The effect of perfectionism on school burnout among adolescence: The mediator of self-esteem and coping style

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ABSTRACT

Perfectionism is a powerful factor for school burnout, but the underlying mediating mechanism of this relationship remains unclear. To investigate the potential mediating roles of self-esteem and coping style in the association between perfectionism and school burnout among Chinese adolescents, a sample of 1222 middle school students was recruited. Path analysis showed that self-esteem and coping style partially mediated the relationship between perfectionism and school burnout. Specifically, maladaptive perfectionism exerted a positive indirect influence on school burnout through the mediators of self-esteem and task- and emotion-oriented coping styles. In contrast, adaptive perfectionism had a negative indirect effect on school burnout via these same mediators. Notably, self-esteem and emotion-oriented coping style had sequential mediating effects on the relations between the two dimensions of perfectionism and school burnout.

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1. Introduction

School burnout refers to a chronic stress response among students engaged with their schooling, which results from a discrepancy between students' resources and their own or others' expectations of their success in school (Salmela-Aro, Kiuru, Leskinen, & Nurmi, 2009; Salmela-Aro, Kiuru, & Nurmi, 2008). Specifically, it emerges as a response to students' ongoing difficulties in coping with academic stress. School burnout comprises three dimensions: exhaustion at school, cynicism toward the meaning of school, and reduced personal accomplishment (Kiuru, Aunola, Nurmi, Leskinen, & Salmela-Aro, 2008; Salmela-Aro et al., 2009; Tuominen-Soini & Salmela-Aro, 2014). Studies have shown that students' school burnout was associated with negative developmental outcomes, such as low academic achievement; anxiety, depression, and other psychological distress; and even truancy and dropping out of school (Bask & Salmela-Aro, 2013; Rudolph, Lambert, Clark, & Kurlakowsky, 2001). To effectively prevent school burnout, an accurate understanding of its causes is needed. Current evidence suggests that, besides contextual factors such as academic stress and study resources, personality characteristics such as perfectionism are strongly associated with school burnout (Brazeau, 2010; Zhang, Gan, & Cham, 2007). Additionally, studies have demonstrated that self-esteem and coping style are related to school burnout. However,

no study to date has examined the potential mediating mechanism underlying the effect of perfectionism on school burnout.

Perfectionism is a personality trait characterized by striving for flawlessness and setting excessively high standards for performance, accompanied by tendencies of excessively critical evaluations of one's behavior. Many empirical studies have been carried out on college and middle school students to investigate perfectionism using the Frost Multidimensional Perfectionism Scale (FMPS) developed by Frost, Marten, Lahart, & Rosenblate (1990). Frost et al. divided perfectionism into dimensions of maladaptive and adaptive perfectionism (Stoeber & Rambow, 2007). Adaptive perfectionism is characterized by high personal standards but less worry about making mistakes (McArdle, 2010). In contrast, maladaptive perfectionism is characterized by a concern over mistakes and persistent doubts about one's actions, socially prescribed perfectionism, a perceived pressure to be perfect, feelings of discrepancy between expectations and results, and negative reactions to imperfections (Wang, Fu, & Rice, 2012). Previous studies have shown that there is a significant correlation between perfectionism and burnout. For example, perfectionists are often unable to achieve their high personal standards, which make them far more prone to burnout compared to others. Research has also revealed that college students with adaptive perfectionism had higher school engagement, while their counterparts with maladaptive perfectionism had higher school burnout (Zhang et al., 2007; Ulu, Tezer, & Slaney, 2012). Chen et al. found that, in adolescent athletes, maladaptive perfectionism positively predicted burnout while adaptive perfectionism negatively predicted it (Chen, Kee, Chen, & Tsai, 2008).

Slade and Owens (1998) proposed a dual process model of perfectionism to explain why its two dimensions (adaptive and maladaptive) have different consequences. Briefly, the two types of perfectionist receive different types of reinforcement—positive or negative—from their actions, which lead to different cognitive processes and emotional states. Specifically, adaptive perfectionists tend to pursue success and internalize their perfectionism into their self-concept. Additionally, when faced with adverse situations, adaptive perfectionists usually use a task-oriented coping style. This explains why adaptive perfectionism is positively related to positive outcomes (Ashby & Rice, 2002; Stoeber & Rambow, 2007) and negatively related to negative outcomes (Hill, Hall, & Appleton, 2010). On the contrary, maladaptive perfectionists often make considerable effort to avoid mediocrity or failure, and tend to employ depressive emotion-oriented coping strategies. This suggests why maladaptive perfectionism shows inverse relationships with various negative (Beevers, 2005; Burns, Dittmann, Nguyen, & Mitchelson, 2000) and positive outcomes (Zhang et al., 2007).

According to the dual process model, perfectionism first influences individuals' self-appraisal. Self-esteem, an important component of the self-concept system, may also be influenced by perfectionism. Indeed, this association might be rather strong: For example, in a study of Iranian students, Besharat (2009) showed that adaptive perfectionism is positively correlated with self-esteem, while maladaptive perfectionism is negatively correlated with it. Elion et al. found that adaptive perfectionists have higher self-esteem and lower depression than do maladaptive perfectionists among students in the United States (Elion, Wang, Slaney, & French, 2012). Furthermore, some research has indicated that self-esteem was negatively associated with all three dimensions of burnout, especially with emotional exhaustion (e.g., Janssen, Schaufeli, & Houkes, 1999). Individuals with low self-esteem may be suspicious of their own ability, sensitive to failure, and prone to experience setback, and may eventually develop burnout (Orth, Robins, Trzesniewski, Maes, & Schmitt, 2009). Additionally, self-esteem may play a mediating role between perfectionism and various behavior outcomes (Blankstein, Dunkley, & Wilson, 2008; Rice, Ashby, & Slaney, 1998).

As per the dual process model, perfectionism can also have an effect on coping style. Coping style is the way in which an individual tends to manage taxing demands with regard to stressful events. It can be roughly divided into two categories: task-oriented coping, which refers to active attempts to deal with stress/stressful events, and emotion-oriented coping, defined as strategies such as rumination or excessive emotional response (Endler & Parker, 1990). There are several studies that have theoretically and empirically demonstrated associations between both dimensions of perfectionism and emotion- and task-oriented coping (Dunkley, Zuroff, & Blankstein, 2003; Flett, Russo, & Hewitt, 1994). Research has also verified close correlations of coping style with perfectionism and burnout (Kokkonen, Cheston, Dallos, & Smart, 2013). Moreover, two studies have suggested that coping style could be a mediator in the relationship between perfectionism and burnout. For example, Hill et al. (2010) noted that task-oriented and emotion-oriented mediated the effects of self-oriented or socially prescribed perfectionism on athlete burnout, while Chang (2011) found that emotion-oriented coping mediated the relationship between maladaptive perfectionism and burnout. Self-esteem is also associated with coping style: High self-esteem is related to task-oriented coping, whereas low self-esteem is associated with emotion-oriented coping (Cawood & Huprich, 2011; Xu et al., 2013).

Taken together, previous studies have confirmed that both self-esteem and coping style relate to perfectionism and burnout. However, it remains unknown whether different coping styles and self-esteem correlate with both dimensions of perfectionism (maladaptive and adaptive) and school burnout. Particularly, non studies have simultaneously considered the relationships of both self-esteem and coping style with perfectionism and burnout in a single study. Notably, cognitive appraisal theory has regarded cognitive appraisals (e.g., self-

esteem, self-concept) and coping as two separate processes, although both are considered critical mediators of the relationships between personality traits, the environment, and various outcomes. Thus, investigating the mediating roles of both self-esteem and coping style simultaneously could help us deepen our understanding of the mechanism underlying the relationship between perfectionism and school burnout. Therefore, the present study aimed to examine these relationships among Chinese middle school students. Based on previous findings, the present study hypothesized that the relationships between the two dimensions of perfectionism and school burnout were sequentially mediated by self-esteem and the two forms of coping style (task-oriented and emotion-oriented) (Fig. 1). The specific hypotheses are presented as follows:

Hypothesis 1. . Maladaptive and adaptive perfectionism have different effects on school burnout.

Hypothesis 2. . Different coping styles and self-esteem are simple mediators in the relationship between perfectionism and school burnout. Self-esteem and emotion-oriented or task-oriented coping are sequential mediators in the association between perfectionism and school burnout.

2. Method

2.1. Participants

The survey was carried out among 1230 randomly selected students from one middle school in Xi'an city, China. We deleted data with more than 10% missing items, and ultimately 1222 (99.67%) valid questionnaires were collected. The average age of the participants was 13.2 (SD = 1.2) years (range 12–16 years). In this sample, there were 640 boys and 582 girls.

2.2. Measures

2.2.1. Perfectionism

Perfectionism was measured using the Chinese version of the FMPS, which was translated by Cheng, Chong, and Wong (1999). The FMPS comprises 27 items in 5 subscales. Participants responded to each item on a 5-point Likert scale from 1 ("totally disagree") to 5 ("totally agree"). The subscales of doubts about actions, concerns over mistakes, and parental expectations are measures of maladaptive perfectionism, while the subscales of organization and personal standards are measures of adaptive perfectionism. Cheng et al. (1999) reported adequate Cronbach's alpha coefficients for all five subscales (doubts about actions 0.67, concerns over mistakes 0.83, parental expectations 0.74, organization 0.73, and personal standards 0.64).

2.2.2. Self-esteem

Self-esteem was assessed by the Chinese version of the Rosenberg Self-Esteem Scale (RSES) (Wu, 2008). The scale comprises ten items scored on a 4-point Likert scale ranging from 1 ("strongly disagree") to 4 ("strongly agree"). The RSES has demonstrated good psychometric properties (Wu, 2008; Liu, Wang, Zhou, & Li, 2014).

2.2.3. School burnout

School burnout was assessed using the Chinese version of the Maslach Burnout Inventory—Student Survey (MBI-SS) (Hu & Schaufeli, 2009). The scale comprises 15 items in three subscales: emotional exhaustion, cynicism toward the meaning of school (hereafter, "cynicism"), and reduced personal accomplishment. Participants responded to all items on a 7-point Likert-type scale ranging from 1 ("completely disagree") to 7 ("completely agree"). In Hu and Schaufeli's study, the Cronbach's alpha coefficients for emotional exhaustion, cynicism, and reduced personal accomplishment showed ranges of 0.60–0.69,
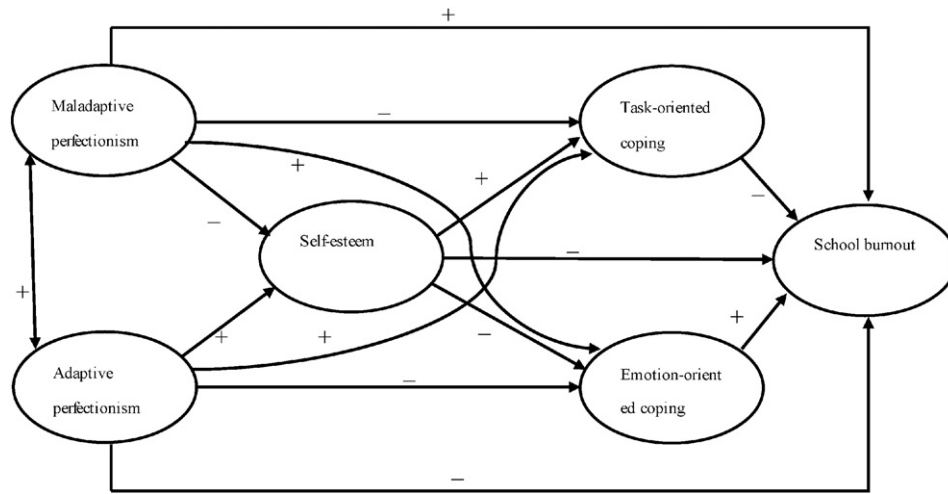
Fig. 1. Hypothesized model of the correlation between broad factors of perfectionism, self-esteem, coping styles and school burnout.

0.68–0.80, and 0.65–0.77, for high school, university, and vocational school students, respectively. The fit indices from a confirmatory factor analysis (CFA) of the MBI-SS that we conducted on this sample of participants were as follows: $\chi^2/df = 3.97$, root mean square error of approximation (RMSEA) 0.07, Tucker-Lewis Index (TLI) 0.92, normed fit index (NFI) 0.91, comparative fit index (CFI) 0.93, and goodness-of-fit index (GFI) 0.93.

2.2.4. Coping style

The Problem-Focused Style of Coping scale (PFSC) was used to measure middle school students' coping styles (Chen, Zheng, & Pan, Zheng, 2000). This scale comprises 36 items rated on a four-point Likert scale ranging from 1 ("never use") to 4 ("often use"). The scale includes two subscales: task-oriented and emotion-oriented coping. The task-oriented coping subscale comprises 19 items that are further categorized into three lower-order subscales: problem solving (7 items), seeking social support (7 items), and positive rational explanations (5 items). The emotion-oriented coping subscale consists of 17 items that are further divided into four subscales: patience (4 items), escape (4 items), venting (4 items), and fantasy (5 items). Higher scores on each dimension indicate that individuals have more prominent behavior characteristics of the corresponding coping style. The Cronbach's alpha coefficients for problem solving, seeking social support, positive rational explanation, patience, escapes, venting and fantasy were 0.92, 0.83, 0.78, 0.78, 0.67, 0.68, 0.74, and 0.76 in Chen's study, respectively; furthermore, those for task-oriented coping, emotion-oriented coping, and the total scale were 0.83, 0.79, and 0.92, respectively.

2.3. Procedure

We collected data from students by class; whole classes were taken to the computer room of the school, where they were instructed to answer each questionnaire on the school's online psychological evaluation system. Participants were assured of the anonymity of their responses. It took students about 20–30 min to complete all questionnaires.

3. Results

The means, standard deviations, and reliability estimates (Cronbach's alpha coefficients) of the variables in this study are presented in Table 1.

3.1. Measurement model

The mediation effects were analyzed following a two-step procedure (Tashman, Tenenbaum, & Eklund, 2010). We first performed a CFA to

test the measurement model, and then used structural equation modeling (SEM) to test the structural relationships between study variables. The measurement model in this study comprised six latent constructs including maladaptive perfectionism, adaptive perfectionism, task-oriented coping style, emotion-oriented coping style, self-esteem, and school burnout. Scores on the FMPS's doubts about actions, concerns over mistakes, and parental expectations subscales were indicators of maladaptive perfectionism, while scores on the organization and personal standards subscales were indicators of adaptive perfectionism. The scores on the problem solving, seeking social support, and positive rational explanations subscales of the PFSC were used as indicators of task-oriented coping style, while those of the patience, escape, venting, and fantasy subscales were indicators of emotion-oriented coping style. The latent variable of school burnout was measured using scores on the emotional exhaustion, cynicism, and reduced personal accomplishment subscales of the MBI-SS. For self-esteem, in order to control for inflated measurement errors with regard to using multiple items to assess a latent variable, we created three item parcels. The results of the CFA indicated that the measurement model provided a good fit to the observed data (χ^2 (124, N = 1222) = 372.62 (P < 0.001); χ^2/df ratio = 3.005; squared root mean residual (SRMR) = 0.045; RMSEA = 0.041 ; CFI =

Table 1
Reliability estimates and descriptive statistics (N = 1222).

Variable	Range	M	SD	α
Maladaptive perfectionism				
Doubts about actions	1–5	3.42	0.71	0.78
Concerns over mistakes	1–5	2.72	0.72	0.85
Parental expectations	1–5	3.30	0.68	0.83
Adaptive perfectionism				
Organization	1–5	3.89	0.73	0.88
Personal standards	1–5	3.47	0.64	0.81
Task-oriented coping				
Problem solving	1–4	2.95	0.61	0.82
Seeking social support	1–4	2.83	0.57	0.84
Positive rational explanations	1–4	3.02	0.66	0.85
Emotion-oriented coping				
Patience	1–4	2.57	0.62	0.86
Escape	1–4	2.13	0.69	0.81
Venting	1–4	2.16	0.69	0.88
Fantasy	1–4	2.25	0.70	0.78
School burnout				
Emotional exhaustion	1–7	3.50	1.15	0.78
Cynicism	1–7	3.26	1.16	0.75
Reduced personal accomplishment	1–7	3.47	1.06	0.72

0.98; TLI = 0.97). The standardized factor loadings from the latent variables to their relevant indicator variables were all significant (ranges of 0.78–0.79, 0.62–0.73, 0.68–0.78, 0.53–0.78, 0.69–0.74, and 0.75–0.82 for maladaptive perfectionism, adaptive perfectionism, task-oriented coping style, emotion-oriented coping style, self-esteem, and school burnout, respectively). The composite reliabilities of all latent variables also supported the measurement model (see Table 2).

3.2. Structural model

We used SEM to test the structural relationships among all study variables (see Fig. 1). The results showed that the hypothesized model (Model 1) with all study variables fitted well to the data (χ^2(124, N = 1222) = 372.62, P < 0.001; χ^2/df ratio = 3.005; SRMR = 0.045; RMSEA = 0.041 (90% CI = 0.035–0.046); CFI = 0.98; TLI = 0.97). Tests of parameter estimates showed that coefficients of direct paths were all significant, except the following path from self-esteem to task-oriented coping style ($b = 0.06$, $t = 1.43$, P = 0.14). Thus, this path was deleted and the model was re-estimated (Model 2). The results showed that Model 2 also fitted well to the data (χ^2(125, N = 1222) = 374.63, P < 0.001; χ^2/df ratio = 2.997; SRMR = 0.044; RMSEA = 0.040 (90% CI = 0.035–0.045); CFI = 0.98; TLI = 0.97). The path coefficients from maladaptive perfectionism and adaptive perfectionism to school burnout were still significant. These results suggested that self-esteem and coping style might partially mediate the relationship between perfectionism and school burnout.

3.3. Full versus partial mediation

To test the hypothesis that self-esteem and coping style partially mediate the relationship between maladaptive perfectionism and school burnout, a full mediation model (Model 3) was tested, in which the path from maladaptive perfectionism to school burnout was constrained to zero and compared to the partial model (Model 2), wherein the same path was freely estimated. The results indicated that the chi-square of the model reduced significantly ($\Delta\chi^2$ (1, N = 1222) = 33.21, P < 0.001) after deleting the path from maladaptive perfectionism to school burnout. Model 2 also had better fit indices (CFI, Akaike information criterion (AIC), expected cross-validation index (EVIC), and Bayesian information criterion (BIC)) than did Model 3 (see Table 3). These results supported the partial mediation model.

Similarly, in order to test the hypothesis that self-esteem and coping style partially mediate the relationship between adaptive perfectionism and school burnout, another fully mediated model (Model 4) wherein the direct path from adaptive perfectionism to school burnout was constrained to zero was tested and compared with Model 2, wherein that same path was freely estimated. The chi-square difference test showed that there was a significant difference between the two models, with the partially mediated model (Model 2) showing a better fit than the fully mediated model (Model 4) ($\Delta\chi^2$ (1, N = 1222) = 34.49, P < 0.001). Additionally, Model 2 had better fit indices (CFI, AIC, EVIC, and BIC) than did Model 4 (see Table 3). This provided further support for the mediating role of self-esteem and coping style. All of the path coefficients of the final model (i.e., Model 2) are shown in Fig. 2.

Table 3
Fit indices among competition models (N = 1222).

Model	χ^2	df	RMSEA	CFI	AIC	ECVI	BIC
模型1	372.62	124	0.41	0.98	368.98	0.34	564.40
模型2	374.63	125	0.40	0.98	366.35	0.33	562.16
模型3	407.84	126	0.43	0.97	384.76	0.36	585.07
模型4	409.12	126	0.43	0.97	385.66	0.36	585.97

Next, we assessed the unique contributions of the mediators (self-esteem and task- and emotion-oriented coping styles) to school burnout beyond the contributions of the predictor variables (maladaptive and adaptive perfectionism). In the model without mediators, maladaptive and adaptive perfectionism explained 18.5% of the variance in school burnout (R = 0.43, R^2 = 0.185). In the final model, the dimensions of perfectionism, self-esteem, and coping styles together accounted for 33.1% of the variance in school burnout. Thus, the mediators (self-esteem and task- and emotion-oriented coping styles) accounted for 14.6% of the variance in school burnout.

3.4. Assessment of mediation

The strength of the mediated effects of self-esteem and coping style (task- and emotion-oriented) were tested using the bootstrapping estimation procedure in AMOS 20.0 (Tarres, Fina, & Piedrafita, 2010). From the dataset (N = 1222), 2000 bootstrap samples were generated using random sampling with replacement. Table 4 shows the indirect effects and their associated 95% confidence intervals (CI). Significance was determined if the 95% CI did not include zero. As displayed in Table 4, the bootstrapping analysis indicated that maladaptive perfectionism exerted significant indirect effects on school burnout via self-esteem and both coping styles. Adaptive perfectionism similarly exerted significant indirect effects on school burnout through the three mediators. The indirect effects of both dimensions of perfectionism on emotion-oriented coping style via self-esteem were also significant.

4. Discussion

This study examined the mediating effects of self-esteem and coping style on the relationship between perfectionism and school burnout among Chinese middle school students. As predicted, the results indicated that maladaptive perfectionism was positively related to school burnout, whereas adaptive perfectionism was negatively related to it.

These findings were generally consistent with the findings of numerous previous studies (Chang, 2011; Zhang et al., 2007): For instance, as noted in Section 1, school burnout is believed to result from a discrepancy between students' resources and their own or others' expectations for their success in school (Salmela-Aro et al., 2009; Kiuru et al., 2008). Additionally, students with burnout are often dominated by two kinds of irrational beliefs (Beck, Koons, & Milgrim, 2000)—they doubt their ability to complete the task successfully while simultaneously believing that the task is too difficult or demanding. As previously mentioned, maladaptive perfectionists make every effort to avoid mediocrity or
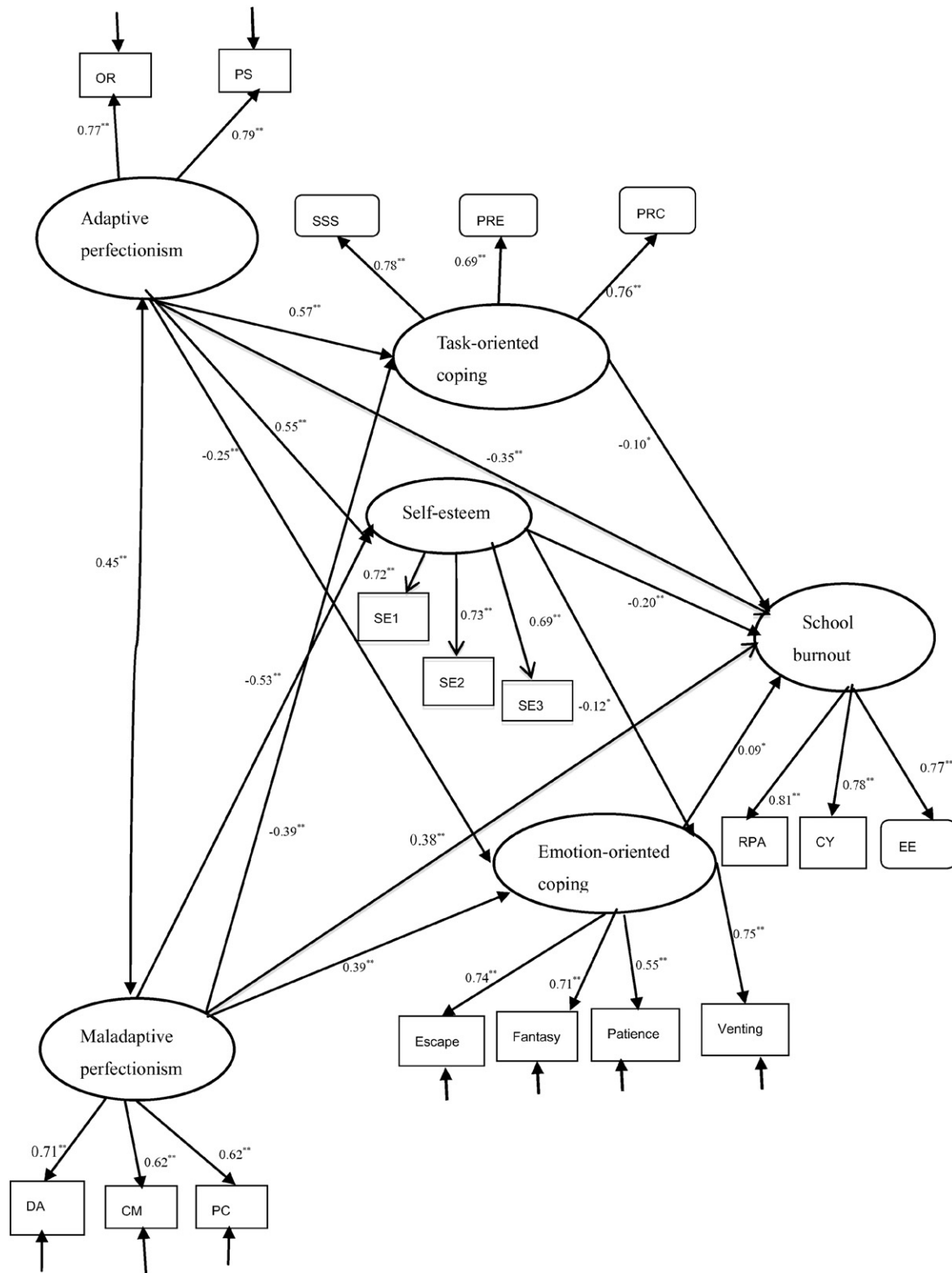
Table 2
Reliabilities and correlations between the latent variables (N = 1222).

	Pc	1	2	3	4	5	6
1. Adaptive perfectionism	0.80	–					
2. Maladaptive perfectionism	0.83	0.58[**]	–				
3. Emotion-oriented coping	0.81	−0.36[**]	0.48[**]	–			
4. Task-oriented coping	0.85	0.52[**]	−0.26[**]	0.32[**]	–		
5. Self-esteem	0.86	0.63[**]	−0.58[**]	−0.28[**]	0.10[*]	–	
6. School burnout	0.75	−0.42[**]	0.38[**]	0.33[**]	−0.41[**]	−0.45[**]	–

[*] P < .05.
[**] P < .01.

Fig. 2. The finalized structural model (factor loadings are standardized, N = 1222). Note: DA = doubts about actions, CM = concerns over mistakes; PE = parental expectations, PS = personal standards, OR = organization, PRS = problem solving, SSS = seeking social support, PRE = positive rational explanation, patience, escape, venting and fantasy are the subscales of emotion oriented coping, EE = emotional exhaustion, CY = Cynicism, RPA = reduced personal accomplishment, SE1–SE3 = three parcels of self-esteem. *P < 0.05, **P < 0.01.

failure. These characteristics are consistent with these irrational beliefs associated with school burnout; therefore, individuals higher in maladaptive perfectionism are naturally more likely to experience burnout. In contrast, adaptive perfectionists pursue rational and realistic standards, and generally tend to believe that they can be successful. When encountering difficulties, they attempt to overcome the difficulties rather than escape. This suggests that adaptive perfectionists would experience less school burnout.

The current study also supported the notion that the effect of perfectionism on school burnout was partially mediated by self-esteem and

Table 4
The final model to explain the standard indirect effects of indices (N = 1222).

Model pathways	Indirectly estimated	95% CI	
		Lower	Upper
Maladaptive perfectionism → task-oriented coping → school burnout	0.04[a]	0.03	0.05
Maladaptive perfectionism → emotion-oriented coping → school burnout	0.05[a]	0.02	0.08
Maladaptive perfectionism → self-esteem → school burnout	0.12[a]	0.03	0.23
Maladaptive perfectionism → self-esteem → emotion-oriented coping	0.03[a]	0.01	0.05
Adaptive perfectionism → task-oriented coping → school burnout	− 0.05[a]	− 0.07	− 0.04
Adaptive perfectionism → emotion-oriented coping → school burnout	− 0.03[a]	− 0.06	− 0.01
Adaptive perfectionism → self-esteem → school burnout	− 0.13[a]	− 0.24	− 0.03
Adaptive perfectionism → self-esteem → emotion-oriented coping	− 0.04[a]	− 0.06	− 0.03
Self-esteem → emotion-oriented coping → school burnout	0.02[a]	0.01	0.03

Note. 95% CI for bootstrap is defined using the values that mark the upper and lower 2.5% of the bootstrap distribution.
[a] Empirical 95% confidence interval does not overlap with zero.

task- and emotion-oriented coping styles. Specifically, maladaptive perfectionism exerted a positive indirect effect on school burnout via these three mediators, whereas adaptive perfectionism exerted a negative indirect effect. These results can be interpreted in terms of cognitive appraisal theory, which aims to explain the process governing psychological stress and coping (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986a, 1986b; Dunkley et al., 2003). Specifically, this theory identifies two processes—cognitive appraisal and coping—as critical mediators of personality–environment relations and outcomes. According to this theory, individuals make two kinds of cognitive appraisal: a primary appraisal, in which they evaluate the event, and a secondary appraisal, in which they evaluate the personality. In terms of this theory, perfectionism, as a personality trait, could influence various outcomes via cognitive appraisal and coping.

The finding that self-esteem, which is an important determinant of cognitive appraisals, mediated the relationship between perfectionism and school burnout is consistent with the findings of prior studies. For example, Lees and Ellis (1990) pointed out that fear of failure, an important feature of maladaptive perfectionism, is related to low self-efficacy and self-esteem. This study showed that maladaptive perfectionists tend to show low levels of self-esteem, which is closely related to school burnout. Other studies showed that, in the face of a new learning task or challenge, individuals with low self-esteem tend to experience burnout (Blom, 2012). In contrast, adaptive perfectionists—namely, individuals who organize, plan, pursue success, and take decisive action—can enhance their sense of self-worth via appropriate self-regulation strategies to strengthen their positive evaluations of the self, thereby reducing burnout. In addition, according to cognitive appraisal theory, coping serves as a critical mediator between personality–environment relations and outcomes.

The finding that task- and emotion-oriented coping styles acted as mediators between perfectionism and burnout is well in line with cognitive appraisal theory and previous studies. Stoeber and Rennert (2008) reported an analogous pattern of relationships between perfectionism, coping style, and burnout.

Importantly, the present study confirmed the hypothesis that self-esteem and emotion-oriented coping style sequentially mediated the associations between different dimensions of perfectionism and school burnout. Specifically, emotion-oriented coping style was a mediator between self-esteem and school burnout, while self-esteem partially mediated the relationship between the two dimensions of perfectionism and emotion-oriented coping style. This result was consistent with previous research showing a significant negative relationship between self-esteem and emotion-oriented coping style. However, the final model revealed that the path from self-esteem to task-oriented coping was nonsignificant, which was contrary to the hypothesis. Some studies have shown that task-oriented coping is less affected by personality variables (e.g., self-esteem) than is emotion-oriented coping (Folkman et al., 1986a, 1986b). In the present study, we also found that

self-esteem had a weaker effect on task-oriented coping study than on emotion-oriented coping style.

Overall, the current study contributes to a better understanding of the mediating mechanism underlying the relationships between perfectionism and school burnout. Specifically, this research extends previous studies by confirming the mediating roles of self-esteem and two different coping styles. However, there are two limitations of the current study that should be considered. First, this study used a cross-sectional design. Although we used SEM to investigate the interrelationship between the study variables, the formation of and change in school burnout is a dynamic process. Thus, a longitudinal method would deepen our understanding of the causal relationships between the study variables. Second, only self-report measures were used in this study. Common-method (or mono-method) variance bias may partly explain the observed effects and could have inflated the relationships among the study variables. Therefore, future research should adopt other sources of measurement (e.g., behavioral and observer-rated) to assess these relationships.

Acknowledgments

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