (Kahn et al., 1964; Hewitt & Flett, 1991; Rizzo et al., 1970). For socially prescribed perfectionists, standards are not only excessively high but also integral to self-identity and self-worth since these perfectionists believe that acceptance and approval are conditional upon attaining others' standards (Hill, Hall, & Appleton, 2011). Hence, socially prescribed perfectionists face a paradox as they do not believe they can live up to others' high standards even though doing so is the very cornerstone of their self-worth (Hall, 2006; Hewitt & Flett, 1993). Correspondingly, socially prescribed perfectionism has been shown to be associated with beliefs that failure is associated with negative interpersonal consequences (Conroy, Kaye, & Fifer, 2007).

When socially prescribed perfectionists first experience role stress, they may engage in increased achievement striving to compensate for the threat to self-worth (e.g., Hall, 2006; Hall, Hill, & Appleton, 2012; Hewitt & Flett, 1991, 1993, 2002; Shafran et al., 2002; Shafran, Egan, & Wade, 2010). However, increased achievement striving may be maladaptive in the long-term as it might deplete resources suggesting that socially prescribed perfectionists may experience increased role stress when they encounter subsequent role stressors. Role stressors may also signal negative interpersonal consequences to socially prescribed perfectionists as they believe that others will reject them. Hence, these perfectionists should experience not only high levels of

role stress in response to role stressors but also high levels of strain (e.g., burnout) because of reduced self-worth and debilitating self-criticism.

The present research

So far, however, no study has employed longitudinal designs investigating if socially prescribed perfectionism is a contributing factor to the development and maintenance of stress and burnout in the workplace. All studies so far have investigated perfectionism, stress, and burnout using cross-sectional designs that only provide information on the co-occurrence of socially prescribed perfectionism, stress, and burnout, but no information on whether socially prescribed perfectionism predicts *increases* in stress and burnout. This is a general limitation of studies investigating personality and burnout because the majority only employ cross-sectional correlational designs (see, e.g., the meta-analysis by Alarcon, Eschleman, & Bowling, 2009) which do not provide any indication of possible causal pathways between personality, stress, and burnout compared to studies using longitudinal correlational designs (see also Taris, 2000).

The aim of the present research was therefore to investigate whether socially prescribed perfectionism is associated with increases in role stress and burnout in the workplace over time. To this end, two studies were conducted. Study 1 investigated employees working in healthcare service provision and used a longitudinal design with two measurement points six months apart. Study 2 investigated teachers and used a longitudinal design with two measurement points three months apart. In both studies, we expected socially prescribed perfectionism to predict longitudinal increases in role stress and burnout.

Study 1

Method

Participants

A sample of 116 administrative and managerial employees was recruited from the local

NHS Primary Care Trust. Of these, 59% returned data for both measurement points that did not

show multivariate outliers (see Preliminary analyses). Hence, the final sample used in our

longitudinal analyses comprised $N = 69$ employees (14 male, 55 female). Mean age of employees

was 41.0 years ($SD = 11.4$; range = 19-61 years). Mean time employees had worked in full-time

employment was 18.3 years ($SD = 12.2$; range = 0.2-48.0 years) and mean time employees had

been in their current job was 2.6 years ($SD = 4.5$; range = 0.1-28.0 years). Employees' job types

were administrative assistant (7%), administrator (13%), senior administrator (16%), team

coordinator (16%), team leader (5%), middle management (19%), and senior management

(24%). Employees' highest level of completed education was middle school (8%), high school

(10%), further education (16%), and university degree (66%).

Procedure and design

Employees were recruited via the staff's electronic newsletter and intranet site. Both

informed consent form and questionnaire were presented on the organization's secure online

questionnaire management system (OQMS). The study employed a longitudinal correlational

design with two measurement points: Time 1 (T1) and Time 2 (T2). Employees were asked to

complete the T1 questionnaire in August 2009 and the T2 questionnaire six months later (T2).

The study was approved by the relevant ethics committees and followed the British

Psychological Society's (2009) code of ethics and conduct.

Measures

To measure socially prescribed perfectionism, we used the respective 15-item scale (e.g.,

"People expect nothing less than perfection from me") from the Multidimensional Perfectionism

Scale (MPS; Hewitt & Flett, 1991, 2004). In addition, we included the 15-item scale capturing

self-oriented perfectionism (e.g., "I demand nothing less than perfection for myself") to examine

if self-oriented perfectionism had any effects on role stress and burnout over and beyond socially prescribed perfectionism. To capture perfectionism at work, employees were asked to respond to the items regarding their work. Although there are questions regarding the factorial validity of the MPS scales (Cox, Enns, & Clara, 2002), both scales have demonstrated reliability and validity in numerous studies (see Hewitt & Flett, 2004 for a comprehensive review). Because of constraints in the organization's OQMS, we could not implement the MPS's original 7-point answer scale. Instead, employees responded to the items on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

To measure role stress, we used the 14-item Role Stress Scale (RSS; Rizzo et al., 1970). Following previous research (e.g., Dale & Fox, 2008; Thomas & Lankau, 2009) we measured total role stress combining role conflict (8 items; e.g., "I receive incompatible requests from two or more people") and role ambiguity items (6 items; e.g., "Clear, planned goals and objectives exist for my job," reverse-coded). The RSS is a widely used measure of work stress and has demonstrated reliability and validity in numerous studies (e.g., Dale & Fox, 2008; Thomas & Lankau, 2009). Employees responded to the items on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

To measure burnout, we used the 16-item Maslach Burnout Inventory-General Survey (MBI-GS; Schaufeli et al., 1996) capturing exhaustion (5 items; e.g., "I feel emotionally drained from my work"), cynicism (5 items; e.g., "I doubt the significance of my work"), and inefficacy (6 items; e.g., "I can effectively solve the problems that arise in my work," reverse-coded). The MBI-GS is a widely used measure of burnout across occupational groups and has demonstrated reliability and validity in numerous studies (see Schaufeli et al., 1996, for a review). Employees responded to the items on a scale from 1 (*never*) to 5 (*always*).

Preliminary analyses

For all measures, mean scores were computed by averaging responses across items (see Table 1). All scores showed Cronbach's alphas above the .70 recommended for research purposes (Nunnally, 1978), except T2 inefficacy (alpha = .68). To examine possible differences between employees who completed both questionnaires (T1 and T2) and employees who only completed the T1 questionnaire, we computed a MANOVA with T2 completion (completer vs. non-completer) as between-participants factor and the six T1 variables (socially prescribed perfectionism, self-oriented perfectionism, role stress, exhaustion, cynicism, inefficacy) as dependent variables. The test was nonsignificant with $F(6, 109) = 1.54$, *ns* indicating that employees who completed both questionnaires were not significantly different from employees who completed only T1. Because the study focused on longitudinal effects, the employees who only completed T1 were excluded from all further analyses. Next, as recommended by Tabachnick and Fidell (2007), data were screened for multivariate outliers regarding the 10 variables included in the longitudinal analyses (T1 socially prescribed and self-oriented perfectionism; T1 and T2 role stress, exhaustion, cynicism, and inefficacy). One employee showed a Mahalanobis distance larger than $\chi^2(10) = 29.59$, $p < .001$ and was excluded from all further analyses. Finally, we examined the data for possible gender differences by computing a Box's *M* test (see Tabachnick & Fidell, 2007). The test was nonsignificant, Box's $M = 90.41$, $F(55,1861) = 1.14$, *ns*. Therefore data were collapsed across gender.

Analytic strategy

To examine the relationships between perfectionism, stress, and burnout we computed two sets of analyses. First, we computed bivariate correlations between all variables. Second, we computed hierarchical regression analyses to examine whether perfectionism was associated with increases in role stress and burnout symptoms over time. For each outcome variable at T2 (role stress, exhaustion, cynicism, inefficacy) one model was tested, comprised of three steps (cf.

Taris, 2000). In Step 1, we entered the outcome variable at T1 to control for baseline effects. In Step 2, to test our hypotheses, we entered T1 socially prescribed perfectionism to examine whether it would predict residual changes in the outcome variable from T1 to T2. In Step 3, to explore if self-oriented perfectionism had any additional effects, we entered T1 self-oriented perfectionism.

Results

Bivariate correlations

Table 1 shows the bivariate correlations. In line with previous cross-sectional findings, socially prescribed perfectionism showed positive correlations with role stress, exhaustion, and cynicism at T1, and with role stress, exhaustion, cynicism, and inefficacy at T2. Self-oriented perfectionism showed a positive correlation with socially prescribed perfectionism at T1 and a negative correlation with inefficacy at T1.

[Insert Table 1 about here]

Regression analyses

Table 2 shows the results of the regression analyses. As expected, socially prescribed perfectionism was associated with increased role stress over time. Employees high in socially prescribed perfectionism not only showed higher levels of role stress at T1 compared to employees low in socially prescribed perfectionism, but their level of role stress further increased over the six-month period. Moreover, socially prescribed perfectionism was associated with increased burnout over time. However, this effect was significant only for one burnout symptom: inefficacy. Although employees high in socially prescribed perfectionism did not show higher levels of inefficacy at T1 compared to employees low in socially prescribed perfectionism, their level of inefficacy increased over the six month period. Self-oriented perfectionism did not have any effects on the T2 outcome variables over and beyond socially prescribed perfectionism.

[Insert Table 2 about here]

Brief discussion

The findings of Study 1 are the first to suggest that socially prescribed perfectionism may be a personality characteristic that longitudinally contributes to the development of role stress and burnout in employees. Socially prescribed perfectionism in employees was not only cross-sectionally associated with higher levels of role stress and burnout, it was also longitudinally associated with increased levels of role stress and burnout.

Study 1, however, had a number of limitations. First, the findings regarding burnout were restricted to one aspect (inefficacy). Second, the reliability (Cronbach's alpha) of T2 inefficacy was lower than desirable. Moreover, and more importantly, the measure we used to assess inefficacy has been criticized because it is comprised of reverse-coded items only and thus captures efficacy (indicating high levels of job engagement, not low levels of burnout) rather than inefficacy (see Schaufeli & Salanova, 2007, for details). Third, the longitudinal sample was rather small, comprising only 69 employees. Consequently, the study may have been "underpowered" (Maxwell, 2004), that is, have had insufficient statistical power to detect further effects of socially prescribed perfectionism on burnout such as effects on the other two aspects, exhaustion and cynicism. Finally, the sample comprised only employees working in healthcare provision. Therefore, it is unclear if the findings would generalize to other employees.

To address these limitations, we conducted a second study with a larger sample of employees working in the educational setting (school teachers) using a revised inefficacy scale comprised of items capturing inefficacy proper (rather reversed-coded efficacy) to examine whether the findings of Study 1 could be replicated and extended in a larger longitudinal sample of employees working in a different setting.

Study 2

Method

Participants

A sample of 349 school teachers was recruited via the Teacher Support Network, an independent charity that provides information, advice, and support to teachers. Of these, 56% returned data for both measurement points that did not show multivariate outliers (see Preliminary analyses). Hence, the final longitudinal sample comprised $N = 195$ school teachers (38 male, 157 female). Mean age of teachers was 44.5 years ($SD = 10.2$; range = 22-63 years). Mean time teachers had been teaching was 15.5 years ($SD = 10.6$; range = 0.3-40.3 years) and mean time teachers had been in their current job was 6.5 years ($SD = 6.0$; range = 0.1-33.0 years). Teachers' job types were teaching assistant (1%), supply teacher (3%), teacher (61%), subject coordinator (3%), department head (15%), deputy head teacher (7%), head teacher (5%), and 5% were unclassified. All teachers had a university degree.

Procedure and design

Teachers were recruited via an advertisement on the electronic newsletter and website. Both informed consent form and questionnaire were presented on our University's secure OQMS. The study employed a longitudinal correlational design with two measurement points: Time 1 (T1) and Time 2 (T2). Teachers were asked to complete the T1 questionnaire in November 2009 and the T2 questionnaire three months later (T2). The time between measurement points was reduced because there was a high rate of attrition in Study 1, and shorter intervals reduce sample attrition (Burisch, 2002); moreover, both six- and three-month intervals have been employed in past research on the development of burnout (e.g., Leiter, 1990; Leiter & Durup, 1996). Teachers who completed both questionnaires were entered into a raffle with prizes of one £100 voucher (approx. US $160), one £50 voucher (US $80), and two £25

vouchers (US $40). The study was approved by the relevant ethics committee and followed the British Psychological Society's (2009) code of ethics and conduct.

Measures

To measure perfectionism, role stress, and burnout, we used the same measures as in Study 1 except that we used Schaufeli and Salanova's (2007) inefficacy subscale that captures inefficacy (4 items; e.g., "In my opinion, I'm inefficient in my job") without employing reverse-coded items (cf. Study 1, Measures). In addition, teachers responded to the perfectionism and role stress items on the original 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*), and to the burnout items on a 7-point scale from 1 (*never*) to 7 (*always*).

Preliminary analyses

For all scales, mean scores were computed by averaging responses across items (see Table 1). All scores showed Cronbach's alphas above .70. To examine possible differences between teachers who completed both questionnaires (T1 and T2) and teachers who only completed the T1 questionnaire, we computed a MANOVA with T2 completion (completer vs. non-completer) as between-participants factor and the six T1 variables as dependent variables. The test was nonsignificant with $F(6, 342) = 0.94$, *ns* indicating that teachers who completed both questionnaires were not significantly different to teachers who completed only T1. Teachers who only completed T1 were excluded from all further analyses. Next, data were screened for multivariate outliers regarding the ten variables included in our longitudinal analyses. Two teachers showed a Mahalanobis distance larger than $\chi^2(10) = 29.59$, $p < .001$ and were excluded from all further analyses. Finally, to examine possible gender differences, we computed a Box's M test. The test was nonsignificant with Box's $M = 79.58$, $F(55, 15028) = 1.30$, *ns* so data were collapsed across gender.

Results and brief discussion

Bivariate correlations

Table 1 shows the bivariate correlations. As in Study 1, socially prescribed perfectionism again showed positive correlations with role stress, exhaustion, and cynicism at T1 and T2, in addition to inefficacy at T2. Moreover, expanding on the findings from Study 1, this time socially prescribed perfectionism also showed a positive correlation with inefficacy at T1 (whereas it showed a nonsignificant correlation in Study 1). Self-oriented perfectionism showed positive correlations with socially prescribed perfectionism at T1 and with role stress and exhaustion at T1 and T2.

Regression analyses

Table 3 shows the results of the regression analyses. Expanding on the findings of Study 1, socially prescribed perfectionism this time predicted increases in role stress and all three burnout symptoms: exhaustion, cynicism, and inefficacy. Teachers high in socially prescribed perfectionism not only showed higher levels of role stress and burnout at T1 compared to teachers low in socially prescribed perfectionism, but their levels of role stress and burnout further increased over the three month period. Teachers high in socially prescribed perfectionism felt more stressed and burnt out at the beginning of the study and these feelings increased in the course of the study, suggesting that socially prescribed perfectionism may be a contributing factor to stress and burnout in teachers. As in Study 1, self-oriented perfectionism did not have any effects over and beyond socially prescribed perfectionism.

Using a larger sample of different employees (school teachers), Study 2 replicated all findings of Study 1 in that socially prescribed perfectionism was associated with longitudinal increases in role stress and inefficacy. In addition, expanding on the findings of Study 1, socially prescribed perfectionism was also associated with longitudinal increases in the other two burnout symptoms: exhaustion and cynicism.

[Insert Table 3 about here]

General discussion

The aim of the present research was to investigate whether perfectionism in the workplace was associated with increases in role stress and burnout over time. To this end, two studies were conducted investigating if socially prescribed perfectionism predicted increases in role stress and burnout symptoms (exhaustion, cynicism, and inefficacy) over time using longitudinal correlational designs with two measurement points. In Study 1, healthcare service provision employees were investigated over a six-month period; and in Study 2, school teachers were investigated over a three-month period.

As expected, socially prescribed perfectionism was associated with higher levels of role stress and burnout. Moreover, and more importantly, socially prescribed perfectionism was associated with increases in role stress and burnout longitudinally. Employees high in socially prescribed perfectionism not only experienced higher levels of role stress and burnout symptoms at the beginning of the longitudinal studies compared to employees low in socially prescribed perfectionism, but they also showed higher increments in role stress and burnout over the course of the studies. In Study 1, socially prescribed perfectionism was associated with increments in role stress and inefficacy. In Study 2, socially prescribed perfectionism was associated with increments in role stress and all three burnout symptoms: exhaustion, cynicism, and inefficacy.

The present research is the first to investigate longitudinal effects of perfectionism on stress and burnout in the workplace. The present findings extend the literature on perfectionism at work by providing the first longitudinal results using a measure of socially prescribed perfectionism. By demonstrating that (a) healthcare employees and school teachers with higher levels of socially prescribed perfectionism showed increased levels of role stress and inefficacy longitudinally and (b) teachers with higher levels of socially prescribed perfectionism also

showed increased levels of exhaustion and cynicism longitudinally, the present findings expand on previous evidence from cross-sectional studies that socially prescribed perfectionism is associated with higher levels of stress and burnout in employees (Childs & Stoeber, 2010; Flett et al., 1995; Mitchelson & Burns, 1998; van Yperen et al., 2011). Thus, socially prescribed perfectionism—a form of perfectionism characterized by externally motivated beliefs that excessively high standards are expected by others and that acceptance by others is conditional on fulfilling these standards—may be more than a correlate of stress and burnout. The findings suggest that socially prescribed perfectionism may be a personality characteristic that might contribute to the development and maintenance of role stress and burnout in the workplace.

The present research has some limitations. First, the research focused on role stress. While role stress is a central form of stress in the workplace (Jackson & Schuler, 1985; Katz & Kahn, 1978), it is not the only form of stress that employees experience. Moreover, role stress is an inherently social form of stress. Consequently, socially prescribed perfectionism, a form of perfectionism in which the social context plays a key role (Hewitt & Flett, 1991), may be particularly influential in social forms of stress such as role stress. Thus, future longitudinal studies on perfectionism and stress should include other indicators of stress such as those listed in the Job Content Questionnaire (Karasek, 1985) to explore if the present findings generalize to other forms of stress and also if socially prescribed perfectionism predicts higher levels of job demands and lower levels of job decision latitude (cf. Karasek, 1979; Karasek & Theorell, 1990).

Second, the present research used longitudinal designs with two measurement points and thus could not investigate longitudinal mediation effects (e.g., if role stress mediates the effect of socially prescribed perfectionism on burnout) for which longitudinal designs with three measurement points are required (Cole & Maxwell, 2003). Consequently, future studies would profit from employing three-wave longitudinal designs to investigate if increased role stress from

Time 1 to Time 2 mediates the longitudinal effects of socially prescribed perfectionism at Time 1 on increased burnout from Time 1 to Time 3. In addition, future studies may profit from employing diary methods to examine the cognitive-behavioral pathway through which socially perfectionism is associated with increases in role stress and burnout (see Hewitt & Flett, 2002). Moreover, they could examine if state expressions of socially prescribed perfectionism, such as perfectionistic cognitions, change as a result of changes in role stressors and levels of burnout (Flett, Hewitt, Blankstein, & Gray, 1998; Hewitt & Flett, 2002; Stoeber & Janssen, 2011) because increased achievement striving when stressors are first encountered may lead to lower levels of resources and higher levels of stress over time as perfectionists attend more and more to the discrepancy between their worsening performance and others' expectations (e.g., Hall, 2006; Hall et al., 2012; Hewitt & Flett, 1991, 1993; Shafran et al., 2002).

Finally, future research may profit from differentiating different sources of socially prescribed perfectionism in the workplace. A study on perfectionism, stress, and burnout in school teachers (Stoeber & Rennert, 2008) demonstrated that the sources of socially prescribed perfectionism make a difference: Perceived pressure to be perfect from students was related to higher levels of stress and perceived pressure to be perfect from students' parents to higher levels of burnout. In contrast, perceived pressure to be perfect from colleagues was related to lower levels of stress and burnout. Future studies should therefore include measures to investigate which sources of socially prescribed perfectionism in the workplace—namely, other employees in the perfectionists' role set (Kahn et al., 1964) such as the perfectionist's line manager, colleagues, and "customers" (including clients, patients, and students)—make the largest contribution to employee stress and burnout longitudinally.

Despite these limitations, the present findings makes a significant contribution to the literature on the role personality plays in employee stress and burnout because they suggest that

socially prescribed perfectionism is a personality characteristic that plays an important role in the development and maintenance of role stress and burnout in the workplace. Employees who hold strong beliefs that others have exceedingly high standards for them and expect them to be perfect not only experienced higher levels of role stress and burnout, they also showed increased role stress and burnout longitudinally. Consequently, socially prescribed perfectionism may be a characteristic that managers should pay more attention to as it might present a risk not just to employees' mental health and wellbeing but also to the organization's ability to have employees deliver their services to the high standards that others (e.g., management, staff, customers) expect.

References

Alarcon, G., Eschleman, K. J., & Bowling, N. A. (2009). Relationships between personality variables and burnout: A meta-analysis. *Work & Stress, 23,* 244-263.

Appleton, P. R., Hall, H. K., & Hill, A. P. (2009). Relations between multidimensional perfectionism and burnout in junior-elite male athletes. *Psychology of Sport and Exercise, 10,* 457-465.

Bakker, A. B., Demerouti, E., de Boer, E., & Schaufeli, W. B. (2003). Job demands and job resources as predictors of absence duration and frequency. *Journal of Vocational Behavior, 62,* 341-356.

Bakker, A. B., Van der Zee, K. I., Lewig, K. A., & Dollard, M. F. (2006). The relationship between the Big Five personality factors and burnout: A study among volunteer counselors. *Journal of Social Psychology, 146,* 31-50.

British Psychological Society. (2009). *Code of ethics and conduct.* London: Author.

Burisch, M. (2002). A longitudinal study of burnout: The relative importance of dispositions and experiences. *Work & Stress, 16,* 1-17.

Cano-García, F. J., Padilla-Muñoz, E. M., & Carrasco-Ortiz, M. Á. (2005). Personality and contextual variables in teacher burnout. *Personality and Individual Differences, 38,* 929-940.

Childs, J. H., & Stoeber, J. (2010). Self-oriented, other-oriented, and socially prescribed perfectionism in employees: Relationships with burnout and engagement. *Journal of Workplace Behavioral Health, 25,* 269-281.

Clark, M. A., Lelchook, A. M., & Taylor, M. L. (2010). Beyond the big five: How narcissism, perfectionism, and dispositional affect relate to workaholism. *Personality and Individual Differences, 48,* 786-791.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New Jersey: Lawrence Erlbaum Associates.

Cole, D. A., & Maxwell, S. E. (2003). Testing meditational models with longitudinal data: Questions and tips in the use of structural equation modeling. *Journal Abnormal Psychology, 112,* 558-577.

Conroy, D. E., Kay, M. P., & Fifer, A. M. (2007). Cognitive links between fear of failure and perfectionism. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 25,* 237-253.

Cooper, C. L., Dewe, P. J., & O'Driscoll, M. P. (2001). *Organizational Stress: A Review and Critique of Theory, Research, and Applications.* London: Sage.

Cordes, C. L., & Dougherty, T. W. (1993). A review and integration of research on job burnout. *Academy of Management Review, 18,* 621-656.

Cox, B. J., Enns, M. W., & Clara, I. P. (2002). The multidimensional structure of perfectionism in clinically distressed and college student samples. *Psychological Assessment, 14*, 365-373.

Dale, K., & Fox, M. L. (2008). Leadership style and organizational commitment: Mediating effect of role stress. *Journal of Managerial Issues, 20*, 109-130.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology, 86*, 499-512.

Enns, M. W., & Cox, B. J. (2002). The nature and assessment of perfectionism: A critical analysis. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism* (pp. 33-62). Washington, DC: APA.

Enzmann, D., & Kleiber. (1989). *Helfer-Leiden: Streß und Burnout in psychosozialen Berufen* [When helpers suffer: Stress and burnout in psycho-social professions]. Heidelberg, Germany: Asanger.

Farber, B. A. (1991). *Crisis in education: Stress and burnout in the American teacher*. San

    Francisco: Jossey-Bass.

Flett, G. L., & Hewitt, P. L. (2002). Perfectionism and maladjustment: An overview of

    theoretical, definitional, and treatment issues. In P. L. Hewitt & G. L. Flett (Eds.),

    Perfectionism (pp. 5-31). Washington, DC: APA.

Flett, G. L., Hewitt, P. L., Blankstein, K. R., & Gray, L. (1998). Psychological distress and the

    frequency of perfectionistic thinking. *Journal of Personality and Social Psychology, 75*,

    1363-1381.

Flett, G. L., Hewitt, P. L., & Hallett, C. J. (1995). Perfectionism and job stress in teachers.

    Canadian Journal of School Psychology, 11, 32-42.

Frost, R. O., & DiBartolo, P. M. (2002). Perfectionism, anxiety, and obsessive-compulsive

    disorder. In G. L. Flett, & P. L. Hewitt (Eds.), *Perfectionism* (pp. 341-372). Washington,

    DC: APA.

Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism.

    Cognitive Therapy and Research, 14, 449-468.

Goldner, E. M., Cockell, S. J., & Srikameswaran, S. (2002). Perfectionism and eating disorders.

    In G. L. Flett, & P. L. Hewitt (Eds.), *Perfectionism* (pp. 319-340). Washington, DC: APA.

Griffin M. A., & Clarke, S. (2011). In S. Zedeck (Ed.), *APA Handbook of Industrial and

    Organizational Psychology* (Vol. 3, pp. 359-397). Washington DC: APA.

Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among

    teachers. *Journal of School Psychology, 43,* 495-513.

Hakanen, J. J., Schaufeli, W. B., & Ahola, K. (2008). The Job Demands-Resources model: A

    three-year cross-lagged study of burnout, depression, commitment, and work engagement.

    Work & Stress, 22, 224-241.

Hall, H. K. (2006). Perfectionism: A hallmark quality of world class performers, or a

    psychological impediment to athletic development? In D. Hackfort, & G. Tenenbaum

    (Eds.), *Perspectives on sport and exercise psychology* (Vol. 1, pp. 178-211). Oxford, UK:

    Meyer & Meyer Sport.

Hall, H. K., Hill, A. P., & Appleton, P. R. (2012). Perfectionism: A foundation for sporting

    excellence or an uneasy pathway toward purgatory? In G. C. Roberts & D. Treasure (Eds.),

    Advances in motivation in sport and exercise (3rd ed., pp. 129-168). Leeds, UK: Human

    Kinetics.

Hall, H. K., Hill, A. P., Appleton, P. R., & Kozub, S. A. (2009). The mediating influence of

    unconditional self-acceptance and labile self-esteem on the relationship between

    multidimensional perfectionism and exercise dependence. *Journal of Abnormal

    Psychology of Sport and Exercise, 10*, 35-44.

Haring, M., Hewitt, P. L., & Flett, G. L. (2003). Perfectionism, coping, and quality of intimate

    relationships. *Journal of Marriage and Family, 65*, 143-158.

Health and Safety Executive. (1999). *The costs to Britain of workplace and work-related ill

    health in 1995/96* (2nd ed.). Norwich, UK: HSE Books.

Health and Safety Executive. (2000). *The scale of occupational stress: A further analysis of the

    impact of demographic factors and type of job.* Suffolk, UK: HSE Books.

Health and Safety Executive. (2010). *Self-reported work-related illness and workplace injuries

    in 2008/2009: Results from the Labour Force Survey.* Suffolk, UK: HSE Books.

Hewitt, P. L., & Flett, G. L. (1991). Perfectionism in the self and social contexts:

    Conceptualization, assessment, and association with psychopathology. *Journal of

    Personality and Social Psychology, 60*, 456-470.

Hewitt, P. L., & Flett, G. L. (1993). Dimensions of perfectionism, daily stress, and depression: A test of the specific vulnerability hypothesis. *Journal of Abnormal Psychology, 102*, 58-65.

Hewitt, P. L., & Flett, G. L. (2002). Perfectionism and stress processes in psychopathology. In G. L. Flett, & P. L. Hewitt (Eds.), *Perfectionism* (pp. 255-284). Washington, DC: APA.

Hewitt, P. L., & Flett, G. L. (2004). *Multidimensional Perfectionism Scale (MPS): Technical manual*. Toronto, Canada: Multi-Health Systems.

Hewitt, P. L., Flett, G. L., & Weber, C. (1994). Dimensions of perfectionism and suicide ideation. *Cognitive Therapy and Research, 18*, 439-460.

Hill, A. P. & Appleton, **P. R.** (2011). The predictive ability of the frequency of perfectionistic cognitions, self-oriented perfectionism and socially prescribed perfectionism in relation to symptoms of burnout in youth rugby players. *Journal of Sports Sciences, 29,* 695-703.

Hill, A. P., Hall, H. K., & Appleton, P. R. (2011). The relationship between multidimensional perfectionism and contingencies of self-worth. *Personality and Individual Differences, 50,* 238-242.

Hill A. P., Hall, H. K., Appleton P. R., & Kozub, S. A. (2008). Perfectionism and burnout in junior elite soccer players: The mediating influence of unconditional self-acceptance. *Psychology of Sport and Exercise, 9*, 630-644.

Hill A. P., Hall, H. K., Appleton P. R., & Murray, J. J. (2010). Perfectionism and burnout in canoe polo and kayak slalom athletes: The mediating influence of validation and growth-seeking. *The Sport Psychologist, 24*, 16-34.

Jackson, S. E., & Schuler, R. S. (1985). A meta-analysis and conceptual critique of research on role ambiguity and role conflict in work settings. *Organizational Behavior and Human Decision Processes, 36,* 16-78.

Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. (1964). *Organizational stress: Studies in role conflict and ambiguity*. New York: John Wiley & Sons Inc.

Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly, 24*, 285-308.

Karasek, R. A. (1985). *Job Content Questionnaire and user's guide* (revision 1.1). Lowell: University of Massachusetts Lowell, Job Content Questionnaire Centre.

Karasek, R. A., & Theorell, T. (1990). *Healthy work: Stress, productivity, and the reconstruction of working life*. New York: Basic Books.

Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations*. New York: Wiley.

Lee, R. T., & Ashforth, B. E. (1993). A longitudinal study of burnout among supervisors and managers: Comparisons between the Leiter and Maslach (1988) and Golembiewski et al. (1986) models. *Organizational Behavior and Human Decision Processes, 54,* 369-398.

Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology, 81,* 123-133.

Leiter, M. P. (1990). The impact of family resources, control coping, and skill utilization on the development of burnout: A longitudinal study. *Human Relations, 43,* 1067-1083.

Leiter, M. P., & Durup, M. J. (1996). Work, home, and in between: A longitudinal study of spillover. *Journal of Applied Behavioral Science, 32,* 29-47.

Maudgalya, T., Wallace, S., Daraiseh, N., & Salem, S. (2006). Workplace stress factors and 'burnout' among information technology professionals: a systematic review. *Theoretical Issues in Ergonomics Science, 7,* 285-297.

Maxwell, S. E. (2004). The persistence of underpowered studies in psychological research: Causes, consequences, and remedies. *Psychological Methods, 9*, 147-163.

Mitchelson, J. K., & Burns, L. R. (1998). Career mothers and perfectionism: Stress at work and at home. *Personality and Individual Differences, 25*, 477-485.

Nepon, T., Flett, G. L., Hewitt, P. L., & Molnar, D. S. (2011). Perfectionism, negative social feedback, and interpersonal rumination in depression and social anxiety. *Canadian Journal of Behavioural Science, 43*, 297-308.

NHS Employers. (2010). *Stress*. Retrieved from http://bit.ly/lUtfMq

NHS Jobs. (2009). *The NHS—a rewarding place to work*. Retrieved from http://bit.ly/buvz89

Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill.

O'Connor, R. C. (2007). The relations between perfectionism and suicidality: A systematic review. *Suicide and Life-Threatening Behavior, 37*, 698-714.

Örtqvist, D., & Wincent, J. (2006). Prominent consequences of role stress: A meta-analytic review. *International Journal of Stress Management, 13,* 399-422.

Örtqvist, D., & Wincent, J. (2010). Role stress, exhaustion, and satisfaction: A cross-lagged structural equation modeling approach supporting Hobfoll's loss spirals. *Journal of Applied Social Psychology, 40,* 1357-1384.

Peiró, J. M., González-Romá, V., Tordera, N., & Mañas, M. A. (2001). Does role stress predict burnout over time among health care professionals? *Psychology and Health, 16,* 511-525.

Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). Role conflict and ambiguity in complex organisations. *Administrative Science Quarterly, 15*, 150-163.

Schaufeli, W. B., Bakker, A. B., van der Heijden, F. M. M. A., & Prins, J. T. (2009). Workaholism among medical residents: It is the combination of working excessively and compulsively that counts. *International Journal of Stress Management, 16,* 249-272.

Schaufeli, W. B., Leiter, M. P., Maslach, C., & Jackson, S. E. (1996). The Maslach Burnout Inventory—General Survey. In C. Maslach, S. E. Jackson, & M. P. Leiter (Eds.), *MBI manual* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

Schaufeli, W. B., Martínez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. *Journal of Cross-Cultural Psychology, 33*, 464-481.

Schaufeli, W. B., & Salanova, M. (2007). Efficacy or inefficacy, that's the question: Burnout and work engagement, and their relationships with efficacy beliefs. *Anxiety, Stress, & Coping, 20,* 177-196.

Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A confirmative analytic approach. *Journal of Happiness Studies, 3,* 71-92..

Shafran, R., Cooper, Z., & Fairburn, C. G. (2002). Clinical perfectionism: a cognitive-behavioural analysis. *Behaviour Research and Therapy, 40,* 773-791.

Shafran, R., Egan, S., & Wade, T. (2010). *Overcoming perfectionism.* London: Constable & Robinson.

Slaney, R. B., & Ashby, J. S. (1996). Perfectionists: Study of a criterion group. *Journal of Counseling and Development, 74*, 393-398.

Stoeber, J., Feast, A. R., & Hayward, J. A. (2009). Self-oriented and socially prescribed perfectionism: Differential relationships with intrinsic and extrinsic motivation and test anxiety. *Personality and Individual Differences, 47*, 423-428.

Stoeber, J., & Janssen, D. P. (2011). Perfectionism and coping with daily failure: Positive reframing helps achieve satisfaction at the end of the day. *Anxiety, Stress, & Coping, 24,* 477-497.

Stoeber, J., & Rennert, D. (2008). Perfectionism in school teachers: Relations with stress appraisals, coping styles, and burnout. *Anxiety, Stress, & Coping, 21,* 37-53.

Stoeber, J., & Stoeber, F. S. (2009). Domains of perfectionism: Prevalence and relationships with perfectionism, gender, age, and satisfaction with life. *Personality and Individual Differences, 46*, 530-535.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston: Pearson.

Tang, C. S.-K., Au, W.-T., Schwarzer, R., & Schmitz, G. (2001). Mental health outcomes of job stress among Chinese teachers: Role of stress resource factors and burnout. *Journal of Organizational Behavior, 22*, 887-901.

Taris, T. W. (2000). *A primer in longitudinal analysis*. Thousand Oaks, CA: Sage.

Taris, T. W. (2006). Is there a relationship between burnout and objective performance? A critical review of 16 studies. *Work & Stress, 20,* 316-334.

Thomas, C. H., & Lankau, M. J. (2009). Preventing burnout: The effects of LMX and mentoring on socialization, role stress, and burnout. *Human Resource Management, 20,* 417-432.

Thoresen, C. J., Kaplan, S. A., Barsky, A. P., Warren, C. R., & de Chermont, K. (2003). The affective underpinnings of job perceptions and attitudes: a meta-analytic review and integration, *Psychological Bulletin, 129,* 914-945.

Tissot, A. M., & Crowther, J. H. (2008). Self-oriented and socially prescribed perfectionism: Risk factors within an integrative model for bulimic symptomatology, *Journal of Social and Clinical Psychology, 27,* 734-755.

van Yperen, N. W., Verbraak, M., & Spoor, E. (2011). Perfectionism and clinical disorders among employees, *Personality and Individual Differences, 50,* 1126-1130.

Wittenberg, K. J., & Norcross, J. C. (2001). Practitioner perfectionism: Relationship to

      Ambiguity tolerance and work satisfaction. *Journal of Clinical Psychology, 57*, 1543-1550.

Table 1

Correlations and Descriptive Statistics

	1	2	3	4	5	6	7	8	9	10	Study 1			Study 2		
											M	*SD*	α	*M*	*SD*	α
Perfectionism																
1. T1 SPP	—	.26*	.41***	.47***	.51***	.52***	.29*	.31**	.14	.33**	2.82	0.70	.87	4.53	0.96	.87
2. T1 SOP	.48***	—	−.10	.06	−.01	.08	−.19	.07	−.28*	−.02	3.62	0.67	.88	5.04	1.07	.92
Role stress																
3. T1 role stress	.50***	.17*	—	.64***	.65***	.53***	.54***	.44***	.38***	.43***	2.90	0.62	.80	4.74	1.00	.83
4. T2 role stress	.46***	.20**	.70***	—	.58***	.67***	.48***	.58***	.33**	.56***	2.69	0.64	.85	4.53	1.09	.87
Burnout																
5. T1 exhaustion	.50***	.23***	.63***	.56***	—	.79***	.77***	.59***	.25*	.55***	2.89	1.16	.94	5.70	1.40	.91
6. T2 exhaustion	.43***	.22***	.42***	.58***	.65***	—	.55***	.70***	.32**	.56***	2.75	1.01	.91	5.50	1.44	.93
7. T1 cynicism	.40***	−.00	.45***	.42***	.59***	.49***	—	.66***	.26*	.48***	2.40	1.11	.88	4.52	1.72	.86

Table 1 continued

Correlations and Descriptive Statistics

	1	2	3	4	5	6	7	8	9	10	Study 1			Study 2		
											M	*SD*	α	*M*	*SD*	α
8. T2 cynicism	.39***	.01	.44**	.55***	.50***	.64***	.75***	—	.22	.62***	2.41	1.08	.95	4.78	1.65	.87
9. T1 inefficacy	.51***	.10	.52**	.41***	.50***	.41***	.54***	.48***	—	.45***	1.82	0.58	.81	3.43	1.64	.81
10. T2 inefficacy	.45**	.08	.41***	.49***	.37***	.41***	.46***	.57***	.70***	—	2.00	0.51	.68	3.35	1.60	.85

Note. Correlations for Study 1 ($N = 69$) are presented above the diagonal and correlations for Study 2 ($N = 195$) below the diagonal. All scores are mean scores, and in Study 1 employees responded to all items on a 5-point scale (see Study 1, Method) whereas in Study 2 teachers responded on a 7-point scale (see Study 2, Method). SPP = socially prescribed perfectionism, SOP = self-oriented perfectionism, α = Cronbach's alpha.

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

Table 2

Study 1: Regressions of Perfectionism Predicting Role Stress and Burnout

Steps and variables	T2 role stress		T2 exhaustion		T2 cynicism		T2 inefficacy	
			Burnout					
	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1: Baseline	.413***		.619***		.441***		.200***	
T1 outcome variable		.64***		.79***		.66***		.45***
Step 2: Socially prescribed perfectionism	.050*		.018		.017		.074*	
T1 socially prescribed perfectionism[a]		.25*		.16		.13		.28*
Step 3: Self-oriented perfectionism	.002		.002		.026		.001	
T1 self-oriented perfectionism		.05		.05		.18		.03

Note. $N = 69$.

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

[a]f^2 = .09 for T2 role stress and .10 for T2 inefficacy (Cohen, 1988).

Table 3

Study 2: Regressions of Perfectionism Predicting Role Stress and Burnout

	T2 role stress		T2 exhaustion		T2 cynicism		T2 inefficacy	
			Burnout					
Steps and variables	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1: Baseline	.482***		.425***		.568***		.490***	
T1 outcome variable		.70***		.65***		.75***		.70***
Step 2: Socially prescribed perfectionism	.016*		.013*		.010*		.012*	
T1 socially prescribed perfectionism[a]		.15*		.13*		.11*		.13*
Step 3: Self-oriented perfectionism	.001		.001		.002		.002	
T1 self-oriented perfectionism		.03		.03		−.06		−.05

Note. N = 195.

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

[a]f^2 = .03 for T2 role stress, .02 for T2 exhaustion, .02 for T2 cynicism, and .02 for T2 inefficacy (Cohen, 1988).