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## An Empirical Study of English Learning Burnout Among Chinese Senior High School Students

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**Abstract:** A number of researchers in language education have investigated the effects of language learning emotions. Burnout, a negative affective factor, is deemed a shared phenomenon among language learners. In the context of teaching English as a foreign language (EFL) in China, Chinese EFL learners, especially senior high school students, seem to be vulnerable to English learning burnout (ELB). ELB is a three-dimensional concept derived from job burnout in psychology and academic burnout in general education. It possesses three principal components: Exhaustion, Cynicism, and Reduced Efficacy. The present study aims to explore ELB levels, gender dissimilarities, and English learning performance differences in ELB among Chinese senior high school students. We administered the *Maslach Burnout Inventory-EFL Student Survey* to a sample of 377 Chinese senior high school students, analyzing the collected data through descriptive statistics, an independent sample t-test, and one-way ANOVA using the Statistical Package for the Social Sciences (SPSS) 26.0. Our significant findings are as follows: 1) Chinese senior high school students had low overall and dimensional ELB levels; 2) there was no significant gender difference in students' ELB levels; and 3) the students' English learning performance levels significantly differentiated their ELB levels. Some theoretical and practical implications are provided.

**Keywords:** Chinese senior high school students, English learning burnout, English learning performance, gender, levels.

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### Introduction

Instruction in foreign languages is long-established in China, dating back to the 19th century. In the 20th century, the Chinese government mandated English as a compulsory course, implying the prime significance of teaching English as a foreign language (EFL) in China. English is seen as a fundamental subject at different stages in the education of Chinese students.

However, learning EFL may be difficult for Chinese learners, especially senior high school students who face the challenge of college entrance examinations. They often struggle with a significant burden of assignments, rigid requirements, and excessive stress from their EFL learning. Therefore, Chinese senior high school students may suffer from physical and mental exhaustion, may have a detached attitude towards EFL, and might even lose their self-efficacy in relation to English learning. These psychological experiences constitute ELB syndrome (Li et al., 2021). In addition, senior high school students are transitioning from adolescents to adults with the associated complexity in their psychophysical state. Hence, examining their emotional factors is crucial for understanding their EFL learning process and enhancing their outcomes.

Notwithstanding its potential perils, the research topic of ELB among EFL learners has received little attention in language education, in contrast with the rich and in-depth research on academic burnout in the general education field. In addition, emotional variables affecting language learners have been the focus of plentiful research, such as language learning anxiety (e.g., Gkonou et al., 2017; Jin et al., 2020; Liu, 2019; Sun & Teng, 2021). With the emergence of positive psychology, researchers in language education started to shift their interest to positive emotional states in language learners, such as enjoyment (Dewaele et al., 2019; Jin & Zhang, 2018; Li, 2022), flow (Liu & Song, 2021), and engagement (Dao & McDonough, 2018; Dincer et al., 2019; Liu, 2021; Mercer & Dörnyei, 2020). However, even though it is a critical

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emotional factor influencing students' EFL learning, research on ELB has been insufficient. This deficiency in research on ELB indicates that the experience and ramifications of burnout among EFL learners have been overlooked.

Thus, it is worth probing the ELB phenomenon and analyzing its pertinent factors. The present study first aims to explore the overall and dimensional levels of ELB among Chinese senior high school students to determine the severity of their ELB syndrome and variances among the three subdimensions. Next, we will compare the levels of ELB between male and female students and among students with various English learning performance levels to ascertain whether there are significant differences.

### Literature Review

In psychology, burnout originally referred to job burnout syndrome among human services workers. As research on burnout has advanced, however, the term was no longer restricted to human service occupations. It has been applied to other groups of people, such as the police, teachers, and students. Hence, conceptualizations of academic burnout and foreign language learning burnout have emerged in research on general and language education.

#### *Defining ELB*

The original concept of burnout or job burnout emerged from qualitative and quantitative research data in psychology. It was defined as "a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment among individuals who do 'people work' of some kind" (Maslach & Jackson, 1986, p. 1).

In the general education field academic burnout, also known as student burnout or school burnout, is based on Maslach's multidimensional theory of job burnout (Maslach & Jackson, 1986). Academic burnout mainly manifests in exhaustion due to excessive learning needs, a cynical and detached attitude towards learning, and poor performance (Bresó et al., 2007; Schaufeli et al., 2002). Students are neither employees nor engaged in specific jobs, but their core activities can be interpreted as work because they are involved in structured and mandatory activities (e.g., attending classes and completing assignments) to attain particular goals (e.g., passing exams and obtaining particular test scores; Bresó et al., 2007; Schaufeli et al., 2002).

Against the background of globalization, EFL education is booming worldwide. Researchers have paid significant attention to the traits of EFL learners. ELB, a vital emotional factor, affects EFL learners' learning motivation and English proficiency. ELB is interpreted as the psychological experience of extreme tiredness in English study, detachment from English learning activities, and a decline in English learning efficacy (Li et al., 2021; Yang, 2015). Despite being seen as a particular branch of academic burnout, ELB is distinctive in that it is both language- and context-specific (Li et al., 2021), since it accentuates the English subject and pertinent factors such as English learning purposes, content, methods, and environment (Yang, 2015).

Regarding the core components of ELB, researchers concur with the original multidimensional theory of burnout proposed by Maslach (1998). ELB is seen as a three-dimensional structure consistent with the conceptualizations of job burnout and academic burnout. The three elements of ELB are Exhaustion, Cynicism, and Reduced Efficacy (Li et al., 2021; Yang, 2015). Specifically, Exhaustion refers to learners' feelings of physical or mental tiredness in English learning; Cynicism alludes to hostile and indifferent attitudes towards English learning activities; and Reduced Efficacy describes a decrease in English learning efficiency and ability (Yang, 2015).

Compared with research on academic burnout in general education, there are fewer studies of students' ELB in language education (e.g., Erakman & Mede, 2018; Jahedizadeh et al., 2015; Li et al., 2021; Li, 2022; Liu et al., 2021; Moghadam et al., 2020). Nevertheless, research topics in ELB range from ELB itself (e.g., burnout levels and subdimensions; see Erakman & Mede, 2018; Li et al., 2021; Liu et al., 2021) to its relations with other factors (e.g., its associations with demographic and other emotional factors; see Jahedizadeh et al., 2015; Liu et al., 2021).

Due to the limited body of research on ELB in the language education domain and consistency in the conceptualizations of ELB and academic burnout, the present study will review studies of academic burnout and ELB in both fields to attain a comprehensive understanding of ELB and its relevant factors.

#### *Levels of ELB*

In the general education field, numerous studies have explored the levels of academic burnout (e.g., Bilge et al., 2014; Ertugut & Soysekerci, 2010; Fernández-Castillo, 2021; Gabola et al., 2021; Gungor, 2019; Kim et al., 2015; Noh et al., 2013; Ríos-Risquez et al., 2016; Rohmani & Andriani, 2021; Shokrpour et al., 2020; Vinter, 2021; Xie et al., 2019). However, researchers have not reached a consensus about global and dimensional levels of academic burnout because of the complex nature of the concept, differing research instruments, and diverse research samples.

Concerning the overall level of students' academic burnout, some studies concluded that it was low (e.g., Vinter, 2021; Xie et al., 2019), while other research reported that it was high (e.g., Bilge et al., 2014; Ertugut & Soysekerci, 2010; Fernández-Castillo, 2021; Rohmani & Andriani, 2021). For example, Xie et al. (2019) investigated the impacts of academic adaptability on academic burnout, immersion in learning, and academic performance among 1977 Chinese medical

students. The results showed that the students' academic burnout level was low. However, Ertugut and Soysekerci (2010) explored the burnout levels among 221 Turkish vocational school students by employing the *Maslach Burnout Inventory* (MBI), with findings indicating that Turkish vocational high school students had a high level of burnout.

In addition to disagreements about the global level of the phenomenon, the dimensional levels of academic burnout are interpreted differently by different researchers. For instance, Shokrpour et al. (2020) investigated the possible factors causing burnout among 195 Iranian medical students, with results suggesting that students had a high level of reduced efficacy and a low level of cynicism. The findings reported by Ertugut and Soysekerci (2010) revealed that their Turkish vocational high school students' exhaustion level was high, while also showing that their cynicism level was low.

In addition, the limited literature has indicated that the overall level of learners' ELB is not high in the language education field. For instance, Liu et al. (2021) explored the relationship between self-oriented perfectionism and ELB in terms of the impact of grit and anxiety among 544 Chinese college students, with their results suggesting that learners had relatively low ELB levels. Li et al. (2021) explored the conceptualization of ELB, providing a corresponding measurement by conducting the newly developed *Maslach Burnout Inventory – EFL Student Survey* among 1718 Chinese secondary school students. Their findings showed that students had low overall and dimensional levels of ELB. Meanwhile, Erakman and Mede (2018) explored the extent of ELB among Turkish EFL students in an English Preparatory Program by conducting the *Maslach Burnout Inventory–Student Survey*, finding that the global ELB level was medium, dimensional levels of exhaustion and cynicism were high, and the level of reduced efficacy was low.

### *Gender Differences in ELB*

So far, few researchers in language education have paid attention to gender differences in learners' ELB (e.g., Jahedizadeh et al., 2015). However, gender is a crucial demographic factor that has received significant attention in the investigation of students' academic burnout (e.g., Bikar et al., 2018; Chen, 2021; Gabola et al., 2021; Herrmann et al., 2019; Martínez et al., 2021; Meylan et al., 2011; Salmela-Aro & Tynkkynen, 2012; Sepede et al., 2021; Treat et al., 2021; Vinter et al., 2021), with many of these studies confirming gender differences in students' general academic burnout (e.g., Bikar et al., 2018; Herrmann et al., 2019; Martínez et al., 2021; Meylan et al., 2011; Salmela-Aro & Tynkkynen, 2012; Sepede et al., 2021; Treat et al., 2021; Vinter et al., 2021). In other words, male and female students distinguish themselves from each other in terms of their levels of academic burnout.

Researchers generally concur that female students present higher levels of burnout than their male peers (e.g., Martínez et al., 2021; Meylan et al., 2011; Salmela-Aro & Tynkkynen, 2012; Treat et al., 2021; Vinter et al., 2021). For instance, Salmela-Aro and Tynkkynen (2012) administered the *School Burnout Inventory* (SBI) to 770 Finnish adolescents to investigate variations in student burnout according to a number of variables including gender, time status, and educational track. The results showed that female students experienced more overall school burnout than male students. Similarly, Martínez et al. (2021) examined the relationship between burnout, self-efficacy, and student gender and age among 1287 Spanish high school students. The results indicated that female students experienced more intense academic burnout than males.

However, there are also studies reporting opposite results, revealing that male students have higher levels of academic burnout. For example, Bikar et al. (2018) measured burnout in 362 high school students in Zahedan, Iran, employing the *Academic Burnout Questionnaire* to explore the relationship between emotional structures and academic burnout among male and female students. The results of an independent t-test demonstrated that academic burnout was higher among the male students than their female counterparts.

In addition to gender differences in the overall level of academic burnout, several studies have also reported gender differences in the dimensional burnout levels (e.g., Herrmann et al., 2019; Sepede et al., 2021). For instance, Herrmann et al. (2019) examined individual differences in school burnout by conducting the SBI with 649 German middle school students, with results showing that female students scored higher on the exhaustion dimension. In contrast, however, Sepede et al. (2021) utilized the MBI to assess the burnout of 765 medical university students in the United States, investigating the impact of involvement in extracurricular activities and attendance on burnout among medical students. The results indicated that male students showed a higher level of depersonalization than females.

In addition, there is also evidence suggesting no statistically significant differences in academic burnout between male and female students (e.g., Chen, 2021; Gabola et al., 2021). For example, Gabola et al. (2021) employed the SBI to measure the academic burnout of 840 adolescents in Switzerland and Italy to examine and compare their school burnout levels. The results showed that gender did not explain burnout differences among students. Similarly, Chen (2021) conducted the *Maslach Burnout Inventory – Student Survey* (MBI-SS) on 255 Chinese secondary school students in order to explore gender dissimilarities, but a regression analysis results showed no significant gender differences. Concerning gender differences in learners' ELB levels, Jahedizadeh et al. (2015) examined levels of burnout among 250 Iranian EFL students by employing the MBI-SS, and the research results demonstrated that male students reported more burnout than female learners.

*English Learning Performance Differences in ELB*

The association between students' English learning performance and ELB has not received significant attention from researchers in language education. However, the relationship between students' academic performance and burnout has been widely explored in the general education field (e.g., Burr & Beck Dallaghan, 2019; Cadime et al., 2016; Madigan & Curran, 2021; March-Amengual et al., 2022; May et al., 2015; Oyoo et al., 2020; Palos et al., 2019; Salanova et al., 2009; Supervía & Bordás, 2020; Supervía et al., 2020; Wei et al., 2021).

Researchers generally agree that students' academic burnout is negatively related to performance (e.g., Madigan & Curran, 2021; May et al., 2015; Oyoo et al., 2020; Supervía et al., 2020; Wei et al., 2021). For instance, Madigan and Curran (2021) carried out a meta-analysis of the association between academic burnout and achievement, including 29 studies and 109,396 participants. The results suggested that academic burnout and its three subdimensions had a significantly negative relationship with academic achievement. Supervía et al. (2020) investigated the relationship between emotional intelligence, academic burnout, and school performance among 1,756 Spanish secondary school students, suggesting a negative relationship between academic burnout and performance.

Nonetheless, researchers also proposed that academic performance as an outcome was unaffected by burnout. For example, March-Amengual et al. (2022) explored the psychological symptoms of burnout and their relationships with academic performance among 506 university students. The results indicated that students' academic achievement was not influenced by burnout. Similarly, Salanova et al. (2009) analyzed the impact of performance obstacles and facilitators, burnout, and engagement on academic performance among 527 university students. The findings showed that academic burnout did not predict performance.

In addition, concerning the causal relationship between academic burnout and achievement, a few researchers have treated burnout as an outcome of academic performance as an antecedent. For instance, Palos et al. (2019) explored the association between academic performance and student well-being, including engagement and burnout, among 142 university students. The results revealed that academic achievement could be an antecedent of burnout. In summary, in both general education and language education, there is scant existing research examining whether differences in students' performance could differentiate their burnout levels, and the current evidence offers an unclear picture.

### Methodology

To explore ELB levels and ascertain whether gender and English learning performance differences are associated with ELB levels among Chinese senior high school students, the present study focused on three research questions:

RQ1. What are the levels of students' ELB?

RQ2. Does students' gender differentiate their ELB levels?

RQ3. Does students' English learning performance differentiate their ELB levels?

*Participants*

The research participants were 377 senior high school students from northeast China. The students were from the first-grade ( $N=152$ ; 40.32%), second-grade ( $N=154$ ; 40.85%), and third-grade ( $N=71$ ; 18.83%) of senior high school. There were 158 male students (41.91%) and 219 female students (58.09%). The students were all native Chinese speakers and were currently taking the compulsory high school English course. Their scores in monthly English examinations were taken as indicators of their English learning performance.

*Instrument*

The study utilized the *Maslach Burnout Inventory-EFL Student Survey* (MBI-EFL SS; Li et al., 2021). The MBI-EFL SS was adapted from the *Maslach Burnout Inventory-Student Survey* (MBI-SS; Schaufeli et al., 2002), which has been widely used to measure students' academic burnout because of its high reliability and validity in various social-cultural contexts, such as the Netherlands, Spain, Portugal, Sri Lanka, and China (Hu & Schaufeli, 2009; Li et al., 2021; Schaufeli et al., 2002; Wickramasinghe et al., 2018). Compared with the MBI-SS, the MBI-EFL SS fits better in the English-specific learning context.

In the MBI-EFL SS (see Appendix A), ten items constitute three subscales, namely Exhaustion (four items, e.g., "I feel emotionally drained by my English studies"), Cynicism (three items, e.g., "I have become less enthusiastic about my English studies"), and Reduced Efficacy (three items, e.g., "I don't feel stimulated when I reach my goals in English study"). Responses are collected using a 5-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Higher scores on the three subscales indicate a higher level of ELB. The Cronbach's alpha scores for the overall MBI-EFL SS and its three subscales (Exhaustion, Cynicism, and Reduced Efficacy) in the present study were .904, .875, .752, and .936, respectively.

### Procedures

The questionnaire was administered online due to the COVID-19 pandemic. The questionnaire was uploaded to Wenjuanxing (www.wjx.cn), a Chinese website for distributing surveys and retrieving collected data. The participants were informed of the primary research information, our confidentiality commitment, and contact details in the questionnaire entry. The participants filled in and submitted their questionnaires online. The data collection time was between December 9 and 13, 2021. The collected data from the 5-point Likert scale were interval. They could be analyzed by performing descriptive statistics, independent samples t-tests, and one-way Analysis of Variance (ANOVA) using the Statistical Package for the Social Sciences (SPSS) 26.0.

### Results

After data collection, the retrieved data were analyzed using SPSS to carry out descriptive statistics, independent samples t-tests, and one-way ANOVA. This section will report the results.

#### Levels of Students' ELB

To answer the first research question about the levels of the students' ELB, the descriptive data presented below show the extent of these Chinese senior high school students' global ELB syndrome and its three dimensions, namely Exhaustion, Cynicism, and Reduced Efficacy. In Table 1, the average mean scores of the overall and dimensional levels of ELB are reported. In addition, to test the normality, the skewness, kurtosis, and Q-Q plots are presented in Table 1 and Figure 1.

Table 1. Overall and Dimensional Levels of ELB

	Min	Max	M	SD	Skewness	Kurtosis
Exhaustion	1.00	5.00	2.34	.93	.558	-.122
Cynicism	1.00	5.00	2.53	1.00	.289	-.577
Reduced Efficacy	1.00	5.00	2.47	.87	.276	-.245
Global ELB	1.00	4.90	2.44	.86	.320	-.397

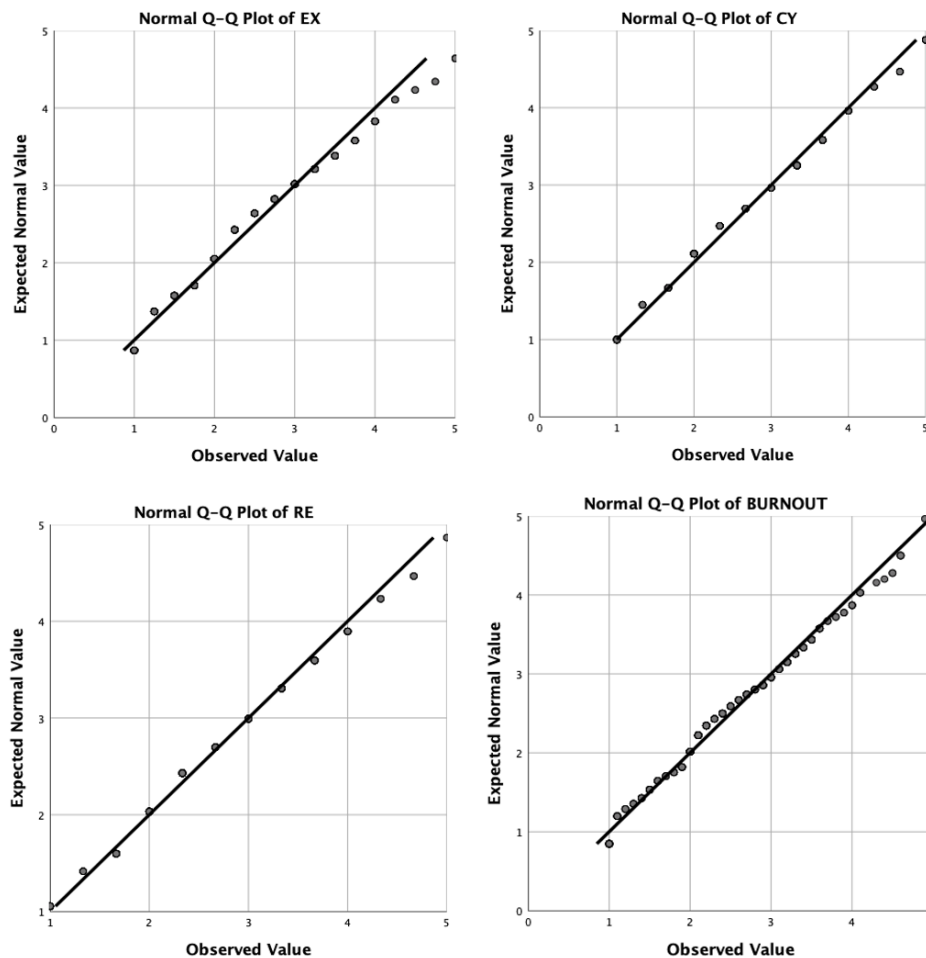


Figure 1. The Q-Q Plots of ELB and Its Three Dimensions.

As shown in Table 1, the mean global score for ELB was low ( $M_{ELB}=2.44$ ,  $SD_{ELB}=.86$ ), as were the three mean dimensional scores ( $M_{EX}=2.34$ ,  $SD_{EX}=.93$ ;  $M_{CY}=2.53$ ,  $SD_{CY}=1.00$ ;  $M_{RE}=2.47$ ,  $SD_{RE}=.87$ ). Among the three subdimensions, Cynicism had the highest mean score ( $M=2.53$ ,  $SD=1.00$ ), Exhaustion had the lowest mean score ( $M=2.34$ ,  $SD=.93$ ), and the mean score of Reduced Efficacy ( $M=2.47$ ,  $SD=.87$ ) was intermediate. In other words, the Chinese senior high school students in our sample reported low general and dimensional levels of ELB. Specifically, they showed the highest level of cynicism and the lowest level of exhaustion.

### Gender Differences in ELB

This study also aims to answer the second research question about whether the students' gender differentiated their ELB levels. Therefore, gender differences in learners' ELB levels were examined by descriptive analysis, including means and standard deviations, as well as independent sample t-tests as shown in Table 2.

Table 2. Gender Differences in Students' ELB

	Male (n=158)		Female (n=219)		MD	t	df	p
	M	SD	M	SD				
Exhaustion	2.39	.99	2.30	.80	.09	.88	375	.382
Cynicism	2.65	1.06	2.45	.95	.20	1.88	316.12	.061
Reduced Efficacy	2.56	.92	2.40	.83	.16	1.77	375	.078
Global ELB	2.52	.90	2.38	.82	.14	1.58	375	.114

The gender factor was taken as the independent variable, while the dimensional and total scores of ELB were dependent variables. As shown in Table 2, the male students had higher mean scores overall ( $M_{ELB}=2.52>2.38$ ) and higher dimensional ELB levels ( $M_{EX}=2.39>2.30$ ;  $M_{CY}=2.65>2.45$ ;  $M_{RE}=2.56>2.40$ ) than female students. However, the results of independent sample t-tests showed that there were no statistically significant differences between the male and female students in the overall level ( $t_{ELB}=1.58$ ,  $p>.01$ ) or in the dimensional levels of ELB ( $t_{EX}=.88$ ,  $p>.01$ ;  $t_{CY}=1.88$ ,  $p>.01$ ;  $t_{RE}=1.77$ ,  $p>.01$ ). In other words, the gender factor could not explain the differences in students' ELB burnout levels.

### English Learning Performance Differences in ELB

In response to the third research question about whether the students' English learning performance differentiates their ELB levels, one-way ANOVA was utilized to analyze whether students' dissimilarities in their English learning performance levels could explain differences in their ELB levels. Thus, the participants were categorized into three groups, namely high, average, and low, according to their levels of English learning performance. Specifically, students' scores in the monthly English examinations were taken as an indicator of their achievement level. The high English learning performance group scored above 127.5 out of 150, the scores of the average group ranged between 127.5 and 90, and the scores of the low group were below 90.

Table 3. English Learning Performance Differences in Students' ELB

	High (n=27)		Average (n=177)		Low (n=173)		F	p	$\eta^2$
	M	SD	M	SD	M	SD			
Exhaustion	1.82	.84	2.19	.88	2.58	.94	12.95	.000	.065
Cynicism	2.16	.87	2.39	.99	2.74	.99	7.75	.001	.040
Reduced Efficacy	2.01	.82	2.37	.85	2.64	.86	8.39	.000	.043
Global ELB	1.98	.72	2.30	.83	2.65	.86	11.67	.000	.059

As shown in Table 3, among the three groups the participants with high English learning performance levels reported the lowest mean overall and dimensional ELB scores ( $M_{ELB}=1.98$ ,  $SD_{ELB}=.72$ ;  $M_{EX}=1.82$ ,  $SD_{EX}=.84$ ;  $M_{CY}=2.16$ ,  $SD_{CY}=.87$ ;  $M_{RE}=2.01$ ,  $SD_{RE}=.82$ ), while the low level group reported the highest mean overall and dimensional ELB scores ( $M_{ELB}=2.65$ ,  $SD_{ELB}=.86$ ;  $M_{EX}=2.58$ ,  $SD_{EX}=.94$ ;  $M_{CY}=2.74$ ,  $SD_{CY}=.99$ ;  $M_{RE}=2.64$ ,  $SD_{RE}=.86$ ). In other words, the descriptive results showed a consistent pattern whereby students with better English learning performance reported lower levels of global and dimensional ELB, and vice versa.

In addition, the results of a one-way ANOVA showed that the different performance levels of students could significantly differentiate their overall ELB level ( $F=11.67$ ,  $p<.01$ ,  $\eta^2=.059$ ) and their dimensional levels of Exhaustion ( $F=12.95$ ,  $p<.01$ ,  $\eta^2=.065$ ), Cynicism ( $F=7.75$ ,  $p<.01$ ,  $\eta^2=.040$ ), and Reduced Efficacy ( $F=8.39$ ,  $p<.01$ ,  $\eta^2=.043$ ). That is to say, the variation in students' English learning performance levels significantly predicted the differences in their overall and dimensional levels of ELB.

## Discussion

The results of our descriptive analysis, independent sample t-tests, and one-way ANOVA have been presented. In this section we will offer detailed explanations of ELB levels, gender differences, and English learning performance differences in relation to the students' ELB.

### *Levels of Students' ELB*

Our descriptive analyses indicate that the Chinese senior school students experienced mild ELB syndrome. They were quite likely to have a cynical, detached, and indifferent attitude towards English learning activities. However, they seemed less likely to experience a state of emotional or physical exhaustion in their English learning process.

This result indicating a low overall level of ELB among the students concurs with studies by Li et al. (2021) and Liu et al. (2021), in which the research participants were also Chinese students. Taking into consideration the Chinese EFL education context, the following reason might partially explain the low ELB levels among Chinese senior high school students. Chinese education, including EFL education, has long been criticized as examination-oriented, but educational reforms have been introduced in recent years. In other words, students do not necessarily experience as much workload and stress as they used to. Specifically, under the double reduction policy issued in 2021 the burdens of excessive homework and off-campus tutoring for students in compulsory education (i.e., primary school and junior high school students) have been eased. Following the mandatory education stage, senior high schools in China are also advised to implement the policy. Thus, senior high school students today may feel less pressure than students in the past because of their reduced academic burden, including their EFL learning burden. They may have fewer assignments and feel less stress in their EFL learning process. Therefore, their ELB levels might be at a low level.

Concerning the individual levels of the three subdimensions of ELB, Exhaustion was the least severe, while Cynicism was the most intense. First, the lowest level of exhaustion might be explained by the multidimensional theory of burnout. According to this theory (Maslach, 1998), Exhaustion is fundamental to the construct of burnout. Some researchers even equate the concept of burnout to the single Exhaustion dimension (Maslach & Leiter, 2016). Thus, the low level of the exhaustion dimension reported by our students is consistent with their low global level of ELB. In addition, the relatively higher level of Cynicism indicates deficiencies in the students' adaptive strategies. In other words, when suffering from excessive EFL learning workload and stress, students may have no applicable strategies to cope effectively with these unfavorable circumstances. Still, they must resort to detaching themselves from English learning activities and developing an indifferent attitude towards English.

### *Gender Differences in ELB*

The independent sample t-tests answered our second research question. No statistically significant gender difference was found in the students' ELB levels, which supports the findings of Chen (2021) and Gabola et al. (2021). In addition, this result also corroborates the inconsistency of previous research findings concerning gender dissimilarities.

Specifically, the results indicated that male and female students experienced indistinguishable levels of ELB and had similar feelings of Exhaustion, Cynicism, and Reduced Efficacy. One of the reasons for this might be that Chinese EFL learners, especially senior high school students, face similar EFL learning contexts, challenges, and stress, whether male or female. They must take English courses to meet the basic requirements for high school graduation and participate in college entrance examinations. Chinese senior high school students of both genders face an extremely burdensome EFL learning workload, caused by excessive learning content condensed into time-limited classes and significant numbers of assignments that are assumed to be beneficial to improve their English learning performance. They also have the same specific goal of obtaining impressive English test scores and struggle with the same pressures to learn English well. Eventually, these conditions may lead Chinese senior high school students of both genders to experience ELB syndrome, and therefore they hamper both male and female students in the same way.

### *English Learning Performance Differences in ELB*

As the results of the one-way ANOVA showed, students with high, average, and low levels of English learning performance were significantly different in their global and dimensional ELB levels. Specifically, students who were more proficient in EFL learning experienced the mildest ELB syndrome. They rarely felt emotional or psychological exhaustion, felt cynical about their EFL learning, or felt they performed poorly. In contrast, students who experienced obstacles in learning EFL suffered more from ELB than their proficient peers.

There may be several reasons underlying the differences in ELB among students with different English learning performance levels. The first reason is pertinent to a particularly influential antecedent of ELB syndrome, namely the excessive EFL learning workload, including in-class learning content, assignments, and homework. Students with higher or lower English achievement levels may perceive the same EFL learning workload differently. In other words, proficient EFL learners may consider their tasks normal and effortless, but the same tasks might be complicated and demanding

for students with lower English levels. Therefore, students with higher or lower levels of English learning performance might experience different levels of ELB due to their differing perceptions of the workload.

Second, the likelihood of the occurrence of ELB among students with different levels of English learning performance and their different responses to ELB are worthy of further study, particularly from a conservation of resources perspective. The conservation of resources theory (COR) is a motivational stress theory concerning individuals' responses to stressful and challenging situations; *resources* broadly refer to the objects, characteristics, conditions, or energies valued by individuals (Hobfoll, 1989, 2002). COR suggests that individuals invest resources to recover from resource loss and regain their diminished resources (Hobfoll, 1989, 2002, 2010).

In the general education field, students with higher levels of academic performance are said to be equipped with various personal resources, including cognitive factors such as self-regulation (Muenks et al., 2017) and emotional factors such as motivation (Guay & Vallerand, 1996; Kusurkar et al., 2013), engagement (Muenks et al., 2017), grit (Muenks et al., 2017), and autonomy and competence (Guay & Vallerand, 1996). In line with research in general education, studies in EFL education also indicate that students with high English learning performance levels possess cognitive and affective personal resources such as learning strategies and styles (Hou et al., 2014) and motivation (Yang et al., 2013).

According to COR, individuals who possess greater resources are less vulnerable to resource loss (Hobfoll, 2010). Also, COR proposes that the larger the stores of resource one has, the more alternative resources one may be able to invest in reobtaining a lost resource (Hobfoll, 2010, 2011). Hence, students with high English learning performance levels who possess more resources than their low-level peers might suffer less from ELB. When ELB threatens them, proficient EFL learners may have a broader range of resources they can employ to compensate for the negative impacts of the syndrome.

### Conclusions

After the data analysis and our discussion of the results, the final section of this research will summarize the significant findings, implications, and limitations of this study. The principal findings of the present research are as follows. First, the Chinese senior school students who participated in the study had low overall and dimensional levels of ELB. Among the three subdimensions of ELB, the level of Cynicism was the highest, and the level of Exhaustion was the lowest. Second, no significant gender difference was found among the students' ELB levels. Third, students with high, average, and low levels of English learning performance were significantly different in their ELB levels; specifically, students with higher English learning performance levels had lower ELB levels.

### Recommendations

Based on these findings, we offer some theoretical and practical implications. Theoretically, the current research was based on the recently proposed conceptualization of ELB and utilized the newly developed MBI-EFL SS to measure students' ELB status (Li et al., 2021). Thus, the results reported by this study could provide evidence to verify this language-specific conceptualization and measurement. They may also partially fill the research gap related to burnout in language education.

Two practical implications of the research are related to ELB levels and individual differences. First, although the participants in the present study reported a low level of ELB, the possibility of ELB syndrome should not be overlooked due to its devastating effects on language learners' psychological well-being and language achievements. Hence, on the one hand, EFL teachers should be trained and equipped with sufficient professional knowledge of negative language learning emotions such as ELB, as well as appropriate coping strategies. In addition, students themselves should also be made aware of and sensitive to the potential threat of negative language emotions, including ELB, by learning about the relevant symptoms and harm.

Second, individual differences in language learning need to be highlighted. Despite the lack of gender difference in students' ELB found by the present study, demographic factors, including gender, age, and educational levels, need further research. Also, EFL teachers should pay attention to individual differences when designing curriculums, instructing content, and evaluating students' progress to better foster students' EFL learning motivation, autonomy, and resilience (Kim et al., 2018; Liu & Han, 2022). In addition, intervention programs should be implemented for lower-level EFL learners to address the different ELB levels of students with various English learning performance levels to reduce their ELB and enhance their self-efficacy and engagement. EFL teachers, schools, family members, and society all need to provide timely support to improve low-level EFL learners' stores of resources, so that they will be less vulnerable to ELB and possess appropriate resources to handle it if it occurs.

### Limitations

Despite this study's significant findings and implications, there are also some drawbacks and limitations. For instance, the assessment of students' English learning performance levels was based only on their scores in monthly English examinations, which may not have been representative of the students' real English achievements. Also, the results in the present study mainly gain support from research in general education, partly because of the lack of existing evidence from empirical studies in the specific language education field. In addition, the study only investigated differences in ELB



levels among students with differing English learning performance levels; it did not probe precisely how ELB levels relate to English learning performance. All of these limitations may offer suggestions for future research.

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### Authorship Contribution Statement

Zhong: Conceptualization, data analysis, writing, and revision. Liu: Conceptualization, data analysis, revision, supervision, and funding. Both authors contributed to the article and approved the submitted version.

### References

- Bikar, S., Marziyeh, A., & Pourghaz, A. (2018). Affective structures among students and its relationship with academic burnout with emphasis on gender. *International Journal of Instruction*, 11(1), 183–194. <https://doi.org/10.12973/iji.2018.11113a>
- Bilge, F., Tuzgöl Dost, M., & Çetin, B. (2014). Factors affecting burnout and school engagement among high school students: Study habits, self-efficacy beliefs, and academic success. *Educational Sciences: Theory & Practice/Kuram ve Uygulamada Egitim Bilimleri*, 14(5), 1721–1727. <https://doi.org/10.12738/estp.2014.5.1727>
- Bresó, E., Salanova, M., & Schaufeli, W. B. (2007). In search of the “third dimension” of burnout: Efficacy or inefficacy? *Applied Psychology*, 56(3), 460–478. <https://doi.org/10.1111/j.1464-0597.2007.00290.x>
- Burr, J., & Beck Dallaghan, G. L. (2019). The relationship of emotions and burnout to medical students’ academic performance. *Teaching and Learning in Medicine*, 31(5), 479–486. <https://doi.org/10.1080/10401334.2019.1613237>
- Cadime, I., Pinto, A. M., Lima, S., Rego, S., Pereira, J., & Ribeiro, I. (2016). Well-being and academic achievement in secondary school pupils: The unique effects of burnout and engagement. *Journal of Adolescence*, 53, 169–179. <https://doi.org/10.1016/j.adolescence.2016.10.003>
- Chen, S. (2021). Academic burnout and its association with cognitive emotion regulation strategies among adolescent girls and boys. *Aggression and Violent Behavior*, Article 101698. <https://doi.org/10.1016/j.avb.2021.101698>
- Dao, P., & McDonough, K. (2018). Effect of proficiency on Vietnamese EFL learners’ engagement in peer interaction. *International Journal of Educational Research*, 88, 60–72. <https://doi.org/10.1016/j.ijer.2018.01.008>
- Dewaele, J., Magdalena, A. F., & Saito, K. (2019). The effect of perception of teacher characteristics on Spanish EFL learners’ anxiety and enjoyment. *Modern Language Journal*, 103(2), 412–427. <https://doi.org/10.1111/modl.12555>
- Dincer, A., Yeşilyurt, S., Noels, K. A., & Vargas Lascano, D. I. (2019). Self-determination and classroom engagement of EFL learners: A mixed-methods study of the self-system model of motivational development. *SAGE Open*, 9(2), 1–15. <https://doi.org/10.1177/2158244019853913>
- Erakman, N., & Mede, E. (2018). Student burnout at English preparatory programs: A case study. *International Journal of Educational Researchers*, 9(3), 17–31. <https://go.cut-link.com/emp0GT>
- Erturgut, R., & Soyşekerici, S. (2010). An empirical analysis on burnout levels among second year vocational schools students. *Procedia – Social and Behavioral Sciences*, 2(2), 1399–1404. <https://doi.org/10.1016/j.sbspro.2010.03.208>
- Fernández-Castillo, A. (2021). State-anxiety and academic burnout regarding university access selective examinations in Spain during and after the covid-19 lockdown. *Frontiers in Psychology*, 12, Article 621863. <https://doi.org/10.3389/fpsyg.2021.621863>
- Gabola, P., Meylan, N., Hascoët, M., De Stasio, S., & Fiorilli, C. (2021). Adolescents’ school burnout: A comparative study between Italy and Switzerland. *European Journal of Investigation in Health, Psychology and Education*, 11(3), 849–859. <https://doi.org/10.3390/ejihpe11030062>
- Gkonou, C., Daubney, M., & Dewaele, J. M. (Eds.). (2017). *New insights into language anxiety: Theory, research and educational implications*. Multilingual Matters. <https://doi.org/10.21832/9781783097722>
- Guay, F., & Vallerand, R. J. (1996). Social context, student’s motivation, and academic achievement: Toward a process model. *Social Psychology of Education*, 1(3), 211–233. <https://doi.org/10.1007/BF02339891>
- Gungor, A. (2019). Investigating the relationship between social support and school burnout in Turkish middle school

- students: The mediating role of hope. *School Psychology International*, 40(6), 581–597. <https://doi.org/10.1177/0143034319866492>
- Herrmann, J., Koeppen, K., & Kessels, U. (2019). Do girls take school too seriously? Investigating gender differences in school burnout from a self-worth perspective. *Learning and Individual Differences*, 69, 150–161. <https://doi.org/10.1016/j.lindif.2018.11.011>
- Hobfoll, S. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513–524. <https://doi.org/10.1037/0003-066X.44.3.513>
- Hobfoll, S. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, 6, 307–324. <https://doi.org/10.1037/1089-2680.6.4.307>
- Hobfoll, S. (2010). Conservation of resources theory: Its implication for stress, health, and resilience. In S. Folkman (Ed.), *The Oxford Handbook of Stress, Health, and Coping* (pp. 127–147). Oxford University Press. <https://doi.org/jm6m>
- Hobfoll, S. (2011). Conservation of resource caravans and engaged settings. *Journal of Occupational and Organizational Psychology*, 84(1), 116–122. <https://doi.org/10.1111/j.2044-8325.2010.02016.x>
- Hou, Y. A., Hou, Y. J., Wei-yu, C., & Cheng, H. Y. (2014). Learning styles, strategy use, and English learning performance: A case study of Taiwanese EFL college students. *International Journal of Learner Diversity and Identities*, 21(1), 1–14. <https://doi.org/10.18848/2327-0128/cgp/v21i01/48580>
- Hu, Q., & Schaufeli, W. B. (2009). The factorial validity of the Maslach Burnout Inventory – Student survey in China. *Psychological Reports*, 105(2), 394–408. <https://doi.org/10.2466/pr0.105.2.394-408>
- Jahedizadeh, S., Ghanizadeh, A., & Ghapanchi, Z. (2015). A cross-contextual analysis of EFL students' burnout with respect to their gender and educational level. *International Journal of English and Education*, 4(3), 10–22. [http://ijee.org/yahoo\\_site\\_admin/assets/docs/2.19005542.pdf](http://ijee.org/yahoo_site_admin/assets/docs/2.19005542.pdf)
- Jin, Y., & Zhang, L. J. (2018). The dimensions of foreign language classroom enjoyment and their effect on foreign language achievement. *International Journal of Bilingual Education and Bilingualism*, 24(7), 948–962. <https://doi.org/10.1080/13670050.2018.1526253>
- Jin, Y., Zhang, L. J., & McIntyre, P. (2020). Contracting students for the reduction of foreign language classroom anxiety: A positive mindsets and behaviors-nurturing approach. *Frontiers in Psychology*, 11(1471), 1–13. <https://doi.org/10.3389/fpsyg.2020.01471>
- Kim, B., Lee, M., Kim, K., Choi, H., & Lee, S. M. (2015). Longitudinal analysis of academic burnout in Korean middle school students. *Stress and Health*, 31(4), 281–289. <https://doi.org/10.1002/smi.2553>
- Kim, T. Y., Kim, Y., & Kim, J. Y. (2018). A qualitative inquiry on EFL learning demotivation and resilience: A study of primary and secondary EFL students in South Korea. *Asia-Pacific Education Researcher*, 27(1), 55–64. <https://doi.org/10.1007/s40299-017-0365-y>
- Kusurkar, R. A., Ten Cate, T. J., Vos, C. M. P., Westers, P., & Croiset, G. (2013). How motivation affects academic performance: A structural equation modelling analysis. *Advances in Health Sciences Education*, 18(1), 57–69. <https://doi.org/10.1007/s10459-012-9354-3>
- Li, C., Zhang, L. J., & Jiang, G. (2021). Conceptualisation and measurement of foreign language learning burnout among Chinese EFL students. *Journal of Multilingual and Multicultural Development*, 1–15. <https://doi.org/10.1080/01434632.2021.1931246>
- Li, H. (2022). Classroom enjoyment: Relations with EFL students' disengagement and burnout. *Frontiers in Psychology*, 12, Article 824443. <https://doi.org/10.3389/fpsyg.2021.824443>
- Liu, C., He, J., Ding, C., Fan, X., Hwang, G. J., & Zhang, Y. (2021). Self-oriented learning perfectionism and English learning burnout among EFL learners using mobile applications: The mediating roles of English learning anxiety and grit. *Learning and Individual Differences*, 88, Article 102011. <https://doi.org/10.1016/j.lindif.2021.102011>
- Liu, H. (2019). *New insights into language anxiety: Theory, research and educational implications*. Oxford University Press. <https://doi.org/10.1093/elt/ccy042>
- Liu, H. (2021). Engaging language learners in contemporary classrooms. *ELT Journal*, 75(2), 232–234. <https://doi.org/10.1093/elt/ccab004>
- Liu, H., & Han, X. (2022). Exploring senior high school students' English academic resilience in the Chinese context. *Chinese Journal of Applied Linguistics*, 45(1), 49–68. <https://doi.org/10.1515/CJAL-2022-0105>
- Liu, H., & Song, X. (2021). Exploring "Flow" in young Chinese EFL learners' online English learning activities. *System*, 96, Article 102425. <https://doi.org/10.1016/j.system.2020.102425>

- Madigan, D. J., & Curran, T. (2021). Does burnout affect academic achievement? A meta-analysis of over 100,000 students. *Educational Psychology Review*, 33(2), 387–405. <https://doi.org/10.1007/s10648-020-09533-1>
- March-Amengual, J. M., Badii, I. C., Casas-Baroy, J. C., Altarriba, C., Company, A. C., Pujol-Farriols, R., Baños, J. E., Galbany-Estragués, P., & Cayuela, A. C. (2022). Psychological distress, burnout, and academic performance in first year college students. *International Journal of Environmental Research and Public Health*, 19(6), Article 3356. <https://doi.org/10.3390/ijerph19063356>
- Martínez, Á. M., Jurado, M. M. M., Pérez-Fuentes, M. C., Martín, A. B. B., Márquez, M. M. S., Martínez, B. M. T., Sisto, M., & Linares, J. J. G. (2021). Self-efficacy, positive future outlook and school burnout in Spanish adolescents. *Sustainability*, 13(8), Article 4575. <https://doi.org/10.3390/su13084575>
- Maslach, C. (1998). A multidimensional theory of burnout. In C. L. Cooper (Ed.), *Theories of organizational stress* (pp. 68–85). Oxford University Press.
- Maslach, C., & Jackson, S. E. (1986). *Maslach burnout inventory manual* (2nd ed.). Consulting Psychologists Press.
- Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: Recent research and its implications for psychiatry. *World Psychiatry*, 15(2), 103–111. <https://doi.org/10.1002/wps.20311>
- May, R. W., Bauer, K. N., & Fincham, F. D. (2015). School burnout: Diminished academic and cognitive performance. *Learning and Individual Differences*, 42, 126–131. <https://doi.org/10.1016/j.lindif.2015.07.015>
- Mercer, S., & Dörnyei, Z. (2020). *Engaging language learners in contemporary classrooms*. Cambridge University Press. <https://doi.org/10.1017/9781009024563>
- Meylan, N., Doudin, P. A., Curchod, D., & Stephan, P. (2011). School burnout in adolescents: Differences in background variables and exploration of school-related stress at the end of compulsory schooling. *Ricerche di Psicologia*, 34(4), 539–563. <https://doi.org/10.3280/RIP2011-004006>
- Moghadam, H., Ghanizadeh, A., & Ghonsooly, B. (2020). Differences in EFL learners' burnout levels and receptive language skills with regard to the mindfulness-based instruction. *ExELL*, 8(2), 185–219. <https://doi.org/10.2478/exell-2021-0004>
- Muenks, K., Wigfield, A., Yang, J. S., & O'Neal, C. R. (2017). How true is grit? Assessing its relations to high school and college students' personality characteristics, self-regulation, engagement, and achievement. *Journal of Educational Psychology*, 109(5), 599–620. <https://doi.org/10.1037/edu0000153>
- Noh, H. K., Shin, H., & Lee, S. M. (2013). Developmental process of academic burnout among Korean middle school students. *Learning and Individual Differences*, 28, 82–89. <https://doi.org/10.1016/j.lindif.2013.09.014>
- Oyoo, S., Mwaura, P., Kinai, T., & Mutua, J. (2020). Academic burnout and academic achievement among secondary school students in Kenya. *Education Research International*, 2020, 1–6. <https://doi.org/10.1155/2020/5347828>
- Paloş, R., Maricuţoiu, L. P., & Costea, I. (2019). Relations between academic performance, student engagement and student burnout: A cross-lagged analysis of a two-wave study. *Studies in Educational Evaluation*, 60, 199–204. <https://doi.org/10.1016/j.stueduc.2019.01.005>
- Ríos-Risquez, M. I., García-Izquierdo, M., Sabuco-Tebar, E. D. L. A., Carrillo-Garcia, C., & Martinez-Roche, M. E. (2016). An exploratory study of the relationship between resilience, academic burnout and psychological health in nursing students. *Contemporary Nurse*, 52(4), 430–439. <https://doi.org/10.1080/10376178.2016.1213648>
- Rohmani, N., & Andriani, R. (2021). Correlation between academic self-efficacy and burnout originating from distance learning among nursing students in Indonesia during the coronavirus disease 2019 pandemic. *Journal of Educational Evaluation for Health Professions*, 18, Article 9. <https://doi.org/10.3352/jeehp.2021.18.9>
- Salanova, M., Schaufeli, W., Martínez, I., & Bresó, E. (2009). How obstacles and facilitators predict academic performance: The mediating role of study burnout and engagement. *Anxiety, Stress and Coping*, 23(1), 53–70. <https://doi.org/10.1080/10615800802609965>
- Salmela-Aro, K., & Tynkkynen, L. (2012). Gendered pathways in school burnout among adolescents. *Journal of Adolescence*, 35(4), 929–939. <https://doi.org/10.1016/j.adolescence.2012.01.001>
- Schaufeli, W. B., Martinez, 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(5), 464–481. <https://doi.org/10.1177/0022022102033005003>
- Sepede, J. C., Petrides, J., Collins, P. B., Jones, M. C., Cantor, N., & Boyd, L. (2021). The role of extracurricular activities and lectures in mitigating medical student burnout. *Journal of Osteopathic Medicine*, 121(7), 617–623. <https://doi.org/10.1515/jom-2020-0311>

- Shokrpour, N., Bazrafcan, L., Ardani, A., & Nasiraei, S. (2020). The factors affecting academic burnout in medical students of Mashahd University of Medical Sciences in 2013–2015. *Journal of Education and Health Promotion*, 9(1), Article 232. [https://doi.org/10.4103/jehp.jehp\\_83\\_20](https://doi.org/10.4103/jehp.jehp_83_20)
- Sun, P. P., & Teng, L. S. (2021). Why so nervous? Revisiting the sources of speech anxiety in Chinese as a second language. *System*, 103, Article 102647. <https://doi.org/10.1016/j.SYSTEM.2021.102647>
- Supervía, P. U., & Bordás, C. S. (2020). Burnout, goal orientation and academic performance in adolescent students. *International Journal of Environmental Research and Public Health*, 17(18), 1–11. <https://doi.org/10.3390/ijerph17186507>
- Supervía, P. U., Bordás, C. S., & Abad, J. J. M. (2020). Relationship between emotional intelligence, academic burnout and school performance in adolescent students. *Revista CES Psicología*, 13(1), 125–139. <https://doi.org/10.21615/CESP.13.1.8>
- Treat, R., Hueston, W. J., Fritz, J., Prunuske, A., & Hanke, C. J. (2021). Medical student burnout as impacted by trait emotional intelligence – moderated by three-year and four-year medical degree programs and gender. *Wisconsin Medical Journal*, 120(3), 188–194. <https://cutt.ly/bM0iU5G>
- Vinter, K. (2021). Examining academic burnout: Profiles and coping patterns among Estonian middle school students. *Educational Studies*, 47(1), 1–18. <https://doi.org/10.1080/03055698.2019.1702510>
- Vinter, K., Aus, K., & Arro, G. (2021). Adolescent girls' and boys' academic burnout and its associations with cognitive emotion regulation strategies. *Educational Psychology*, 41(8), 1061–1077. <https://doi.org/10.1080/01443410.2020.1855631>
- Wei, H., Dorn, A., Hutto, H., Corbett, R. W., Haberstroh, A., & Larson, K. (2021). Impacts of nursing student burnout on psychological well-being and academic achievement. *Journal of Nursing Education*, 60(7), 369–376. <https://doi.org/10.3928/01484834-20210616-02>
- Wickramasinghe, N. D., Dissanayake, D. S., & Abeywardena, G. S. (2018). Clinical validity and diagnostic accuracy of the Maslach Burnout Inventory – Student Survey in Sri Lanka. *Health and Quality of Life Outcomes*, 16(1), 1–9. <https://doi.org/10.1186/s12955-018-1048-y>
- Xie, Y. J., Cao, D. P., Sun, T., & Yang, L. B. (2019). The effects of academic adaptability on academic burnout, immersion in learning, and academic performance among Chinese medical students: A cross-sectional study. *BMC Medical Education*, 19(1), Article 211. <https://doi.org/10.1186/s12909-019-1640-9>
- Yang, M. T., Hou, Y. J., Hou, Y. A., & Cheng, H. Y. (2013). How college students' motivation is related to their English learning performance on three Taiwanese popular tests. *International Journal of Communication and Linguistic Studies*, 10(3), 37–52. <https://doi.org/10.18848/2327-7882/cgp/v10i03/43609>
- Yang, T. (2015). *Waiyu xuexi juandai yu dongji guanxi yanjiu* [The relationship between foreign language learning burnout and motivation]. Kexue Chuban She.