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Hindrance or motivation? How shame affects creativity

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The impact of the negative emotion of shame on creativity and its underlying psychological mechanisms are still unclear to researchers. In this study we explored the effects of shame on creativity within the Chinese cultural context, basing our research on the theory of cognitive adaptation and the process model of emotion regulation. We constructed a serial mediation model to examine the relationships among shame, self-forgiveness, meaning in life, and creativity. Analysis of surveys completed by 419 Chinese college students showed that shame was positively correlated with creativity, self-forgiveness mediated the effect of shame on creativity, and shame influenced creativity through the serial mediators of self-forgiveness and meaning in life. These findings offer valuable insights into the impact of shame on creativity within the context of Chinese culture, and enhance understanding of the underlying psychological mechanisms, particularly the serial mediating roles of self-forgiveness and meaning in life.

Keywords
shame, creativity, self-forgiveness, meaning in life

Article Highlights

- Shame was found to positively predict creativity in the context of Chinese culture.
- Self-forgiveness played a mediating role, having a suppressive effect on the positive relationship between shame and creativity.
- Shame negatively impacted creativity by reducing self-forgiveness and meaning in life, thus influencing an individual's creativity.
- This study offers insights into how cultural factors like shame and self-forgiveness interact to influence creativity.
- Further research could explore how self-forgiveness interventions might enhance creativity by altering the emotional impact of shame.

Creativity refers to an individual's ability or trait to generate ideas, discover, and create new things (Runco & Jaeger, 2012), and it is widely recognized for its role in driving advancements in artistic creation and scientific technology (Ashby et al., 1999). As an essential human capability, creativity is both an innate trait and influenced by external factors. In the field of creativity research, scholars have proposed an orientation with the focus on the impact of emotional states on individuals' creative behaviors.

Although some researchers have turned their attention to the potential influence of negative emotions on individual creativity, the predominant focus in previous studies has been on the impact of positive emotions on creativity (Hirt et

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al., 2008). In studies on negative emotions, scholars have expressed differing views. For instance, in a study on the creative performance of corporate employees, George and Zhou (2002) found that negative emotions have a more pronounced positive effect than do positive emotions on creative performance. Furthermore, they found that under conditions of high perceived recognition and rewards for creative performance, and clarity of feelings, positive emotions exhibit a more noticeable negative effect on creative performance. Conversely, Zhang (2005) discovered that in a group of middle-s hool students, negative emotions signifi antly and negatively impa ted reativity levels.

According to the cognitive-oriented approach in cognitive adaptation theory (Taylor, 1983), emotions convey to the organism critical information about the nature of the current environment. Negative emotions indicate that there is a problem with the current situation, such as a threat or a need that must be addressed, and these emotions trigger actions aimed at alleviating or meeting the need or remediating the threat, thereby enhancing individual creativity (Baas et al., 2008; Du et al., 2020). Similarly, the emotion regulation process model suggests that negative emotions can motivate individuals to engage in strategies to escape these emotions by distancing themselves from the current unfavorable situation and re-evaluating their circumstances. By doing so, individuals can restore their emotional balance, enhancing their overall well-being and psychological resilience, which may foster creative behavior (Gross, 2002; Higgins, 1997). Therefore, negative emotional states could potentially promote individual creativity. Thus, it is crucial to conduct a more nuan ed exploration of the impa t of the negative emotion of shame on reativity.

Shame is commonly regarded as a distressing affect accompanied by self-scrutiny and self-evaluation (Gilbert, 2000). However, research findings have indicated significant cross-cultural differences in shame (de Groot et al., 2021; HonorShame, 2014). For example, in Western cultures, shame is typically viewed as a negative emotional state, with the emphasis on associations with individual achievements, performance, and self-worth (Van Herpen, 2023). In contrast, in Chinese culture, shame is associated with societal and group expectations, with a greater focus on maintaining group and societal harmony in the process of emotional regulation (F. Wang, 2006; Wen & Qiao, 2010). Furthermore, in Chinese culture, according to Confucian values, shame is conceptualized as an emotion that motivates individuals toward more positive directions, embodying the concept that having a feeling of shame gives rise to courage (Foreign Language Teaching and Research Press, 1999; Zhai, 2018; Zhang, 2015). Therefore, in the context of the Chinese culture, despite shame being an emotion associated with distressing experiences, it may trigger constructive actions aimed at mitigating or resolving issues, thereby leading individuals to demonstrate reativity.

Self-forgiveness is a method individuals employ upon recognizing their errors or failure to deal with self-condemnation. It does not entail forgetting one's faults; rather, following the experience of negative emotions stemming from wrongdoing, it involves self-acceptance, confronting one's mistakes, taking responsibility, and acknowledging one's intrinsic worth (Holmgren, 1998; Mills, 1995; Murphy, 2005). Researchers have demonstrated that this proactive self-acceptance and self-forgiveness amid errors foster individual creativity (Leach & Cidam, 2015). A sentiment of self-loathing lies behind shame, potentially leading individuals to attribute the outcomes of their actions to internal and stable factors, thereby evading self-awareness, self-identity, and understanding of their position and value in the world (self-existence), and fostering reduced self-forgiveness (Tangney, 1995). We proposed our first hypothesis on the basis of the above analysis:

Hypothesis 1: Self-forgiveness will mediate the relationship between shame and creativity.

Meaning in life refers to the perception that individuals form about their life goals and existential values based on their environment and cognitive level (Steger et al., 2009). It has been found that self-forgiveness is associated with individuals' sense of meaning in life and may play a crucial role therein (Vismaya et al., 2024). Individuals who can forgive themselves following interpersonal and moral lapses are able to acknowledge their faults rather than choosing to ignore them, thereby facilitating construction of meaning (Graham et al., 2017). For instance, Woodyatt and Wenzel (2013) suggested that self-forgiveness can alleviate inner turmoil and potentially restore interpersonal relationships harmed by wrongdoing. Thus, self-forgiveness exhibits a positive correlation with meaning in life, indicating that it can support the reconstruction of individuals' sense of purpose.

On the other hand, meaning in life may serve as a potent driver, inspiring individual creativity. This notion is supported by studies that have found a positive correlation between individuals' perceived meaning in life and their level of creativity (Han et al., 2023; Kwong et al., 2019). When individuals perceive life as meaningful, they are more likely to exhibit higher levels of creativity because they have greater motivation to seek new experiences and development (Amabile & Pratt, 2016). We based our second hypothesis on the evidence provided above:
Hypothesis 2: Self-forgiveness and meaning in life will serve as serial mediators of the relationship between shame and creativity.

In summary, our aim in this study was to explore the psychological mechanisms through which shame influences creativity in the context of Chinese culture. We surmised that, in this cultural context, shame may predict higher levels of creativity; however, concurrently, shame may lead to lower levels of self-forgiveness and diminish individuals' sense of meaning in life, ultimately resulting in lower levels of creativity. The research model is depicted in Figure 1.

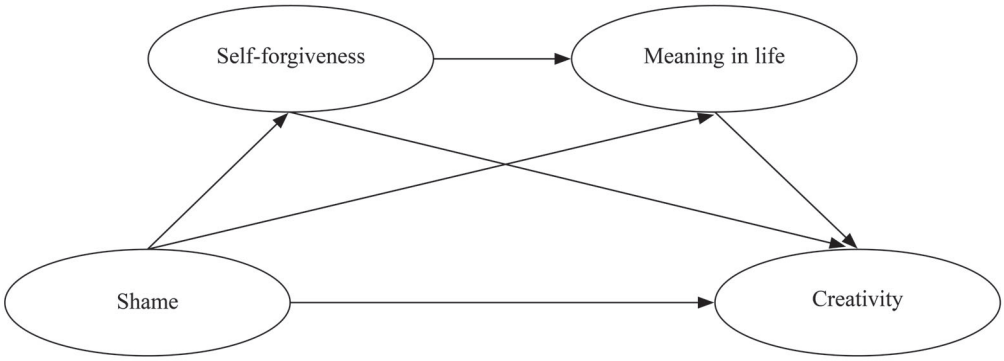

Figure 1. *Proposed Serial Mediation Model*

Method

Participants and Procedure

The Ethics Committee of Anhui University of Science and Technology approved this study. We collected our data in March 2024 from 472 students at Anhui Science and Technology University in China. The survey was conducted online using https://www.wjx.cn, with all participants completing it in class under the guidance of one of the experimenters. All students volunteered to take part in the survey and signed an informed consent form before filling out the survey. After completing the survey, participants each received a keychain with an approximate value of RMB 5 (USD 0.70) as compensation, with the amount disclosed only after the survey's completion.

To ensure data quality, we implemented several criteria for data exclusion: (a) participants who failed deception-detection items in the survey, (b) participants who gave identical answers to half or more of the items throughout the entire survey (Curran, 2016), and (c) participants whose completion time for the survey fell outside the range of 10–20 minutes. After excluding samples that did not meet these criteria, surveys from 419 participants (258 men and 161 women) aged 18–24 years were included in the analysis. Specific demographic details are shown in Table 1.

Table 1. *Descriptive Statistics for Study Variables*

Variable		*n*	%	Variable	*M*	*SD*
Gender	Male	258	61.58	Age	21.10	1.81
	Female	161	38.42			
Year of study	Freshman	285	68.02			
	Sophomore	29	6.92			
	Junior	63	15.04			
	Senior	14	3.34			
	Graduate student	28	6.68			
Education	Bachelor's degree	391	93.32			
	Master's degree	21	5.01			
	Doctoral degree	7	1.67			
Only-child status	Yes	138	32.94			
	No	281	67.06			

Note. $N = 419$.

Measures

Shame

We utilized the Shame Scale, developed by Chinese scholars Qian et al. (2000), to assess participants' level of shame. The scale consists of 25 items encompassing three dimensions: personal shame (12 items, e.g., "Do you feel shame due to certain personal habits or behaviors?"), behavioral shame (nine items, e.g., "Have you ever felt shame because you made a mistake?"), and bodily shame (four items, e.g., "Do you feel shame about a specific part of your body or your body posture?"). Participants rate each item on a 4-point Likert scale (1 = *not at all consistent*, 4 = *extremely consistent*), with all items scored positively. The mean score across all items is calculated as the measure of participants' shame level. In this study we did not differentiate among the different dimensions of shame but instead used the overall mean score to evaluate participants' shame level, where a higher score indicates a higher level of shame. In this study Cronbach's alpha was .96.

Self-Forgiveness

Self-forgiveness was assessed using a Chinese version (J. Wang, 2007) of the self-forgiveness subscale from the Heartland Forgiveness Scale (Thompson et al., 2005). A sample item is "I often brood over the mistakes I have made." The revised self-forgiveness subscale has demonstrated good reliability and validity among Chinese participants (J. Wang, 2007). The 12 items are rated on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*), with five items being reverse scored. We used the mean score of all items to evaluate the level of self-forgiveness, with higher scores indicating higher levels of self-forgiveness. In this study Cronbach's alpha was .82.

Meaning in Life

We assessed individuals' perceived meaning in life using the Chinese version (Liu & Gan, 2010) of the Meaning in Life Questionnaire developed by Steger et al. (2009). The scale consists of nine items, one of which is reverse scored, and comprises two dimensions: presence of meaning (e.g., "I am seeking things that make my life feel meaningful") and search for meaning (e.g., "I am looking for a purpose or mission in my life"). A 7-point Likert response scale is used (1 = *strongly disagree*, 7 = *strongly agree*). The total score of all items is used to evaluate the individual's sense of meaning in life, with higher scores indicating a stronger sense of meaning. In this study Cronbach's alpha was .80.

Creativity

We used the Runco Ideational Behavior Scale (Runco et al., 2011) to measure participants' tendency toward creative behavior in daily life (e.g., "I have many novel ideas"). This self-report scale is designed to reflect individuals' use of innovative ideas or thoughts, and its translated version has demonstrated good reliability and validity in China (D. Wang et al., 2022). The scale consists of 24 items rated on a 5-point Likert scale (1 = *never*, 5 = *very frequently*). The mean

score of all items is calculated to reflect the individual's creativity, with higher scores indicating higher levels of creativity. In our study Cronbach's alpha was .92.

Depression

We used a Chinese translation (Zheng & Zheng, 1987) of the 13-item version of the Beck Depression Inventory (Beck et al., 1961) to assess individual levels of depression. This scale consists of 13 items measuring the following symptoms: depression, pessimism, sense of failure, lack of satisfaction, guilt, self-disappointment, negative tendencies, social withdrawal, indecisiveness, changes in self-image, work difficulties, fatigue, and loss of appetite. Each item is rated on a 4-point Likert scale ranging from 0 = *not at all* to 3 = *severely*, and the total score is calculated to assess the individual's level of depression. In this study Cronbach's alpha was .93.

Control Variables

Previous researchers have highlighted the prominent prevalence of depressive symptoms among Chinese university students (Chen et al., 2022; Lu et al., 2021). Depression may exhibit behavioral response patterns similar to those for shame, such as lower levels of self-forgiveness, with significant correlations reported between shame and depression (Jung et al., 2019; Kim et al., 2011). Therefore, to ensure that the assessment of the independent impact of shame on creativity was more precise than that in prior research, we included depression as a covariates in the regression analysis to mitigate its potential confounding effects.

Data Analysis

We calculated descriptive statistics and Pearson correlations using SPSS 26.0. Following Hayes' methodology (Hayes, 2022), Model 4 in PROCESS 3.4 was used to test the mediating role of self-forgiveness between shame and creativity. Additionally, Model 6 was used to examine the serial mediation effect of self-forgiveness and meaning in life between shame and creativity.

Results

Testing for Common Method Bias

To rule out the potential confounding effects of common method bias in the data, we applied Harman's single-factor test. We included all items in the scales in an exploratory factor analysis. The results indicated that the first common factor accounted for 19.63% of the variance, which is below the critical value of 40% (Podsakoff et al., 2003; Zhou & Long, 2004). Thus, there was no significant common method bias present in this study.

Descriptive Statistics and Correlation Analyses

Table 2 shows the descriptive statistics and correlation analysis of study variables. There was a positive correlation between shame and creativity, suggesting that individuals with higher shame scores tended to score higher on creativity. Additionally, there were negative correlations between shame and self-forgiveness, and between shame and meaning in life, indicating that individuals with higher shame scores tended to have lower scores for self-forgiveness and meaning in life. Furthermore, self-forgiveness was positively correlated with both meaning in life and creativity. Finally, there was a positive correlation between meaning in life and creativity.

Table 2. *Descriptive Statistics and Correlation Analyses of Variables*

	M	*SD*	1	2	3	4
1. Shame	2.08	0.61	1			
2. Self-forgiveness	4.29	0.83	–.51**	1		
3. Meaning in life	42.07	8.24	–.19**	.24**	1	
4. Creativity	3.15	0.48	.14**	.10*	.31**	1

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

Testing for Mediation Effect

Previous studies have found that during the stage of attending university, students in China experience a rapid development of independent social and psychological maturity because of the reduction in supervision both at university and by families (Geng et al., 2018). Consequently, students may exhibit differences in psychological and behavioral characteristics according to their year of study. Moreover, the age distribution of participants in our study was not uniform. Hence, we opted to include gender, age, and depression as covariates in our data analysis, as these factors might influence the variables of interest in the current study. We conducted independent samples *t* tests or analyses of variance in testing the effects of these three potential confounding factors on the other variables. We found that these factors did, indeed, influence the variables of interest in the current study: there were significant differences in creativity scores across age groups. We divided the students into seven groups based on their age: 1 = 18 years old, 2 = 19 years old, 3 = 20 years old, 4 = 21 years old, 5 = 22 years old, 6 = 23 years old 7 = 24 years and over ($F = 2.93$, $p < .01$), indicating that age significantly affected creativity. Additionally, we categorized depression scores into four groups based on the diagnostic criteria of the revised Beck Depression Inventory-13: 1 = 0–4 points, 2 = 5–7 points, 3 = 8–15 points, and 4 = 16–39 points. The results show that depression significantly influenced shame ($F = 41.61$, $p < .001$), meaning in life ($F = 13.88$, $p < .001$), and self-forgiveness ($F = 27.82$, $p < .001$).

We utilized gender, age, and depression scores as covariates and employed Model 4 in PROCESS 3.4 to test Hypothesis 1 (Hayes, 2022). The SPSS output of the model results is displayed in Table 3. Age (Model 1) and depression (Model 1) emerged as significant predictors of self-forgiveness, and shame significantly and negatively predicted self-forgiveness (Model 1). Furthermore, as shown in Model 2, shame and self-forgiveness both significantly predicted creativity.

Table 3. *Mediating Effect of Self-Forgiveness on Creativity*

	Model 1: Self-forgiveness				Model 2: Creativity			
	β	*t*	*SE*	95% CI	β	*t*	*SE*	95% CI
Constant	5.55	33.70	0.16	[5.22, 5.87]	2.28	10.62	0.21	[1.85, 2.70]
Gender	–.05	–1.15	0.07	[–0.22, 0.06]	–.09	–1.78	0.05	[–0.18, 0.01]
Age	.11	2.64**	0.02	[0.01, 0.09]	.09	1.76	0.01	[–0.00, 0.05]
Depression	–.23	–4.64***	0.01	[–0.04, –0.02]	–.04	–0.68	0.00	[–0.01, 0.01]
Shame	–.40	–8.51***	0.06	[–0.68, –0.42]	.26	4.30***	0.05	[0.11, 0.29]
Self-forgiveness					.21	3.64***	0.03	[0.06, 0.19]
R^2			0.30				0.07	
F			44.76				6.18	

Note. CI = confidence interval.
** $p < .01$. *** $p < .001$.

The indirect effect of self-forgiveness → creativity reached significance, since the 95% confidence interval (CI) did not include zero (see Table 3). Therefore, Hypothesis 1 was supported in this study, suggesting that shame may influence individual creativity through self-forgiveness.

Testing for Serial Mediation Effect

Gender, age, and depression scores were used as covariates, and Model 6 in PROCESS 3.4 was employed to analyze the mediating roles of self-forgiveness and meaning in life in the relationship between shame and creativity (see Table 4). Our results showed that shame was a significant predictor of self-forgiveness. In Model 2, when meaning in life was included as an outcome variable, self-forgiveness emerged as a significant predictor, but shame did not significantly predict meaning in life. Finally, shame, self-forgiveness, and meaning in life significantly predicted creativity. Therefore, Hypothesis 2 was supported. Detailed results of the path coefficients in the model are illustrated in Figure 2.

Table 4. *Mediating Role of Self-Forgiveness and Meaning in Life in the Relationship Between Shame and Creativity*

	Model 1: Self-forgiveness			Model 2: Meaning in life			Model 3: Creativity		
	β	*t*	*SE*	β	*t*	*SE*	β	*t*	*SE*
Constant	5.55	33.70	0.16	36.49	10.28	3.55	1.56	6.85	0.23
Gender	–.05	–1.15	0.07	.02	0.36	0.78	–.09	–2.00*	0.04
Age	.11	2.64**	0.02	.10	2.11*	0.22	.05	1.13	0.01
Depression	–.23	–4.63***	0.01	–.29	–5.21***	0.07	.06	1.04	0.00
Shame	–.40	–8.50***	0.06	.01	0.23	0.78	.25	4.46***	0.04
Self-forgiveness				.13	2.28*	0.55	.16	3.03**	0.03
Meaning in life							.34	6.98***	0.00
R^2	.30				.12			.17	
F	44.76				11.55			13.88	

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

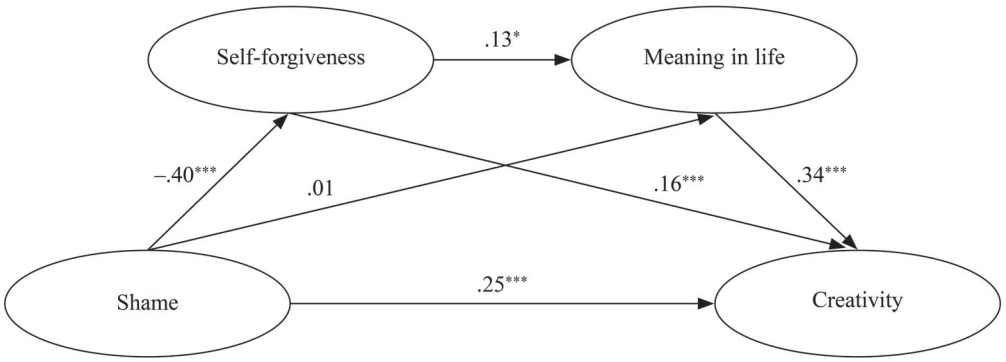

Figure 2. *Research Model with Standard Coefficients*

Note. $N = 419$. Regression coefficients were obtained with year of study, age, and depression as covariates.
* $p < .05$. *** $p < .001$.

We further used Model 6 in PROCESS 3.4 to examine how shame influences creativity through self-forgiveness and meaning in life. The bias-corrected percentile bootstrapping method with 5,000 resamples and 95% bias-corrected CIs was used to test the mediation effects. If the CI did not include zero, the effect was considered statistically significant. The results are shown in Table 5.

Table 5. *Direct and Indirect Effects of Shame on Creativity*

Path	Estimate	*SE*	95% CI
Total effect	.14	0.04	[0.05, 0.22]
Direct effect	.20	0.04	[0.11, 0.29]
Total indirect effect	–.06	0.03	[–0.13, –0.01]
Shame → Self-forgiveness → Creativity	–.05	0.02	[–0.11, –0.01]
Shame → Meaning in life → Creativity	.00	0.02	[–0.03, 0.03]
Shame → Self-forgiveness → Meaning in life → Creativity	–.01	0.01	[–0.03, –0.00]

Note. CI = confidence interval.

We analyzed the mediating role of self-forgiveness in the relationship between shame and creativity, the mediating role of meaning in life in the relationship between shame and creativity, and the serial mediation effect of self-forgiveness and meaning in life in the relationship between shame and creativity. The total effect and direct effect were significant. The total indirect effect comprised three mediation pathways: Path 1: shame → self-forgiveness → creativity, Path 2: shame → meaning in life → creativity, Path 3: shame → self-forgiveness → meaning in life → creativity. Since the 95% CI for Path 2 included zero, the indirect effect for this pathway was not significant. However, the 95% CIs for Paths 1 and 3 did not include zero, indicating that the indirect effects of these two pathways were significant. The proportion of the total effect explained by the indirect mediation effect was –.06/.20, which is 30%.

Discussion

From a Western cultural perspective, researchers have demonstrated that shame is associated with individual creativity, yet many related studies have not yielded consistent conclusions (Anderson & Clarke, 2019; de Hooge et al., 2011; Lickel et al., 2014). Moreover, the psychological mechanisms through which shame influences creativity remain unclear. Therefore, we further investigated these aspects of the association of shame with creativity within the context of Chinese culture. Our current study yielded the following conclusions: Individuals with higher (vs. lower) levels of shame tend to exhibit greater creativity; however, this positive effect of shame on creativity may be attenuated when considering the factor of self-forgiveness. In other words, self-forgiveness mediated the relationship between shame and creativity. We also found that shame negatively impacted creativity by reducing self-forgiveness and meaning in life, thus influencing an individual's creativity.

Our findings support the view that in the Chinese culture, although shame may inherently involve a negative emotional experience, this feeling can potentially be transformed into a beneficial factor that promotes creativity. This aligns with the findings of some previous research, such as the functionalist viewpoint that the behaviors elicited by the emotions underlying shame may serve as beneficial conditions for the individual (Bagozzi et al., 2003; de Hooge et al., 2011). Similarly, research has indicated that shame may unlock creative potential in individuals. González-Gómez and Richter (2015) asked participants to imagine that they were in a situation where they felt ashamed because their boss had told them in front of their colleagues that they had made a serious mistake in a report they had prepared. Participants were asked if they would avoid the situation and try to make themselves invisible, hoping the day would end quickly so they could go home, or if they would start writing a new, more useful report that would correct their mistakes and restore their standing in the team. At the same time, participants described their teams as either low or high in creativity. González-Gómez and Richter reported finding that when people were exposed to a creative team environment, their feelings of shame predicted higher levels of creativity Additionally, in a meta-analysis on shame and constructive behavior, Leach and Cidam (2015) found that when the causes or consequences of failure are rectifiable, the intense discomfort that shame causes can motivate individuals to correct their mistakes, thereby enhancing constructive behavior.

Given that the participants in this study were all Chinese university students, we considered the implications of our findings within the context of Chinese culture. In Confucianism shame is conceptualized not only as an emotion but also as a human capability that prompts introspection and motivates individuals toward socially and morally desirable

changes (Foreign Language Teaching and Research Press, 1999; Zhai, 2018; Zhang, 2015). Therefore, our finding that shame positively predicted creativity may reflect the emphasis in Chinese culture on positive correction and improvement in response to feelings of shame, with individuals engaging in creative behaviors to restore a positive self-perception.

We found a negative correlation between shame and self-forgiveness, which is consistent with previous research (Fisher & Exline, 2010). Furthermore, we identified a suppressive effect of self-forgiveness in the relationship between shame and creativity. Specifically, we found that self-forgiveness diminished the positive impact of shame on creativity. A suppressive effect such as this is a relatively unique finding in mediation analyses of these variables (MacKinnon et al., 2000; Rucker et al., 2011). This suggests that individuals experiencing shame may have a tendency to restore their self-image through creative behavior, but the reduced level of self-forgiveness associated with shame could inhibit highly creative actions following the experience of shame. According to Brown's (2006) shame resilience theory, the power of shame stems from its unspeakable nature, which, if ignored and avoided, can foster negative behaviors and thoughts. Self-forgiveness, on the other hand, involves confronting and accepting the emotions underlying shame (Cleare et al., 2019). Thus, self-forgiveness may play a critical role in the impact of shame on creativity. Our data supported this hypothesis, demonstrating that self-forgiveness mediated the relationship between shame and creativity.

A previous study showed that self-forgiveness can enhance individual psychological resilience, making it easier to cope with life's challenges and setbacks, and enhancing the sense of meaning in life (Thompson et al., 2005). This is consistent with our result of a positive correlation between self-forgiveness and meaning in life. Additionally, in their revised componential model of creativity, Amabile and Pratt (2016) proposed the progress principle: Creativity itself can foster a sense of meaning in life, which, in turn, promotes creativity. This suggests that when individuals perceive their lives as meaningful, they are more likely to exhibit higher levels of creativity, seeking new experiences and growth (Amabile & Pratt, 2016). Therefore, shame may influence creativity through its impact on self-forgiveness and meaning in life. Our data supported this hypothesis, demonstrating that self-forgiveness and meaning in life served as serial mediators in the relationship between shame and creativity.

Our study makes several significant contributions to this field of research. First, at the theoretical level, we proposed an explanatory pathway for the relationship between shame and creativity, offering valuable insights into the psychological mechanisms through which shame influences creativity. Second, on a practical level, our findings suggest that interventions targeting self-forgiveness and meaning in life may be effective methods for enhancing individual creativity. However, further experimental validation is required to confirm these findings.

Limitations and Future Research Directions

Our study has several limitations. First, the cross-sectional study design precluded establishing causal relationships. Therefore, the significant differences observed in the current dataset may require validation through further longitudinal research. Second, the assessment of shame, self-forgiveness, meaning in life, and creativity through self-report in a survey underscores the importance of interpreting the research findings with caution because of potential biases in data analysis. Last, the convenience sampling method used in this study, primarily involving undergraduate students, and exhibiting a gender imbalance, with 61.58% of participants being men, highlights the necessity for future research to expand the sample size and address gender ratio disparity.

Conclusion

In the context of Chinese culture, shame can positively predict individual creativity, despite the lower levels of self-forgiveness and meaning in life exhibited by individuals experiencing higher levels of shame. Furthermore, self-forgiveness and meaning in life served as serial mediators in the relationship between shame and creativity, and this mediating effect likely acted as a suppressive mechanism, weakening the positive predictive effect of shame on creativity.

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Zhaojun Chen is now at the School of Education, Shandong Women's University, People's Republic of China.

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During the preparation of this work, the authors used the ChatGPT service provided by OpenAI to enhance the clarity and fluency of the language. After using this tool, the authors reviewed and edited the text as needed and take full responsibility for the content of the publication.

The data that support the findings of this study are all presented within this manuscript.

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