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The motivation-anxiety interface in language learning: A regulatory focus perspective

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The study examined the relationship between chronic regulatory focus, L2 self-guides, L2 anxiety, and motivated behavior. Questionnaire data were collected from 161 English learners in a foreign language context. Multiple regression results showed that the participants' promotion focus (concerned with accomplishments and achievements) strongly and negatively predicted their L2 anxiety whereas their prevention focus (concerned with safety and obligations) was unrelated to L2 anxiety. Additionally, ought L2 self/own and ought L2 self/other, which have a prevention focus, positively predicted L2 anxiety, whereas ideal L2 self/own, which has a promotion focus, was a negative predictor. L2 anxiety was not directly related to motivated behavior for either promotion-focused or prevention-focused learners. The results suggest that a promotion-focused approach in L2 learning and teaching might minimize L2 anxiety.

KEYWORDS
English as a foreign language, L2 anxiety, L2 motivation, L2 self-guides, regulatory focus

本研究探索了长期调节定向, 二语自我指导, 二语焦虑感, 和动机行为之间的关系。本研究收集了161名英语学习者的调查问卷。多元回归分析结果显示, 本研究的调查对象的促进定向(拥有促进定向的调查对象更关注做事情的相关成就和成果)对其自身的二语焦虑感有显著的负向预测作用, 而本研究的调查对象的预防定向(拥有预防定向的调查对象更关注做事情的相关安全性和义务)与其本身的二语焦虑感没有显著关系。此外, 一方面, 拥有二语应然自我/自我视角和二语应然自我/重要他人视角这两个研究变量的调查对象同时也

拥有预防定向,这两个研究变量对二语焦虑感都有正向预测作用。另一方面,拥有二语理想自我/自我视角这个研究变量的调查对象同时也拥有促进定向,这个研究变量对二语焦虑感有负向预测作用。对于无论是拥有促进定向还是拥有预防定向的调查对象,他们的二语焦虑感和动机行为之间都没有直接关系。该研究的结果表明,在二语学习和教学中采用促进定向相关的教学方法可以减少二语学习的焦虑感。

关键字
英语作为外语(的教育),二语焦虑感,二语学习动机,调节定向,二语自我指导

1 | INTRODUCTION

Anxiety plays an important role in the process of second and foreign language (L2) learning and teaching (e.g., Horwitz et al., 1986; MacIntyre & Gardner, 1989; Mak, 2011). Many studies have been conducted in the field of second language acquisition (SLA) on different aspects of L2 anxiety, such as its relationship with L2 achievement (e.g., Aida, 1994; Gardner, 2001; Gkonou et al., 2017; Horwitz, 2001; MacIntyre & Gardner, 1994), motivation and self-confidence (e.g., Piniel & Cizser, 2013; Yan & Horwitz, 2008), and the development of speaking or writing skills (Cheng, 2002; Mak, 2011). Despite the valuable contribution of previous studies, second language (L2) anxiety remains a controversial topic. An important gap in our understanding concerns the relationship between motivation and anxiety. A few studies (Papi, 2010; Papi & Teimouri, 2014; Teimouri, 2017) have provided evidence for the relationship between the future L2 selves outlined in Dörnyei's (2009) L2 Motivational Self System (L2MSS) and L2 anxiety. The studies have found the ideal L2 self representing one's hopes and aspirations in L2 learning, to negatively predict L2 anxiety whereas the ought-to L2 self, representing one's obligations and duties, has been found to be positively associated with L2 anxiety. These results provide evidence for the importance of the connection between motives with L2-specific regulatory focus and L2 anxiety. This is because from a regulatory focus perspective, the ideal L2 self has a promotion regulatory focus, representing movement from the current state to a more desirable end-state, whereas the ought-to L2 self has a prevention regulatory focus, concerned with maintaining the current state and avoiding an undesirable end-state. Whereas these studies provide clear evidence for the connection between the future selves and L2 anxiety, the relationship between learners' chronic and dispositional regulatory focus and their L2 anxiety has remained underexplored. According to regulatory focus theory (Higgins, 1997), individuals with a chronic promotion focus are concerned with growth, advancement, and positive outcomes, while those with a chronic prevention focus are concerned with security, safety, and negative consequences. The link between chronic regulatory focus and emotional experiences has been established in the field of psychology. For instance, Klenk et al. (2011) found that in their goal pursuits, individuals with a promotion focus experienced elation-related emotions such as joy, whereas prevention-focused individuals experienced agitation-related emotions such as anxiety. The present study examines whether the connection between L2 learners' chronic regulatory focus and anxiety can be extended to the realm of language learning, and if so, how the potential links are affected by learners' future L2 selves (as indicators of L2-specific regulatory focus). In addition, given that some previous studies have suggested that L2 anxiety could be facilitative for prevention-focused individuals and debilitative for promotion-focused individuals (e.g., Papi & Teimouri, 2014), we will separately explore and compare the relationship between L2 anxiety and motivated learning behavior for promotion-focused versus prevention-focused individuals.

1.1 | L2 anxiety: trait or state?

MacIntyre and Gardner (1994, p. 284) defined L2 anxiety as "the feeling of tension and apprehension specifically associated with second language contexts, including speaking, listening, and learning." According to Spielberger et al. (1983), L2 anxiety could be either a temporary state or a stable trait. *Trait anxiety* is a type of characteristic that is difficult to change; *state anxiety*, on the other hand, is transient and fluctuates from moment to moment. Some researchers view L2 anxiety as "a trait which recurs in language learning situations, namely classrooms" (Woodrow, 2006: p. 310), whereas others view the construct as a state. Horwitz (2001) suggested that foreign language anxiety (FLA) is an anxiety related to different foreign language situations rather than a trait. MacIntyre and Gardner (1991) suggested that L2 anxiety is associated with certain circumstances and certain personalities (e.g., easily being anxious and easily being shy). Generally, it seems that researchers agree that the experience of L2 anxiety can be both a temporary emotional reaction specific to certain situations, and a tendency to feel the emotion more than others across different situations. If that is the case, then L2 anxiety should have both situation-specific and dispositional sources.

In the present study, we explore learners' future L2 self-guides, as L2-specific sources, and their chronic regulatory focus as a dispositional source of L2 anxiety. The previous studies have shown that the ought-to L2 self leads to higher levels of anxiety whereas the idea L2 self may decrease L2 anxiety (e.g., Papi, 2010; Teimouri, 2017). However, it is not clear whether learners' regulatory focus also influences their experience of L2 anxiety. Therefore, this study aims to explore the links between learners' L2 future selves and chronic regulatory focus, on one hand, and their L2 anxiety, on the other hand.

1.2 | L2 anxiety: facilitative or debilitative?

Alpert and Haber (1960) introduced the contrast between facilitative and debilitative anxiety to the field of education and created scales to measure them. Using the scales, Kleinmann (1977) found evidence for the facilitative and debilitative effects of anxiety in learning. Positive links between anxiety and success in foreign language learning were also reported in Chastain's (1975) study. Examining the distinction in the L2 learning, the results of Bailey's (1983) study showed that sometimes anxiety would make students work harder. She concluded that competitiveness and anxiety could work together for positive outcomes. Similarly, Young (1992) argued that some tension may facilitate students' learning and create challenges for students to overcome. MacIntyre (1995) suggested that high degrees of anxiety are detrimental to L2 learning, while moderate levels of anxiety can motivate students. Ehrman and Oxford (1995) discovered that students who were moderately anxious performed better on two oral tasks than low-anxiety participants. In a study exploring the teachers and students' perceptions of L2 anxiety, Tran et al. (2013) found that both teachers and students believed that L2 anxiety could be both beneficial and harmful.

Some L2 motivation researchers (e.g., Papi, 2010; Papi & Teimouri, 2014; Teimouri, 2017) have speculated that the inconsistencies in the results of the previous studies could be attributed to differences in learners' chronic motivational dispositions, namely their regulatory focus (Higgins, 1997), based on the findings of the studies that supported such a link. Papi (2010) found that the motivational construct of ought-to L2 self, which has a prevention regulatory focus concerned with the learners' desire to meet the expectations of others, positively predicted L2 anxiety, which in turn positively predicted motivated behavior. Papi and Teimouri (2014) confirmed that the ought-to L2 self significantly correlated with motivated behavior but only for the prevention-oriented type of learners. The authors argued that, for prevention learners, L2 anxiety might lead to "some degree of motivated behavior in order to meet the expectation and obligations and avoid the possible negative consequences causing this level of anxiety" (Papi & Teimour, 2014, p. 518). Additionally, Teimouri (2017) indicated that L2 anxiety was only related to learners' ought-to L2 selves and not to their ideal L2 self. He argued that "L2 anxiety fits the motivational orientation of learners with a predominant prevention focus and plays a facilitative role by keeping them alert to the presence of possible negative outcomes"

(Teimouri, 2017, p.702). This finding supports the facilitative role of anxiety in influencing students' learning by exploring the relationships between L2 anxiety and regulatory focus (promotion focus and prevention focus).

The studies reviewed above, however, do not provide direct evidence for the connection between chronic regulatory focus and L2 anxiety. The present study is an attempt to further our understanding of such dispositional factors and the construct of L2 anxiety. It is speculated that learners with a predominant prevention focus experience higher levels of L2 anxiety, which can in turn be positively related to their motivated behavior; on the other hand, learners with a predominant promotion focus are anticipated to experience lower levels of L2 anxiety, which is in turn expected to be negatively related to their motivated behavior.

1.3 | Regulatory focus theory

Regulatory focus theory (Higgins, 1997) outlines two motivational principles underlying human behavior: a *prevention* focus and a *promotion* focus. A *promotion* focus concerns the need for advancement, growth and accomplishments; individuals with a promotion focus are motivated by ideal selves and are sensitive to presence or absence of positive outcomes (i.e., gains or non-gains). A *prevention* focus, on the other hand, concerns the need for stability, safety, and security; individuals with a prevention focus are motivated by ought selves and are sensitive to the presence or absence of negative outcomes (i.e., losses and non-losses). Individuals develop different levels of chronic promotion and prevention focus depending on their upbringing and life experiences. Some can be strong in both promotion and prevention tendencies, while others can be strong in one and weak in the other.

Individuals with different regulatory focus also show different strategic inclinations in the goal pursuits. Promotion-focused individuals follow an eager strategic inclination that aims to maximize opportunities for advancement. Those with a prevention focus, on the other hand, use vigilant strategies to minimize their chances of failure. In their goal pursuits, people with different regulatory focus also experience various emotions, which may motivate or hinder their progress towards their goals. Those with a promotion focus experience cheerfulness-related emotions (i.e., happiness) when they succeed in approaching positive results and dejection-related emotions (i.e., sadness) when they fail to approach positive outcomes. Those with a prevention focus, on the other hand, experience quiescence-related emotions (i.e., calmness) when they succeed in avoiding negative outcomes and agitation-related emotions (i.e., anxiety) when they fail to avoid negative consequences.

To the best of the our knowledge, the relationship between chronic regulatory focus and anxiety has not been directly investigated in the field of SLA. The studies examining the relationship between future self-guides and anxiety (e.g., Papi, 2010; Papi & Teimouri, 2014; Teimouri, 2017) only provide indirect evidence for the existence of such a relationship. In the present study, not only have we examined the direct connection between chronic regulatory foci and L2 anxiety, but we have also employed the latest self-guide conceptualization outlined in Papi et al. (2019) 2×2 model of self-guides.

1.4 | The 2×2 model of L2 self-guides

The future self-guides were first introduced to the field of SLA by Dörnyei (2005, 2009) in his L2 Motivational Self System (L2MSS) to better understand the complex phenomenon of motivation based on Higgins' (1987) self-discrepancy theory. This model includes three components: *ideal L2 self*, *ought-to L2 self*, and *L2 learning experience*. According to Dörnyei (2005, 2009), ideal L2 self is the L2-specific facet of one's ideal self and represents the ideal L2 attributes one would like to possess. The second component, ought-to L2 self-concerns the attributes that one believes one *ought to* possess to meet expectations and to *avoid* possible negative outcomes. L2 learning experience, which concerns situated, "executive" motives related to the immediate learning environment and experience (e.g., the teacher, the curriculum, the peer group, the experience of success), is the third component of the model.

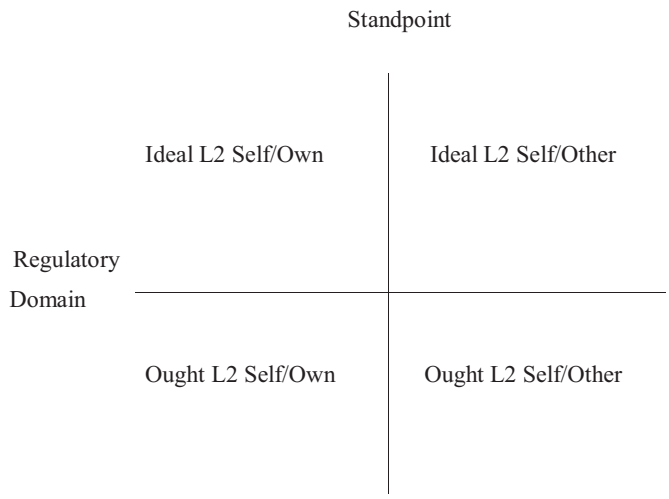

FIGURE 1 The 2 × 2 model of L2 self-guides (adopted from Papi et al., 2019)

Researchers have emphasized the importance of studying the relationship between the future L2 self-guides and emotions. MacIntyre et al. (2009, p. 47) stated that, "without a strong tie to the learner's emotional system, possible selves exist as cold cognition, and therefore lack motivational potency." Dörnyei and Ushioda (2009) suggested the importance of examining both the emotional and the motivational properties of future self-guides. Using the original L2MSS model, studies in the field of SLA have found evidence for the relationship between the future self-guides and L2 anxiety. Papi (2010) studied the relationships among future self-guides, L2 anxiety, and motivated behavior using structural equation modeling. In this study, L2 anxiety was found to be predicted positively by the ought-to L2 self and negatively by the ideal L2 self and L2 learning experience. Interestingly, L2 anxiety was found to be a positive predictor of intended effort. Papi and Teimouri (2014) also found that learners who had a stronger ought-to L2 self, reported higher levels of anxiety and were motivated at the same time. The authors discussed that "the desire to meet the expected performance standards in learners with the prevention-focused motives results in some degrees of L2 anxiety and motivated behavior at the same time" (Papi & Teimouri, 2014p. 518). Teimouri (2017) bifurcated the ought-to L2 self into two constructs, one from learner's own perspective (ought-to L2 self/own) and one from others' perspective (ought-to L2 self/others) and found these to positively correlate with L2 anxiety.

Mainly due to measurement and construct validity issues around the construct of the ought-to L2 self, two revisions of the L2 self-guides outlined in the L2MSS have been proposed in recent years by Teimouri (2017) and Papi et al. (2019). Both the studies attempted to reformulate the self-guides in the L2MSS based on the tenets of self-discrepancy theory (Higgins, 1987) and regulatory focus theory (Higgins, 1997), and developed new scales to test a model which bifurcated the original future L2 self-guides by two different standpoints (own vs. other): *ideal L2 self/own*, *ideal L2 self/other*, *ought L2 self/own*, and *ought L2 self/other*. In Teimouri's (2017) study, however, three self-guides emerged from factor analysis: *ought-to L2 self/own*, *ought-to L2 self/other*, and a unitary *ideal L2 self*. Pointing out Teimouri's lack of sufficient attention to the standpoints and regulatory distinctions in the operationalization of the scales, Papi et al. (2019) tested a new model with four self-guides (see Figure 1). They collected data from 257 international students from a North American university using a questionnaire that was developed by the authors based on previous studies and the conceptual foundations discussed above. Confirmatory factor analysis supported the better fitness of the new model compared to alternative models (i.e., Dörnyei, 2009; Teimouri, 2017). In addition, multiple regression results showed that all the four self-guides were significant predictors of the quantity and quality of motivated behavior, confirming the predictive validity of the new self-guides.

Since the introduction of the model, a few studies have employed the model in different learning contexts. In an intensive English program in the United States, Kermad (2018) examined the relationship between the model and L2 pronunciation and found that ideal L2 self/own and ought L2 self/other positively predicted pronunciation accuracy,

and ideal L2 self/own positively predicted pronunciation fluency. Papi and Khajavy (2021) examined a comprehensive model containing relations between regulatory focus, future self-guides, emotions (anxiety and enjoyment), strategic inclinations in L2 use (eager vs. vigilant), and foreign language achievement among 324 EFL learners in the context of Iran. The results showed that whereas the promotion focus contributed to ideal selves, the prevention focus minimized the number of ought selves by helping students meet the ought selves. In addition, whereas ideal L2 self/own led to enjoyment, ought L2 self/other and ideal L2 self/other contributed to anxiety. Finally, enjoyment predicted higher achievement by enhancing eager L2 use whereas anxiety negatively predicted achievement through the mediation of vigilant L2 use. In another study among learners of Chinese as a foreign language in the United States, Feng and Papi (2020) found that ideal L2 self/own and ought L2 self/own predicted motivational intensity whereas only ideal selves (own and other) predicted long-term persistence in language learning. Finally, Bondarenko (2020) found that among 341 learners of foreign language in the United States, self-efficacy beliefs positively predicted ideal selves, which in turn, contributed to the students' feedback-seeking behavior.

Even though these studies have provided indirect evidence for the connection between L2 self-guides and L2 anxiety in the contexts of the United States and Iran, the current study is the first one directly examining the links between learners' chronic regulatory focus and the L2 self-guides outlined in Papi et al. (2019) new model on the one hand, and L2 anxiety on the other hand, in the context of China. Establishing such a connection in a different Asian context such as China can help us deepen our understanding of the underlying sources of L2 anxiety and the controversies around the nature and role of anxiety in language learning.

1.5 | Research questions

To investigate whether L2 anxiety is related to the chronic motivational characteristics of L2 learners or the L2-specific goals that the learners pursue, this study examines how regulatory focus (promotions vs. prevention) and future L2 self-guides (ideal L2 self-own/other & ought L2 self-own/other) predict L2 anxiety in the EFL context of China. In addition, the link between L2 anxiety and motivated behavior is separately examined for learners with a predominant promotion focus versus those with a predominant prevention focus. Therefore, the following research questions were formulated:

1. What are the relationships between the participants' regulatory focus and L2 anxiety?
2. What are the relationships between L2 self-guides and L2 anxiety?
3. What are the relationships between L2 anxiety and motivated behavior for L2 learners with different predominant regulatory focus (predominantly promotion-focused vs. predominantly prevention-focused)?

It is expected that learners with a predominant prevention focus pursue ought L2 selves and experience more L2 anxiety than promotion-focused learners, who, by contrast, are anticipated to pursue ideal selves and experience lower levels of anxiety. It is also anticipated that L2 anxiety will contribute to the motivated behavior for prevention-focused individuals, but it will decrease the motivated behavior for promotion-focused individuals.

2 | METHODS

2.1 | Participants

In order to include enough participants in this study, power analysis was performed in advance using G*Power3 (Faul et al. 2007). The result showed that a minimum number of 146 participants was needed in order to achieve a large power of .8. Therefore, 161 university students (22 males, 131 females, and eight missing gender) majoring in English

TABLE 1 Demographic information

Category	Sub-category	N	Percent
Gender	Female	131	81.4%
	Male	22	13.7%
	Missing	8	5%
Age	17	7	4.3%
	18	33	2.5%
	19	62	38.5%
	20	39	24.2%
	21	6	3.7%
	Missing	14	8.7%
Year in college	Freshman	73	45.3%
	Sophomore	86	53.4%
	Missing	2	1.2%
Years of English learning experience	Less than 5 years	2	1.2%
	6 to 12 years	134	83.3%
	13 to 20 years	14	8.7%
	Missing	11	6.8%
Overseas experience	No	159	98.8%
	Missing	2	1.2%
Self-reported English proficiency	Beginner	2	1.2%
	Post-beginner	11	6.8%
	Lower-intermediate	45	28%
	Intermediate	91	56.5%
	Upper-intermediate & above	2	1.2%
	Missing	10	6.2%

Note. Sample's statistics (N: 161).

at a central university in China were recruited to participate in the current study. The age of the participants ranged in age from 17 to 21 years (M = 19.03, SD = .92) and were in the first and second year of their studies. Ninety-two percent of the participants had learned English for at least 6 years (M = 9.34, SD = 2.56). On a five-point scale ranging from *Beginner* to *Upper-Intermediate and Over*, approximately 85% of participants rated their English proficiency to be at *Low-Intermediate* or *Intermediate level*. Descriptive information about the participants is presented in Table 1.

2.2 | Instruments

Data were collected using a questionnaire that consisted of two parts. The first part measured the participants' chronic regulatory focus, L2 self-guides, L2 anxiety, and L2 motivated behavior. Considering the fact that the original version of the adopted scales was in English, and to increase the comprehensibility of the items to the Chinese participants, they were translated by the authors into Chinese, and then translated these items back to English by two other translators to confirm that the Chinese translation matches the original items. The final Chinese version of the questionnaire was administered.

2.2.1 | Regulatory focus questionnaire

Higgins et al.'s (2001)) Regulatory focus questionnaire (RFQ) was used for measuring participants' chronic motivational orientation. The questionnaire included 11 items; six items measured participants' promotion focus (e.g., *How often have you accomplished things that got you "psyched" to work even harder?*) and five items measured the prevention focus (e.g., *Growing up, did you ever act in ways that your parents thought were objectionable?*). Following Higgins et al. (2001), responses to the regulatory focus items were collected on a five-point Likert scale with 1 showing *Seldom/Never* or *Certainly False* to 5 representing *Very Often* or *Certainly True*.

2.2.2 | L2 Self-guides scales

The scales used for measuring L2 self-guides were adopted from Papi et al. (2019). According to Papi et al. (2019), the four L2 self-guides were: ideal L2 self/own (e.g., *I can imagine a day when I speak English like a native speaker of English.*), ideal L2 self/other (e.g., *My family will be proud of me if one day I master the English language.*), and ought L2 self/own (e.g., *If I don't work on my English, I will fail in school/university.*) Each of the three variables included four items, and ought L2 self/other included two items (e.g., *My family puts a lot of pressure on me to learn English*).

2.2.3 | Motivated behavior and anxiety scales

Five items adopted from the Papi et al. (2019) study were used to measure learners' current level of motivated L2 learning behavior (e.g., *I spend a lot of time studying English.*), and six items from Papi (2010) were used to measure L2 anxiety (e.g., *How nervous and confused do you get when you are speaking in your English class?*). Following Papi et al. (2019), responses to items measuring L2 self-guides, anxiety and motivated behavior were elicited through a six-point Likert scale with 1 showing *Strongly Disagree* and 6 showing *Strongly Agree*. The second part of the questionnaire gathered students' demographic information such as their gender, major, experience living abroad, and English proficiency self-ratings.

2.3 | Procedures

The data collection process took place in Spring 2018. After getting the official approval from the relevant Institutional Review Board, we contacted the coordinator who was supervising undergraduate English majors at a Chinese university. The author explained the purpose and procedures of the study to the coordinator, who, subsequently, agreed to cooperate. Once permission for conducting this study was granted, the researcher emailed the coordinator an electronic copy of the questionnaire and an administration manual. Then the coordinator contacted associated instructors and asked them to administer the survey to the students at the end of their classes following the guidelines provided. Students were told that participation was voluntary, no identifying information such as their names and email addresses would be collected, and their responses would be kept confidential. After data collection, the coordinator mailed the completed questionnaires back to the author, and the students who participated in the study were thanked via email.

TABLE 2 Exploratory factor analysis results for L2 self-guides

			Pattern Matrix				
Item no.	M	SD	Ideal L2 Self/Own	Ought L2 Self/Other	Ideal L2 Self/Other	Ought L2 Self/Own	*h*2
17	4.96	1.02	**.79**	.009	.001	−.005	.63
12	4.75	1.12	**.75**	.07	−.004	.12	.51
28	4.88	1.02	**.73**	−.11	.02	−.15	.63
27	4.96	.97	**.62**	−.14	−.21	−.21	.73
22	2.74	1.31	.03	**.76**	.07	−.01	.58
32	3.19	1.32	−.12	**.55**	−.13	−.20	.46
13	5.19	.94	.03	.07	**−.84**	.13	.67
19	5.28	1.05	.02	−.16	**−.53**	−.17	.40
29	4.65	1.20	.23	.21	**−.35**	−.11	.37
26	4.38	1.27	−.006	.06	−.02	**−.81**	.71
21	4.56	1.36	.04	−.06	−.04	**−.71**	.53
23	3.89	1.35	.04	.25	.06	**−.71**	.66
Eigenvalue			4.21	2.28	1.06	1.00	
Mean (SD)			4.88 (.86)	2.96 (1.14)	5.04 (.82)	4.27 (1.14)	
Cronbach's alpha			.85	.67	.65	.83	
57.23% of variance			31.75	15.62	5.06	4.80	

Note. All the other factor loadings are below .3. *h*2 denotes the communality coefficient. The bold numbers in the table refer to the loadings of the items representing each of the four factors.

2.4 | Data Analysis

Using SPSS 22 (IBM, Armonk, NY), exploratory factor analysis (EFA) was run to examine if the data related to the L2 self-guides would confirm the 2 × 2 model, which had been tested only in two studies (i.e., Papi & Khajavy, 2021; Papi et al., 2019). EFA was run with Principal Axis Factoring as the method of extraction, and direct oblimin with Kaiser Normalization as method of rotation. The number of factors were determined using eigenvalues larger than 1 (Kaiser's criterion), and scree plots (Field, 2013). Initially, the 14 questionnaire items loaded on four latent factors. However, due to cross-loadings, two items were deleted and the analysis was rerun. As presented in Table 2, the items strongly loaded onto four factors matching the Papi et al. (2019) model, and the solution was supported by the scree plot. The four factors explained 57.23% of the variance (Table 2). Additionally, the Kaiser-Meyer-Olkin figure (.78) was excellent, suggesting that the dataset was suitable for EFA, and Bartlett's Test of Sphericity was significant ($\chi 2(66) = 764.452$, $p < .001$), showing a good fit between the model and the dataset.

The first factor, labeled *ideal L2 self/own*, explained 31.75% of the variance (eigenvalue = 4.21). This factor included four items reflecting the L2 attributes that the learner hopes or aspires to achieve in future (Table 2). The second factor, labeled *ought L2 self/other*, explained 15.62% of the variance (eigenvalue = 2.28). This factor included two questionnaire items reflecting L2 attributes the learner believes his or her significant others (e.g., family members) expect him or her to possess. The third factor, labeled *ideal L2 self/other*, explained 5.06% of the variance (eigenvalue = 1.06) and included three questionnaire items measuring L2 attributes that learner believes his or her significant others would ideally hope the learner will possess in the future. Finally, the fourth factor, labeled *ought L2 self/own*, explained 4.80% of the variance (eigenvalue = 1.00) and included three questionnaire items measuring the L2 attributes the learner believed that he or she should possess. Cronbach's alphas, presented in Table 2, show that the self-guide scales had

TABLE 3 Interrelations among variables

	1	2	3	4	5	6	7
1. Prevention	–						
2. Promotion	.14						
3. Ideal L2 Self/Own	−.08	.18*					
4. Ideal L2 Self/Other	.18*	.05	.52**				
5. Ought L2 Self/Own	−.12	−.10	.31**	.39**			
6. Ought L2 Self/Other	−.14	−.08	−.06	.12	.38**		
7. L2 Anxiety	−.01	−.31**	−.13	.09	.26**	.33**	
8. L2 Motivated Behavior	.12	.20**	.45**	.40**	.32**	.00	.05

Note. *$p < .05$, **$p < .01$.

TABLE 4 Multiple regression results with regulatory foci as predictors and L2 anxiety as the outcome variable

	B	Std. Error	Beta	t	*p*	95% CI
(Constant)	5.25	.57		9.23	<.001	[4.12, 6.37]
Prevention	.06	.12	.04	.49	.63	[−.17, .28]
Promotion	−.59	.14	−.32	- 4.15	<.001	[−.87, −.31]

Note. Rš = .1.

acceptable reliability. Cronbach's alpha coefficients for promotion ($\alpha = .62$; Mean = 3.04, SD = .52), prevention ($\alpha = .71$; Mean = 3.74, SD = .64), L2 anxiety ($\alpha = .85$; Mean = 3.66, SD = .96), and motivated behavior ($\alpha = .77$; Mean = 4.31, SD = .73) were also acceptable, confirming the reliability of the scales. The mean scores for each scale were used for the rest of the analyses.

3 | RESULTS

To examine the relationship between regulatory focus and L2 anxiety (Research Question 1), a multiple regression analysis with the standard method of entry was run (for intercorrelations see Table 3). Promotion and prevention were entered as predictor variables and L2 anxiety as the outcome variable. As presented in Table 4, the regression model ($F^{(2, 156)} = 7.26$, $p < .001$, $R^2 = .10$) predicted 10% of the variance in L2 anxiety. In addition, promotion was found to negatively predict L2 anxiety ($\beta = -.32$, $p < .001$), as expected, whereas, surprisingly, prevention did not emerge as a significant predictor.

Another multiple regression analysis with the standard entry method was run to test the relationship between the future L2 self-guides and L2 anxiety (Research Question 2). As shown in Table 5, the regression model was significant ($F^{(4, 156)} = 7.69$, $p < .001$, $R^2 = .17$), accounting for 17% of the variance in L2 anxiety. As expected, ideal L2 self/own emerged as a negative predictor of L2 anxiety ($\beta = -.23$, $p < .01$) whereas ought L2 self/own ($\beta = .20$, $p < .05$), and ought L2 self/other ($\beta = .23$, $p < .01$) emerged as positive predictors of L2 anxiety. ideal L2 self/other was not a significant predictor.

Finally, to examine the relationship between L2 anxiety and motivated behavior (Research Question 3), and following Higgins et al. (2001), participants were divided into two groups, a predominantly promotion group (N = 81) and a predominantly prevention group (N = 80), on the basis of a median split on the difference between their promotion scores and prevention scores (median = −0.8). As expected, the promotion group had a significantly higher promotion score than the prevention group (M = 3.27 vs. M = 2.80; $t(159) = 6.42$, $p < .001$) and the prevention group had a

TABLE 5 Multiple regression results with L2 self-guides as predictors and L2 anxiety as the outcome variable

	B	Std. Error	Beta	t	*P*	95% CI
(Constant)	2.99	.52		5.82	<.001	[1.98, 4.01]
Ideal L2 Self/Own	−.26	.10	−.23	−2.61	<.05	[−.46, −.06]
Ideal L2 Self/Other	.13	.11	.11	1.22	.23	[−.08, .34]
Ought L2 Self/Own	.17	.07	.20	2.27	<.05	[.02, .31]
Ought L2 Self/Other	.19	.07	.23	2.80	<.01	[.06, .33]

Note. $R\check{s} = .17$.

significantly higher prevention score than the promotion group (M = 4.11 vs. M = 3.38; $t(122.20) = -8.72$, $p < .001$). However, the correlations between L2 anxiety and motivated behavior for the promotion group ($r = .19$) and the prevention group ($r = --.10$) were small and statistically non-significant.

4 | DISCUSSION

The descriptive statistics, presented in Table 2, show that ideal L2 self/other has the largest mean of all the selves, suggesting that the desire to make one's important others (e.g., family, parents) proud is the strongest future self among the Chinese participants of this study. Ideal L2 self/own and ought L2 self/own have the next two higher means respectively, suggesting that to these learners their own hopes and fears are among their strong motives, whereas external pressure is not, as shown in the relatively low mean score for ought L2 self/other. The inter-correlations among the variables showed that ideal L2 self/own weakly correlated with promotion, ideal L2 self/other weakly and positively correlated with prevention, and ought L2 selves (own/other) showed negative but non-significant correlations with prevention. These results partially confirm the findings of the study by Papi and Khajavy (2021), who found that promotion weakly and positively predicted the ideal selves whereas prevention weakly and negatively predicted the ought selves. The weaker associations in this study seem to suggest that in the context of this study the chronic regulatory foci and the L2 self-guides do not seem to be largely interdependent. In other words, whereas, for instance, one's promotion focus may lead them to take higher risks in using a new language, the selves that the learners follow might be more influenced by the realities of the context where the learner is situated.

To answer Research Question 1, multiple regression analysis was run with regulatory orientations as predictor variables and L2 anxiety as the outcome variable. Interestingly, only promotion predicted L2 anxiety and it did so negatively, whereas prevention did not emerge as a significant predictor. Although the negative relationship between promotion and L2 anxiety was expected, the lack of connection between prevention and L2 anxiety was not. In addition, motivated behavior positively correlated with promotion but did not correlate with prevention (Table 3). These results confirm the findings of the study by Papi and Khajavy (2021) who found similar correlations, and suggest that the chronic promotion focus plays a more important role than the prevention focus in learners' motivation and anxiety. One explanation for these results could be that prevention is responsible for meeting one's oughts and responsibilities (Papi & Khajavy, 2021), which in turn could lead to the reduction of L2 anxiety. The lack of relationship between prevention and the ought selves in this study, however, might have led to the lack of a similar connection between prevention and L2 anxiety. A second explanation could be that language learning is largely a promotion-focused pursuit. Learning a language might mean developing a new identity, delving into a new culture and being willing to connect with the speakers of a foreign language. It is a process that requires willingness to take risks and embrace change, characteristics that are inherent in a promotion regulatory focus. From the first word pronounced to the most advanced levels of proficiency in a language, forming and testing linguistic hypotheses and making errors seem to be part and parcel of L2 development. When involved in this process, learners make themselves vulnerable to negative judgments

by testing their command of the new linguistic elements they are trying to learn. It is, therefore, not surprising that the promotion focus, which is prominent among individuals who are eager to take risks and look for opportunities for growth and change, seems to be the self-regulatory system that learners' employ to minimize the anxiety inherent in the learning process and stay motivated in this challenging process. Prevention, on the other hand, concerns stability, safety, and calmness and requires vigilance in the learning process, characteristics that do not seem to prevail in the adventurous world of language learning.

To answer Research Question 2, another multiple regression analysis was run with L2 selves as predictors and L2 anxiety as an outcome variable. The results showed that ought L2 self/own and ought L2 self/other positively predicted L2 anxiety and ideal L2 self/own was a negative predictor. The connection between ought L2 selves (own/other) and L2 anxiety confirms the results of the previous studies (e.g., Papi, 2010; Papi & Khajavy, 2021; Papi & Teimouri, 2014; Teimouri, 2017). They also support one of the premises of self-discrepancy theory (Higgins, 1987) that as an agitation-related emotion, anxiety is generated by the perceived discrepancies between one's current and future ought selves. The generation of anxiety is because of the pressure of meeting obligations, expectations, and requirements in order to avoid possible negative consequences (e.g., Higgins, 1987; Scheier & Carver, 1977). Worries such as fear of failure in one's academic pursuits as English major students as well as the fear of negative evaluation by one's teachers, family members, or others, appear to lead to the arousal of L2 anxiety. Ideal L2 self/own, on the other hand, negatively predicted L2 anxiety, a result that supports similar findings in previous studies (e.g., Papi, 2010; Papi & Khajavy, 2021; Papi & Teimouri, 2014; Teimouri, 2017). It seems that being focused on one's aspirations and goals could naturally result in less attention to one's worries about negative consequences, an interaction that could lead to more elation-related emotions such as enjoyment and less agitation-related emotions such as anxiety (Higgins, 1987). Anxiety may thus be a natural consequence of a prevention-oriented goal pursuit. According to regulatory focus theory (Higgins, 1997), learners with different regulatory orientations pursue goals in qualitatively different manners. The prevention orientation of the learners who are motivated by ought selves may result in vigilant strategies to avoid making mistakes, whereas the promotion orientation of learners who pursue ideal selves can lead to eager strategies for maximizing language learning opportunities (Papi et al., 2019). The L2 anxiety associated with the ought L2 selves (own/other), therefore, can act as an emotional state that keeps learners alert and vigilant in their language learning use and strategies.

Finally, to answer Research Question 3, the relationship between L2 anxiety and motivated behavior was analyzed separately for a promotion group and a prevention group. In contrast to our predictions, the results showed no significant correlations between L2 anxiety and motivated behavior for either of the groups. These results seem to contradict the findings of some previous studies (e.g., Papi, 2010; Papi & Khajavy, 2021). However, if one takes a closer look at the results of those studies, one can see that the positive relationship between L2 anxiety and motivated behavior, where it was found, has typically been weak. In this study, we actually found small but non-significant correlations between L2 anxiety and motivated behavior for both the promotion group ($r = .19$) and the prevention group ($r = -.10$), results that also run counter to our expectations in terms of their direction even though they seem to be marginal. The correlation of .19 for the promotion group, however, may suggest that a low amount of anxiety could help promotion-focused learners to stay vigilant and motivated in their goal pursuit.

Among other findings, ideal L2 self/own ($r = .45$, $p < .01$) and ideal L2 self/other ($r = .40$, $p < .01$) correlated more strongly with motivated behavior than ought L2 self/own ($r = .32$, $p < .01$) did. Promotion correlated with motivated behavior positively whereas ought L2 self/other and prevention showed no correlation with motivated behavior. These results, along with the higher means for the ideal selves (Table 2), seem to run counter to the common assumption that in Asian contexts prevention-oriented variables are more motivating that the promotion-oriented variables (e.g., Apple et al., 2016) and confirm the findings of a recent study by You and Dörnyei (2016) that found a major role for the ideal L2 self in the Chinese context. The results in our study are especially meaningful for the specific population that we examined. The participants for this study were English-major students who learn English mainly because they see the language to be part of their future professional career and perhaps social life. Learning English could help these

students become successful English teachers in future and achieve their ideal self. Therefore, it is not surprising that they use their promotion system rather than prevention system to regulate their English learning motivation.

5 | CONCLUSIONS

The present study explored the interface between L2 motivation and L2 anxiety from a regulatory focus perspective among undergraduate English learners in China. More specifically, it examined how learners' L2 anxiety is related to their chronic regulatory focus (prevention focus vs. promotion focus) (Higgins, 1997), their L2-specific future self-guides (Papi et al., 2019), and their motivated learning behavior. The findings of this study suggest that L2 anxiety is originated in the obligations and requirements of the context of language learning but can be influenced by learners' promotion system of self-regulation, represented by both their chronic promotion focus and L2-specific ideal self/own. In other words, whereas the prevention-focused L2 self-guides result in the generation of L2 anxiety, the chronic promotion focus and ideal L2 self/own counterbalance the effects of the former and reduce the anxiety. Regulatory focus theory (Higgins, 1997) suggests that individuals with a chronic promotion focus are motivated by ideal selves and employ eager strategies to maximize their opportunities for growth and advancement. Such an eager approach requires risk-taking, for which emotions such as excitement rather than anxiety seem to be a good match. On the other hand, those who are motivated by ought L2 selves (own/other), which have a prevention focus, tend to employ risk-averse vigilant strategies to minimize their possibility of failure and facing negative consequences. For such a vigilant strategic inclination, anxiety seems to be an emotional match. This regulatory match/mismatch between learners' strategic inclinations for goal attainment and the emotional consequences of such strategic differences could explain why in this study ought L2 selves positively predicted L2 anxiety while the ideal L2 self/own was a negative predictor of L2 anxiety. Supporting this explanation, regulatory focus theory (Higgins, 1997) suggests that the prevention and promotion focus are mutually inhibitory motivational systems. If the regulation mode of prevention focus is not available or interrupted, the regulation mode of promotion focus will work as a compensatory mechanism (Higgins, 1998). Klenk and his colleagues (2011) suggested that although a person may have prevention goals or promotion goals for completing the same task, only one regulatory focus might be at work at a given time in the process of goal pursuit. Therefore, when promotion-related motives are at play in a goal pursuit, mainly matching elation-related emotion such as excitement and joy are experienced and when prevention-related motives are at play, mainly matching agitation-related emotions such as stress and anxiety are generated.

6 | LIMITATIONS AND FUTURE DIRECTIONS

In the present study, only questionnaire data was collected. Interviews and qualitative data could be used in future studies in order to capture a deeper picture of the link between L2 motivation and anxiety. The findings of this study cannot be generalized to other populations before the study is replicated in other contexts. Some of the scales used for measuring future selves in this study contained two or three items only, which may have affected the reliability of the scales. In future studies, including more items in the scales, as long as they align with the theoretical basis of each construct, could enhance the psychometric properties of the scales and the validity of the results. The results of this study suggest that the chronic promotion focus and the promotion-related ideal L2 self/own might have the capacity to reduce the level of L2 anxiety among learners. Designing future studies that include a promotion intervention to reduce L2 anxiety could contribute to our understanding of the interface between motivation and anxiety and lead to many helpful instructional techniques. As discussed above, L2 anxiety does not seem to be directly related to the intensity of motivated behavior. The relationships between regulatory focus and self-guides on one hand, and L2 anxiety and motivated behavior on the other hand, seem to be better understood if qualitative differences in learners' task performance and achievement are examined in future studies (Papi, 2016, 2018).

7 | PEDAGOGICAL IMPLICATIONS

The results of the present study support a promotion-oriented approach to regulating L2 anxiety. Learners' chronic promotion focus and ideal L2 self/own were found to significantly decrease L2 anxiety. The mutually inhibitory nature of the promotion and prevention focus (Higgins, 1998; Klenk et al., 2011) can be of great value to L2 teachers. Activating the promotion system, therefore, can override the prevention system that results in the increase of L2 anxiety. There are different ways of activating the promotion system. Having students think about and develop a conscious awareness of an elaborate ideal L2 self (Magid & Chan, 2012; Sampson, 2012) can possibly help enhance a promotion focus and decrease their anxiety as a result. Promotion-oriented strategies can be used at the level of teacher's communication style, teaching tasks, and formal and informal evaluation of students' progress. Studies have found that a promotion-oriented management style (Leung & Lam, 2003), message framing (Freitas & Higgins, 2002) and even body language (Cesario & Higgins, 2008) that encourage openness and risk-taking could also induce a temporary promotion induction among students. In an SLA study, Papi (2018) showed that framing task instructions in promotion terms emphasizing gains rather than losses can induce a promotion induction and result in more task engagement and incidental vocabulary learning. Using promotion tasks requiring creativity and risk-taking (Han & McDonough, 2018; Van Dijk & Kluger, 2004) could have similar effects and potentially reduce students' L2 anxiety. These are only a few areas where promotion-oriented teaching strategies could be employed to minimize L2 anxiety. However, this is a new venue of research and there are many potential possibilities to be explored in second language research and pedagogy.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

PEER REVIEW

The peer review history for this article is available at https://publons.com/publon/10.1111/ijal.12375.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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