

# Learning Perfectionism and Learning Burnout in a Primary School Student Sample: A Test of a Learning-Stress Mediation Model

Hongfei Yang<sup>1</sup> · Jiaying Chen<sup>1</sup>

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**Abstract** The relations among learning perfectionism, learning stress and learning burnout were examined among 552 primary school students from grade 3 to 6 with average age of 11.7 years ( $SD = 1.2$ ; range 9–15 years). Results of multiple regression analysis indicated that learning stress partially mediated the relations between self-oriented learning perfectionism (SOLP) and three dimensions of learning burnout (i.e., negative emotional state, negative external evaluation and poor teacher-student relationship), and mother-prescribed learning perfectionism and three dimensions of learning burnout (i.e., negative emotional state, negative external evaluation and poor life quality). The results also indicated that learning stress fully mediated the relations between SOLP and poor life quality, and mother-prescribed perfectionism and poor teacher-student relationship. Moreover, father-prescribed learning perfectionism did not predict learning stress and learning burnout. Implications for providing counseling services to primary school students are discussed.

**Keywords** Learning perfectionism · Learning stress · Learning burnout · Primary school students

## Introduction

Learning burnout (or academic burnout) refers to the feeling of exhaustion in the learning process, which is accompanied by cynical and detached attitudes towards schoolwork, as well as a low sense of achievement (Pines et al. 1981; Schaufeli and Buunk 2003; Yang and Farn 2005). Although learning burnout has been studied in numerous countries (e.g., the United States, Korea, South Africa, and France; Galbraith and Merrill 2012; Lee et al. 2013; Mogan et al. 2014; Walburg 2014, for a review), China may be the only country with recently burgeoning scientific literature on learning burnout owing to the test-oriented education. For example, a keyword search of Chinese National Knowledge Infrastructure, a Chinese database in January 2015 revealed 558 articles on learning burnout that accumulated beginning 2005 (with only 1 article). Furthermore, numerous learning burnout studies focused on identifying antecedents, including social, family, school, and individual factors for prevention and intervention purposes (see Li and Xu 2013; for a review). Although most studies used college and high school students as subjects, research indicated that primary school students are similarly exposed to learning burnout (e.g., Chen 2009; Yang et al. 2013). The purpose of the present study was to determine if and how learning perfectionism relates to learning burnout among primary school students.

Decades of empirical studies have demonstrated that perfectionism is a complex disposition with two broad dimensions: “perfectionistic strivings,” which taps self-oriented efforts and high personal standards for perfectionism; and “perfectionistic concerns,” which taps concerns over mistakes, fear of failure, and negative reactions to imperfection (see Stoeber and Otto 2006 for a review). In Hewitt and Flett’s (1991) model, two forms of perfectionism can be

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✉ Hongfei Yang  
hongfeiy@zju.edu.cn

<sup>1</sup> Department of Psychology and Behavioral Sciences, Xixi Campus, Zhejiang University, Hangzhou City 310028, Zhejiang Province, People’s Republic of China

differentiated as indicators of perfectionistic strivings and concerns, respectively: self-oriented and socially prescribed perfectionism. Self-oriented perfectionism includes behaviors such as setting exacting standards for oneself, as well as a salient motivation to attain perfection in one's endeavors. Socially prescribed perfectionism involves the perceived need to attain standards and expectations prescribed by significant others. Previous studies have indicated that self-oriented perfectionism is *positively* related to psychological adjustment, whereas socially prescribed perfectionism is *negatively* related to psychological adjustment (Bieling et al. 2004; Frost et al. 1993; Hewitt and Flett 2004; Hill et al. 1997; Sherry et al. 2008; Stoeber and Otto 2006; Stoeber and Stoeber 2009). Therefore, self-oriented perfectionism is regarded as adaptive, whereas socially prescribed perfectionism is viewed as maladaptive.

Whereas early researchers defined perfectionism as a general disposition that affects all domains of life (e.g., Hewitt and Flett 1991), evidence has emerged indicating that perfectionism is often domain-specific (Dunn et al. 2005; McArdle 2010; Stoeber and Stoeber 2009). Furthermore, domain-specific perfectionism predicts domain-specific characteristics, processes, and outcomes better than does general perfectionism (e.g., Dunn et al. 2011). Consequently, researchers studied domain-specific perfectionism (e.g., perfectionism in sports, parenting, sexuality, physical appearance, and morality; Dunn et al. 2005; Snell et al. 2005; Stoeber et al. 2013; Yang and Stoeber 2012; Yang et al. 2015).

In line with the conceptualization of perfectionism and the studies on domain-specific perfectionism, we see learning perfectionism as a domain-specific form of perfectionism and define it as a high standards set for learning, accompanied by perfectionistic concerns such as those over mistakes and fear of failing to learn. Similarly, based on the Lazarus (1966) concept of stress, we define learning stress as the psychological strain or distress resulting from exposure to the demands of learning situations, known as learning stressors.

Previous studies repeatedly indicated that learning stress is positively related to learning burnout (e.g., Liao 2013; Zhang et al. 2013) and stress mediates the relation between perfectionism and psychological adjustment (e.g., Ashby et al. 2012; Chang 2006a; Chang et al. 2004; Li et al. 2013; Shang and Yang 2014) including burnout (e.g., D'Souza et al. 2011; Tashman et al. 2010). However, no studies have been conducted to examine the relations of learning perfectionism with learning stress and burnout. To our knowledge, only three studies investigated the relation between the general perfectionism measured with the Frost Multidimensional Perfectionism Scale (FMPS) and learning burnout. Results indicated that perfectionistic strivings (e.g., Personal Standards, PS) are negatively related to learning burnout, whereas perfectionistic concerns (e.g., Concern over Mistakes, CM) are positively

related to the learning burnout experienced among junior high school (Chen 2011) and college students (Jue 2011; Zhang et al. 2007).

Furthermore, researchers examined the association between learning perfectionism and stress in a study with college students (Yang and Jiang 2008). Surprisingly, results indicated a nonsignificant correlation between the two. The absence of a significant correlation may be attributed to the measurement of learning perfectionism with a unidimensional subscale of the Domain-specific Perfectionism Scale (Zhang et al. 2007), which includes both striving and concern items (e.g., "I set high standards for my study", "I will feel disappointed if I cannot get scholarship"). Hence, perfectionistic strivings and concerns of learning perfectionism require differentiation as two independent dimensions because they would most probably show different, even opposite, patterns of relation with learning stress and burnout. Importantly, the overlap between two forms of learning perfectionism needs to be controlled for to examine the relation patterns among them.

Considering the limited knowledge on learning perfectionism and its relation with learning stress and burnout, this study adapted self-oriented learning perfectionism (SOLP), father-prescribed learning perfectionism (FPLP), and mother-prescribed learning perfectionism (MPLP) as important dimensions of learning perfectionism. We hypothesized that SOLP would exhibit a negative relation with learning stress and burnout, whereas FPLP and MPLP would demonstrate a positive relation with them. Thus, the main objectives of the present study were to (a) examine the relation between learning perfectionism and burnout and (b) determine if learning stress mediates the relation between learning perfectionism and burnout.

## Method

### Participants

A sample of 552 primary students (292 males and 260 females) from three schools completed the questionnaire. There were third grade (23.4 %), fourth grade (23.2 %), fifth grade (22.5 %), and sixth grade (31.0 %). Of the participants, 29.9 % were from an urban school, 44.9 % were from a suburban school and 25.2 % were from a rural school. Mean age of participants was 11.7 years ( $SD = 1.2$ ; range 9–15 years). Four students did not complete the questionnaire and were excluded in the sample.

### Procedure

To recruit the participants, we first contacted the principals of the schools and got approved for this study. Then we

randomly selected four classes (one for each grade from grade 3–6) from every school for survey. Finally, the second author went to the classes one by one with class tutors, asking students to finish the questionnaire. Because FPLP and MPLP were adapted from socially prescribed perfectionism of the Hewitt and Flett's (1991) model of perfectionism in this study, we did not plan to ask those students who lost one or two parents to do the survey. Fortunately, all students in the selected classes had a father and a mother.

## Measures

### *Learning Perfectionism*

Using similar protocols adopted by Mitchelson and Burns (1998), Dunn et al. (2005) and McArdle (2010), two scales from the Multidimensional Perfectionism Scale (MPS; Hewitt and Flett 1991; cf. MPS-Short Form; Cox et al. 2002) were adapted. To measure SOLP, we used the 5 items of the MPS-Short Form's self-oriented perfectionism (e.g., "One of my goals is to be perfect in everything I do") and adapted all items so they referred to student (e.g., "One of my goals is to be perfect in everything I do in learning"). To measure FPLP and MPLP, we used the 5 items of the MPS-Short Form's socially prescribed perfectionism (e.g., "Anything that I do that is less than excellent will be seen as poor work by those around me") and also adapted all items so they referred to father and mother respectively (e.g., "Anything of learning that I do that is less than excellent will be seen as poor work by my father" for FPLP and relacing "by my father" in the item with "by my mother" for MPLP). Respondents are asked to rate items across a 5-point Likert-type scale ranging 1 (*strongly disagree*) to 5 (*strongly agree*). Evidence for the content and construct validity of the Chinese HFMPs scale has been reported in Zhou et al. (2008). Higher scores on the SOLP, FPLP and MPLP scales reflect greater learning perfectionism.

### *Learning Burnout*

Learning burnout was assessed by the Primary Students Learning Burnout Scale (PSLBS) (see "Appendix"; Chen 2009). The PSLBS scale is a 23-item multidimensional measure of learning burnout consisting of the following four subscales: Negative Emotional State (7 items, e.g., "I have a lot of pressure in everyday study"), Negative External Evaluation (5 items, e.g., "Every time when I am not good in learning, my parents will criticize me"), Poor Life Quality (7 items, e.g., "I feel tired because of little leisure time") and Poor Teacher-Student Relationship (4 items, reverse coded, e.g., "I love my teachers and trust them"). Respondents are asked to rate items across a 3-point scale,

i.e., 1 (*yes*), 2 (*unsure*) and 3 (*no*). Evidence for the content and construct validity of the PSLBS scale has been reported in Chen (2009). In the present study the responses were reversed so higher scores on the PSLBS scales reflect greater learning burnout.

### *Learning Stress*

Learning stress was assessed by the Perceived Learning Stress Scale (PLSS) modified from the Perceived Stress Scale (PSS, S. Cohen, Karmarck and Mermelstein 1983) following the similar protocols noted above. We strived to preserve the original phrasing as much as possible (e.g., "How often have you been upset because of something that happened unexpectedly" was changed to "How often have you been upset because of something in learning that happened unexpectedly?") The PLSS is a 10-item unidimensional scale. Respondents are asked to rate items across a 5-point Likert-type scale ranging from 1 (never) to 5 (very often). Evidence for the content and construct validity of the Chinese PSS scale has been reported in Yang and Jiang (2008) and Shang and Yang (2014). Higher scores on the PLSS reflect greater learning stress.

## Data Analysis

We examined the missing data at the item level. If a participant was missing data for less than 10 % of items on any relevant scale, we calculated a mean item score for that participant for that subscale using items with data present, and then substituted that mean item score for the missing item scores for that participant only (Graham et al. 2003).

## Results

Cronbach's alpha coefficients, means, and standard deviations are presented in Table 1. We examined the internal consistencies with Cronbach's alpha coefficient, in which values above .70 indicate satisfactory reliability (Hair et al. 1998), whereas values above .60 indicate satisfactory reliability with scales that have 6 or less items (Peter 2002). This study includes three dimensions of learning perfectionism and two dimensions of learning burnout (i.e., negative external evaluation and poor teacher-student relationship) each consisting of less than six items with alpha values ranging from .60 to .75. The PLSS and the other two dimensions of learning burnout (i.e., negative emotional state and poor life quality) each has over six items with alpha values ranging from .74 to .81. Therefore, all measures indicated satisfactory alpha reliability.

We tested the score differences of FPLP and MPLP within subjects through paired-comparisons. Results

**Table 1** Correlations and descriptive statistics

	1	2	3	4	5	6	7	8	9	10	11
Learning perfectionism											
1. Self-oriented	–										
2. Father-prescribed	.21***	–									
3. Mother-prescribed	.24***	.60***	–								
4. Learning stress	-.38***	.07	.17***	–							
Learning burnout											
5. Negative emotional state	-.32***	.07	.19***	.61***	–						
6. Negative external evaluation	-.28***	.18***	.29***	.53***	.47***	–					
7. Poor life quality	-.21***	.08	.21***	.52***	.72***	.52***	–				
8. Poor teacher-student relationship	-.25***	.00	.09*	.39***	.52***	.38***	.47***	–			
9. Gender (female)	-.10*	.07	.01	.21***	.15***	.21**	.09*	.08*	–		
10. Grade	-.06	.03	.03	.00	.18***	-.08	.06	.06	.04	–	
11. School (urban)	.06	-.01	.01	-.04	-.09	.14**	.18***	-.05	.00	-.05	
12. School (suburban)	.04	.05	.01	.06	.14**	.03	.15***	.07	-.06	.13**	.59***
<i>M</i>	3.93	3.21	3.34	2.37	1.67	1.74	1.55	1.44	–	–	–
<i>SD</i>	0.73	0.81	0.79	0.65	0.57	0.49	0.47	0.45	–	–	–
$\alpha$	.75	.66	.64	.75	.85	.64	.74	.60	–	–	–

$n = 552$ . All scores are mean scores (see Method section). Gender (female) was coded 0 = female, 1 = male. School (urban) was coded 0 = urban, 1 = non-urban. School (suburban) was coded 0 = suburban, 1 = non-suburban. “–” = not applicable

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

showed a significantly higher score for MPLP than FPLP,  $t(552) = 4.43$ ,  $p < .001$ ,  $d = 0.14$ , 95 % CI [0.08, 0.20].

The bivariate correlations among all variables, including gender, grade, and school are presented in Table 1 as well. As expected, SOLP was negatively related to learning stress and all four learning burnout dimensions as well, whereas MPLP were positively related to them. However, FPLP was not related to learning stress, and its correlation with negative external evaluation was small according to J. Cohen’s (1992) suggestions of small- (.10), medium- (.30), and large-sized (.50) correlation values, which was contrary to our hypothesis. Furthermore, gender, grade, and school indicated significant correlations. Female gender showed a negative correlation with SOLP, insignificant correlation with FPLP and MPLP, and positive correlations with learning stress and all four learning burnout dimensions. Grade demonstrated a positive correlation with negative external evaluation, school (urban) showed positive correlations with negative external evaluation and poor life quality, and school (suburban) showed positive correlations with negative emotional state and poor life quality. As expected, the three forms of learning perfectionism manifested a significant positive correlation (see Table 1), which indicates the significant overlap between the forms of learning perfectionism.

To analyze the predictive utility of learning perfectionism in accounting for learning burnout, we conducted a

hierarchical regression analysis. Because the relation between FPLP and learning stress was not established, only SOLP and MPLP were examined as predictors. The analysis comprised three separate steps. In step 1, gender, grade and school were entered simultaneously to examine how they predicted learning burnout. In step 2, the two forms of perfectionism were entered simultaneously to examine how learning perfectionism predicted learning burnout over and beyond gender, grade and school. In step 3, learning stress was included to examine how learning stress predicted learning burnout over and beyond gender, grade, school and learning perfectionism.

Results of regression analysis are presented in Table 2. The inclusion of learning stress reduced the path involving SOLP and negative emotional state, negative external evaluation, poor life quality, and poor teacher-student relationship, and the path involving MPLP and negative emotional state, negative external evaluation, poor life quality, and poor teacher-student relationship. The significant association between SOLP and poor life quality, as well as that between MPLP and poor teacher-student relationship became insignificant after controlling for learning stress. Furthermore, across the mediation models for all four learning burnout dimensions, the path between stress and each learning burnout dimension is consistently stronger than those between learning perfectionism and the same learning burnout dimension. For example, the path

**Table 2** Summary of hierarchical regression analyses predicting learning burnout

Predictor	Negative emotional state		Negative external evaluation		Poor life quality		Poor teacher-student relationship	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
Step 1: Control variables	.074***		.072***		.041***		.015*	
Gender (female)		.17***		.21***		.09*		.10*
Grade		.17***		-.08		.05		.06
School (urban)		.02		.15***		.18***		.05
School (suburban)		.11*		-.05		.08		.06
Step 2: Learning perfectionism	.164***		.199***		.106***		.079***	
Self-oriented		-.38***		-.35***		-.26***		-.28***
Mother-prescribed		.26***		.38***		.27***		.15**
Step 3: Learning stress	.196***		.113***		.162***		.077***	
Self-oriented		-.16***		-.18***		-.07		-.15**
Mother-prescribed		.13***		.27***		.15***		.07
Learning stress		.51***		.39***		.46***		.32***

*N* = 552. Gender (female) was coded 0 = female, 1 = male. School (urban) was coded 0 = urban, 1 = non-urban. School (suburban) was coded 0 = suburban, 1 = non-suburban

\* *p* < .05; \*\* *p* < .01; \*\*\* *p* < .001

found between leaning stress and negative emotional state ( $\beta = .51$ ) is over three times stronger than the direct path found between SOLP and negative emotional state ( $\beta = -.15$ ). In addition, this path is four times stronger than the direct path found between MPLP and negative emotional state ( $\beta = .13$ ). Overall, the present regression analytic results suggest that learning stress mediates the relation between SOLP and MPLP, and the dimensions of learning burnout (Baron and Kenny 1986).

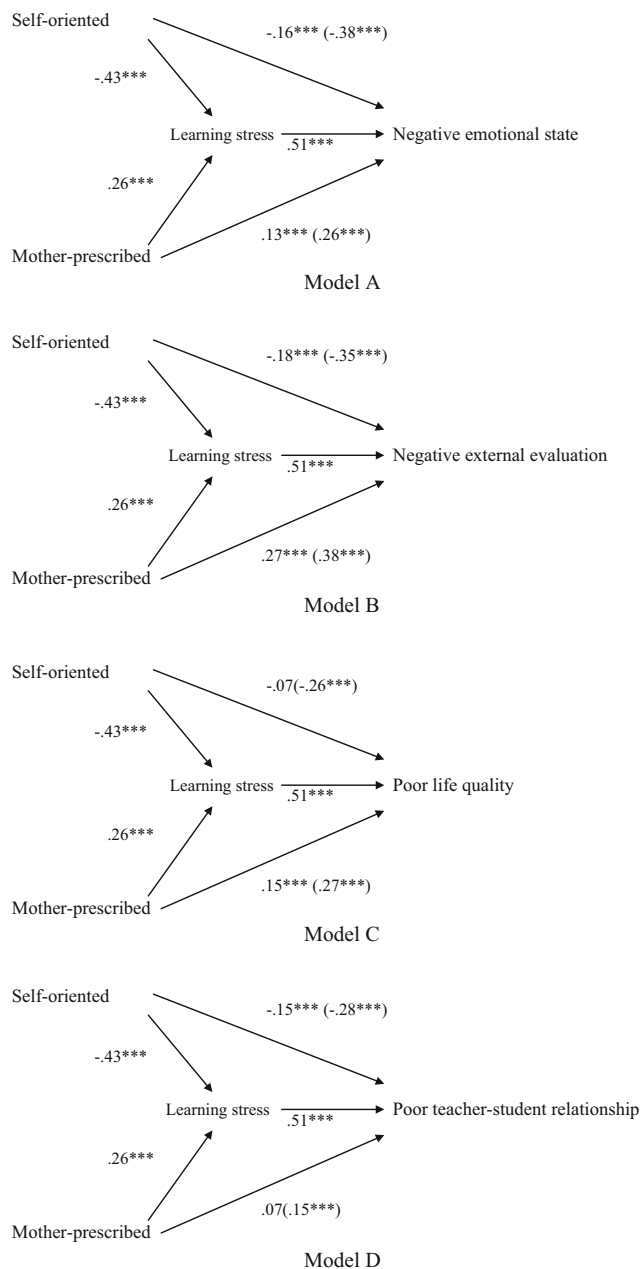
Finally, following the procedures of Preacher and Hayes (2004), we conducted mediation analyses for four mediation models with the two forms of learning perfectionism as the independent variables, learning stress as the mediator, and the four dimensions of learning burnout as the dependent variables. The Sobel tests of the mediation effects were significant with  $z = -2.87, -5.45, -2.31, -4.50, ps < .05$ , for upper mediation path in Model A, B, C and D respectively, and  $z = 4.20, 9.36, 6.74, 3.32, ps < .05$ , for lower mediation path in Model A, B, C and D respectively. All the 95 % confidence intervals (CIs) from the bootstrap tests of the indirect effect (5000 bootstraps) did not include zero indicating that the indirect effects were significant. Learning stress mediated the relationship between SOLP, MPLP, and learning burnout (see Fig. 1).

**Discussion**

This study aimed to examine the mediation of learning stress on the relation between learning perfectionism and burnout. The results of this study showed that SOLP was

negatively related to learning stress, and MPLP was positively related to learning stress, whereas FPLP remained unrelated. The present study further determined the negative relation between SOLP and all four dimensions of learning burnout (negative emotional state, negative external evaluation, poor life quality, and poor teacher-student relationship). Furthermore, MPLP was positively related to these dimensions, whereas FPLP was positively related to negative external evaluation alone. Importantly, when multiple regressions were computed while controlling for the overlap between the two forms of perfectionism (as well as the influence of gender, grade, and school), learning stress mediated the relations of both SOLP and MPLP across all four learning burnout dimensions.

Present findings of the correlational analyses expand on the findings from previous studies with student samples (e.g., Chen 2011; Jue 2011; Zhang et al. 2007) by showing that SOLP is negatively related to learning stress and all dimensions of learning burnout, whereas MPLP is positively related to them in primary school students. Going beyond previous findings, the regression analysis results indicated that when gender, grade, and school, and the overlap between SOLP and MPLP are controlled for, learning stress partially or fully mediates the relations between SOLP and MPLP with the four dimensions of learning burnout. Furthermore, results are inconsistent with two previous findings. First, self-oriented perfectionism alone cannot be considered a good proxy for positive perfectionistic strivings if it overlaps with socially prescribed perfectionism or self-criticism which is



**Fig. 1** Mediation models of learning stress on relationship between learning perfectionism and learning burnout

not controlled for (see Stoeber and Otto 2006). Second, the mediation of stress may be restricted to the relation between perfectionistic concerns and psychological functioning (Chang 2006a; Chang et al. 2004; Dunkley et al. 2003; Shang and Yang 2014).

This inconsistency may be attributed to the difference in relation patterns of domain-specific perfectionism with stress and other outcomes. For example, Cain et al. (2008) found that the perfectionistic concerns in appearance,

interpersonal, and academic domains are positively related to stress. However, these factors were not related to self-efficacy in the respective domains. By contrast, Stoeber and Rennert (2008), as well as Childs and Stoeber (2012) determined that perfectionistic strivings at work did not predict stress and burnout unlike perfectionistic concerns at work. Therefore, the present finding that the stress-mediation model involves the perfectionistic strivings in the domain of learning may be generalized to some (but not all) other domains. Thus, whether the perfectionistic strivings of domain-specific perfectionism show significant relations with psychological outcomes such as stress and burnout or not depends on domains.

Present findings indicate that MPLP scored higher with stronger relation to learning stress and burnout than FPLP, which suggests that children's exposure to the maternal perfectionistic expectation is an important family origin for learning perfectionism. Furthermore, no gender differences on the FPLP and MPLP are derived as well. These findings provide support for the primary-caregiver hypothesis on the development of children's perfectionism which states that children's perfectionism resembles that of their mother (see Frost et al. 1993; Morris and Lomax 2014; Tong and Lam 2011). Interestingly, in the present study, the SOLP is found stronger among females than males. One possible explanation is that females are more mature physically and mentally than males in this age. Thus, they are more intentional in striving for good performance. This finding suggests other origins of SOLP apart from parenting for development. For the same reason, females are more effective in coping with learning issues, and therefore suffer less from learning stress and burnout than males.

Furthermore, the negative external evaluation and poor life quality among urban students are weaker compared to non-urban students. The negative emotional state and poor life quality of suburban students are weaker than rural students. This might be explained by the quality differences among urban, suburban and rural schools aforementioned. Given the better quality of urban schools, students receive more positive external evaluation and experience, which results in better life quality compared to students in less qualified suburban and rural schools. For the same reason, suburban students have better emotional state and life quality than rural students.

The present study includes limitations as well. First, the present study used the Hewitt and Flett's MPS to measure learning perfectionism. Therefore, SOLP only taps adaptive aspects with personal high standards, whereas FPLP and MPLP only tap maladaptive aspects of high standards placed on students by parents. Future studies may consider including additional measures such

as the Performance Perfectionism Scale (Chang 2006b) and the Revised Child and Adolescent Perfectionism Scale (Yang et al. 2015) which differentiate adaptive and maladaptive aspects of self-oriented perfectionism and socially prescribed perfectionism to clarify what aspects of learning perfectionism are responsible for the negative effects on learning stress and burnout. Moreover, future studies may include general perfectionism measures to investigate if learning perfectionism has incremental contributions beyond and over general perfectionism. Second, the present study used perceived perfectionistic expectations from parents as predictors. Future study may include parent report forms of perfectionistic expectations to compare the predictive power of perceived and real perfectionistic expectations from parents. Finally, the data are cross-sectional. Consequently, the causal-effect relationship among learning perfectionism, learning stress, and learning burnout is determined in the statistical sense. Future studies need to adopt longitudinal research designs to examine if the mediation effects we found represent predictive effects over time.

Despite these limitations, the present findings present a number of practical implications for professionals who provide counseling services to students in primary schools. First, SOLP was found to be a negative predictor of learning stress and burnout, and primary school students with higher SOLP are less likely to be psychologically distressed. Therefore, professionals can develop perfectionistic striving-focused programs that facilitate potentials to strive for high standards, which may be of special importance for males in primary schools. Second, given that MPLP increases learning stress and burnout, counselors may develop cognitive strategies to help clarify whether students have biased perceptions or irrational beliefs about the expectations from their mother. For example, students may believe that their mothers love them only when they are perfect in school. In this regard, counseling may involve efforts to dispute their irrational beliefs. Typically, this might involve efforts to reframe expectations from mothers to better understand their love. Moreover, counselors may suggest that fathers spend more time with their children and attempt to buffer stress generated by MPLP. Third, helping develop effective coping strategies that consider the mediation effect of learning stress, including time management, is necessary to reduce learning stress. Furthermore, considering that numerous parents possess unrealistic expectations for their children (Wang 2010) and supportive parenting will help to cope with learning stress and burnout (Chen 2009), counselors may help parents set realistic expectations, and express them in a right (supportive) way.

### Appendix: Primary Students Learning Burnout Scale

This scale consists of a number of items that describe your potential feelings, ideas and behaviors regarding learning. Please indicate your agreement with each item by circling the appropriate number on the line following that item. Please be open and honest with your responding.

1. I am full of energy once I think about my study <sup>a</sup>	1	2	3
2. I have a lot of pressure in everyday study	1	2	3
3. Correcting academic works over and over again makes me bored	1	2	3
4. I always feel upset when I am unable to work out exercise	1	2	3
5. Teachers are able to understand me regarding study <sup>a</sup>	1	2	3
6. Too much exercise makes me feel tied	1	2	3
7. I feel tired because of little leisure time	1	2	3
8. I feel sad once I think about my study	1	2	3
9. Teachers often criticize me because of study	1	2	3
10. I love my teachers and trust them <sup>a</sup>	1	2	3
11. I feel down when I think about my study everyday	1	2	3
12. Recently, my sleeping is becoming bad	1	2	3
13. Recently, my appetite is worse than ever before	1	2	3
14. I found that teachers have bias on me	1	2	3
15. Studying everyday makes me short-tempered	1	2	3
16. There is little error in my academic work <sup>a</sup>	1	2	3
17. Busy study everyday makes me indifferent to my classmates	1	2	3
18. I would be inattentive to anybody if I am not doing well in study	1	2	3
19. I like to get along with my teachers and classmates <sup>a</sup>	1	2	3
20. Every time when I am not good in learning, my parents will criticize me	1	2	3
21. I am always criticized by parents for my poor study	1	2	3
22. I am able to finish work assigned by teachers <sup>a</sup>	1	2	3
23. I often look forward to holidays without school	1	2	3

1 = Yes 2 = Unsure 3 = No

<sup>a</sup> Indicates reverse-scored items. Negative emotional state includes item 1, 2, 3, 6, 8, 11, and 23; Negative external evaluation includes item 9, 16, 20, 21, and 22; Poor life quality includes item 4, 7, 12, 13, 15, 17 and 18; Poor teacher-student relationship includes item 5, 10, 14 and 19

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