ORIGINAL RESEARCH

The Relationship Between Interparental Conflict and Social Anxiety Among Chinese College Students: A Moderated Mediation Model

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Purpose: Our aim is to construct a moderated mediation model for investigating the effect of interparental conflict on social anxiety, the potential mediating role of psychological resilience, the moderating effect of perceived social support on this association, and the gender difference among Chinese college students.

Methods: This cross-sectional survey was conducted on 1343 Chinese college students from Anhui Province, Hunan Province, Jiangsu Province, and Henan Province, China, in March 2024. Pearson correlation, mediation effects analyses, and multiple-group comparison were conducted.

Results: (1) Interparental conflict and social anxiety varied significantly with gender, while the interparental conflict ($t = -3.998$, $p < 0.001$) and social anxiety ($t = -4.644$, $p < 0.001$) in the female group were significantly more severe than in the male group. However, there was no significant difference in interparental conflict and social anxiety between different grades ($p > 0.05$); (2) Interparental conflict positively predicts social anxiety; (3) The relationship between interparental conflict and social anxiety is mediated by psychological resilience; (4) The relationship between interparental conflict and psychological resilience is moderated by perceived social support; (5) The mediating effect was found only in women, but the moderating effect was no gender difference.

Conclusion: It is crucial to recognize and cultivate the psychological resilience of college students and to provide them with appropriate high social support. This is conducive to alleviating the social anxiety suffered by college students and promote their psycho-social well-being.

Keywords: interparental conflict, perceived social support, psychological resilience, social anxiety, college students

Introduction

In recent years, with the rapid development of society, the progress in technology and the increase in academic pressure exerted on college students, social anxiety has become one of the mental health problems in most of them,[1,2] and has been a wide concern in society. Social anxiety is defined as a persistent fear of being scrutinized by others and a sense of apprehension about potential embarrassment in social situations,[3] which has an adverse impact on the academic integrity and self-esteem of college students[4,5] and even causes mobile phone addiction.[6] Previous studies have shown that the level of social anxiety among Chinese college students has been increasing year by year since the 21st century,[7] and even 65.4% of Chinese college students have experienced different degrees of social anxiety.[8] Among the factors of college students' social anxiety, interparental conflict is considered one of the risk factors.[9,10] In addition, psychological resilience and perceived social support were found to be associated with social anxiety in college students[11–14] and can alleviate social anxiety in college students. Furthermore, previous studies in China have also explored gender differences in perceived social support[15,16] and psychological resilience.[17,18]

It is undeniable that the previous studies have laid a solid foundation for this study, despite a need to further explore the shortcomings of the previous studies in this study. (1) The prior Chinese studies focused mainly on the direct

relationship between interparental conflict and social anxiety[19] or the mediating role of negative factors, such as threat perception, emotional insecurity, and negative representation.[20,21] There is still a lack of clarity on the underlying mechanism of protective factors (psychological resilience and perceived social support) among Chinese college students. (2) Although previous studies have been conducted to explore the interparental conflict and social anxiety in China, most of them focused narrowly on middle school students, and the sample size was relatively small. Concentrated in the range of 400–800,[19–21] it rarely involved college students. The sample size is still relatively small even for those studies involving college students, which is more than 700.[1] Thus, the representativeness of the sample is restricted. (3) Previous studies have shown that in the same age group with Chinese cultural background, there are divergent conclusions reached on the gender differences in perceived social support and psychological resilience. As suggested in some studies, adolescents showed no significant gender difference in perceived social support[22] and psychological resilience.[23,24] However, some studies also reveal that female college students have stronger perceived social support and psychological resilience than male students.[22] In addition, psychological resilience and perceived social support are of cross-cultural nature.[25,26] However, there are few studies conducted in China to account for the gender differences in the mediating role of psychological resilience and the moderating role of perceived social support from the perspective of Chinese culture. Therefore, there is a great need to explore the mechanisms by which the interparental conflict affects social anxiety in Chinese college students and their gender differences.

Interparental Conflict and Social Anxiety

Interparental conflict commonly refers to verbal arguments or nonverbal hostility between parents resulting from differences or other causes.[27] Many empirical studies have found that the Emotional security theory (EST) is an important theoretical model to reveal the impact of interparental conflict on children's psychological and behavioral problems.[10,28,29] According to the Emotional security theory,[28] interparental conflict compels children into perceiving the unhappiness of family life and the instability of the relationship between parents. As a result, they fall into a state of long-term insecurity, which makes them more sensitive to similar interpersonal conflict situations and susceptible to sustained emotional disorders, thus increasing the risk of social anxiety. Based on this theory, some literature[30–32] have found that interparental conflict has an effect on children's social anxiety. For example, it has been indicated in previous studies[30,31] that interparental conflict can induce social anxiety by undermining family cohesion or by provoking children to assess the threats posed to their relationship. Furthermore, according to a longitudinal study[33] conducted on the interparental conflicts among adolescents, adolescents consider parental conflicts as a threat to family well-being, which may make them feel worried about and fearful of their peer environment to develop social anxiety. Therefore, interparental conflict significantly positively predicts social anxiety in Chinese college students.

The Mediating Role of Psychological Resilience

With the development of positive psychology, various factors that are protective for adolescent mental health have received extensive attention, such as psychological resilience.[34–36] Psychological resilience refers to the process by which individuals adapt well in the face of adversity, trauma, tragedy, or significant threats[37]. It is influenced by many factors such as individual, family and social environment. In other words, in addition to genetic factors, external environmental factors can also affect an individual's psychological resilience.[38,39] According to the spillover hypothesis of family system theory,[40,41] which suggests that marital problems or parent–child problems are stress factors that lead to additional problems for the children's mental health. Previous studies[42–44] have found that interparental conflict, as a family stress, has a negative impact on children's internal psychological development, such as psychological resilience. Specifically, interparental conflict is negatively correlated with psychological resilience, that is, the more significant the interparental conflict, the lower the level of psychological resilience[36,45].

Additionally, psychological resilience is an important factor in preventing social anxiety. According to the resilience framework (KRF) proposed by Kumpfer,[46–48] the external stressors perceived by individuals tend to destroy their internal stable state. In this case, individuals adapt to stressors through learning and reach a new stable state under the combined influence of external environment, internal psychological resilience factors (cognition, emotional or emotional intelligence, will, etc) and the interaction between them. Some studies[35,49] have found a significant negative correlation

between psychological resilience and social anxiety, that is, the higher the psychological resilience, the less the individual feels social anxiety. For example, a study[50] on the social anxiety of poor college students in China found that the higher their psychological resilience, the less social anxiety they had. For another example, in a cross-cultural study of social anxiety, 5880 young people were surveyed and found that the higher the psychological resilience, the lower the level of social anxiety.[34] Therefore, psychological resilience might serve as a mediating factor in the relationship between interparental conflict and social anxiety among Chinese college students.

The Moderating Role of Perceived Social Support

Although interparental conflict can lead to low psychological resilience, not all children encountering interparental conflict will have low psychological resilience. According to the stress buffer theory of perceived social support,[51,52] the social support perceived by individuals from social relations can relieve the individual perception of pressure when external pressure arises. This is beneficial in reducing the evaluation of the severity of stressful events and maintaining mental health for individuals. Perceived social support is an individual's subjective expectation and evaluation of social support and an assessment of the possible support.[53] Compared with actual support, it has a more beneficial function for individual mental health[54.] It has been proven that perceived social support, as a moderator variable, can mitigate the negative impact of stressful life events or negative life events on individuals[55,56] For example, studies have found that individuals with high perceived social support have enough external resources to mitigate the negative impact of stressors (such as low emotional intelligence, high stress intuition, low self-esteem, etc) on individual resilience, and then improve the level of psychological resilience.[57,58] Furthermore, research has indicated that the negative impact of interparental conflict on individual resilience will be weakened under high social support levels.[42] Building upon these findings, this study proposes that perceived social support may also moderate the relationship between interparental conflict and psychological resilience.

Gender Difference

According to the Social Role Theory,[59] socialization forms different role expectations for both genders, which in turn develops distinct psychological and behavioral characteristics. In terms of interpersonal relationship experience, women are more dependent on others, more sensitive to relationships, and more influenced by others, while men are more independent, free, and less influenced by others.[60] For example, gender has also become an important variable that cannot be ignored in the process of interparental conflict among adolescents.[61] Studies have found that women experience more interparental conflict than men.[62,63] Compared with boys, girls are more inclined to view problems from a negative perspective and are more sensitive to parental conflict.[64] In addition, some studies have found that there are gender differences in psychological resilience.[17,18] A study[65] has shown that in the face of negative events (adverse childhood experiences), women's psychological resilience is more affected, while men are less affected. Moreover, some studies have found that there are significant gender differences in perceived social support; that is, the level of perceived social support in women is significantly higher than that in men.[15,16] For example, in the study on the pain of breakup, women are more likely to seek care from the surrounding social support system and perceive a higher level of social support, while men are the opposite.[66] Based on the above literature, this study speculates that there are significant gender differences in the mediating effect of psychological resilience and the moderating effect of perceived social support.

The Current Study

In summary, the present study aims to fill existing gaps in the literature by constructing a moderated mediation model to explore the underlying mechanisms between interparental conflict and social anxiety while also considering whether associations differ between male and female. Considering the aforementioned prior research, we hypothesize that:

H1: Interparental conflict can positively predict social anxiety in college students.

H2: Psychological resilience plays a mediating role between interparental conflict and social anxiety in college students.

H3: Perceived social support moderates the link between interparental conflict and psychological resilience in college students.

H4: A gender difference exists in the mediating role of psychological resilience (H4a). A gender difference exists in the moderating role of perceived social support (H4b).

Methods
Participants and Procedure
This is a cross-sectional study, and the data used in this study were collected using the convenience sampling method. In order to enhance the representativeness of samples while preventing the potential bias of samples, the college students participating in this study voluntarily filled in the questionnaire. Also, they were informed in advance that relevant information would be kept strictly confidential, with lie detector questions set as well. Meanwhile, according to the sample number calculation formula used by Wu[67] (2023), the sample size of this study exceeded 1000 people. In addition, the diversity of the sample is maximized in this study by covering multiple regions, given the geographical location of the researchers and their online connections with other research members. Therefore, an online survey is conducted in this study in the form of "Survey Star" across several central provinces such as Anhui, Hunan, Jiangsu and Henan in March 2024. The students completed this online survey by scanning the website links or QR codes with their mobile phone. This study was approved by the Ethics Committees of Anhui Normal University in China. Initially, 1490 questionnaires were distributed, and 1343 questionnaires were collected, with a validity rate of 90.1%. The mean age of the participants was 19.74 (SD = 1.46, ranging from 17 to 24), including 577 men (42.9%) and 766 women (57.0%). The number and percentage of college students are 598 freshmen (44.50%), 370 sophomores (27.60%), 208 juniors (15.50%), and 167 seniors (12.40%).

Measures
The Children's Perception of Interparental Conflict Scale(CPIC)–Chinese Version
Children's Perception of Interparental Conflict Scale developed by Grych and Fincham[68] and later revised by Chi and Xin,[27] was utilized as the research instrument.

The scale grouped into three dimensions, such as conflict characteristics, threat cognition and self-attribution. The study used a conflict trait subscale, which consists of 17 items. For example, "When parents argue, they lose a lot of temper." The questionnaire was rated on a 4-point scale ranging from 1 (high inconsistent) to 4 (complete consistent). A sample item is "I have never witnessed my parents argue or disagree." The Cronbach's α of this scale was reported to be 0.91 among Chinese college students.[69] In this study, the Cronbach's α of the scale was 0.88.

Psychological Resilience Scale–Chinese Version
Psychological Resilience Scale developed by Connor & Davidson[70] and modified by Yu & Zhang[71] was used, which consists of 25 items. For example, "No matter what happens, I can handle it". The scale uses a 5-point response scale from 1 (very inconsistent) to 5 (very consistent), with a higher score indicating a higher level of psychological resilience. It has also been reported that the Cronbach's α of this scale was 0.92 among Chinese college students.[72] In this study, the Cronbach's α of the scale was 0.92.

Interaction Anxiousness Scale (IAS)–Chinese Version
Interaction Anxiousness Scale developed by Leary[73] and revised by Peng et al[74] was used. The scale has 15 items, such as "In social occasions, I rarely feel anxious." and "I usually feel uncomfortable when I'm with a group of people I don't know". The scale uses 5-point response scales from 1 (very inconsistent) to 5 (very consistent). The higher the mean of all items, the more social anxiety. The internal consistency of the scale was 0.81, according to a study conducted by Wang and Xia[75] on Chinese college students. In this study, the Cronbach's α of the scale was 0.83.

Perceived Social Support Scale–Chinese Version
Perceived Social Support Scale developed by Zimet et al[76] and modified by Jiang[77] was used. The scale comprises 12 items, such as "My friends can really help me", and "When I encounter problems, some people (teachers/classmates/relatives) will

appear beside me". The scale uses a 7-point response scale from 1 (extremely disagree) to 7 (extremely agree). The higher the mean of all items, the more support. The scale has been demonstrated as reliable and valid, with the Cronbach's α of this scale reaching 0.90 among Chinese college students.[78] In this study, the Cronbach's α of the scale was 0.91.

Statistical Analysis

SPSS 26.0 was used for descriptive statistics and correlation analysis of the data, Model 7 in the PROCESS plug-in was applied to analyze the mediating role of psychological resilience and the moderating role of perceived social support, and Amos 26.0 was used to test the significance of the mediation effect. The variables were standardized in the analysis. The gender and grade factors were controlled, and the significance test of all regression coefficients was conducted by the deviation-corrected percentile Bootstrap method, with 5000 resampling times and 95% confidence interval.

Results

Common Method Variance Test

A Harman one-way analysis of variance was conducted to test for the presence of common variance. The analysis revealed 9 factors with a characteristic root greater than 1. The first factor accounted for 28.65% of the variance, which was less than the threshold of 40%. This suggests that there was no significant common method bias present in the study.

Descriptive Statistics and Correlation Analysis

As indicated by descriptive statistics (see Table 1), interparental conflict and social anxiety varied significantly with gender, while interparental conflict ($t = -3.998$, $p < 0.001$) and social anxiety ($t = -4.644$, $p < 0.001$) in female group were significantly more severe than in the male group. Notably, no significant difference was observed in interparental conflict and social anxiety between different grades ($p > 0.05$).

Correlation analysis shows (see Table 2) that interparental conflict is significantly positively correlated with social anxiety, and significantly negatively correlated with psychological resilience and perceived social support; psychological resilience is significantly negatively correlated with social anxiety, and significantly positively correlated with perceived social support; perceived social support is significantly negatively correlated with social anxiety.

Moderated Mediation Analysis

The Process macro program in SPSS26.0 was used to set the model as Model 7, with gender and grade as control variable to analyze the moderated mediation model. The results showed that (see Table 3), interparental conflict had a significant direct

Table 1 Gender Differences and Grade Differences in Interparental Conflict and Social Anxiety (N = 1343)

		M	SD	t/F	p
IPC	Male	2.052	0.580	−3.998	<0.001
	Female	2.186	0.645		
	freshmen	2.101	0.616	1.049	>0.05
	sophomores	2.140	0.634		
	juniors	2.132	0.612		
	seniors	2.194	0.663		
SA	Male	3.216	0.674	−4.644	<0.001
	Female	3.391	0.690		
	freshmen	3.313	0.675		>0.05
	sophomores	3.326	0.718		
	juniors	3.307	0.722	0.042	
	seniors	3.313	0.625		

Abbreviations: IPC, Interparental conflict; SA, Social anxiety.

Table 2 Descriptive Statistics and Correlation Analysis Results (N = 1343)

	M	SD	1	2	3	4
1. IPC	2.128	0.621	1			
2. PR	3.520	0.671	−0.314***	1		
3. PSS	5.201	1.167	−0.390***	0.613***	1	
4. SA	3.316	0.688	0.221***	−0.427***	−0.258***	1

Note: 0=male, 1=female;***p<0.001.
Abbreviations: IPC, Interparental conflict; PR, Psychological resilience; PSS, Perceived social support; SA, Social anxiety.

Table 3 The Moderate Mediation Model Test

	SA(Y)		PR(M)		SA(Y)	
	β	t	β	t	β	t
Gender	0.197	3.647***	−0.202	−4.664***	0.162	3.246**
Grade	−0.006	−0.251	0.041	2.022*	0.008	0.319
IPC(X)	0.209	7.822***	−0.082	−3.526***	0.087	3.364***
PR(M)					−0.392	−15.161***
PSS(W)			0.594	25.728***		
IPC×PSS(X×W)			−0.095	−4.944***		
R^2	0.063		0.404		0.200	
F	22.404***		150.932***		66.961***	

Note:*p<0.05;**p<0.01;***p<0.001.
Abbreviations: IPC, Interparental conflict; PR, Psychological resilience; PSS, Perceived social support; SA, Social anxiety.

predictive effect on social anxiety (β=0.209, t=7.822, p<0.001). After adding mediation variables and moderating variables, interparental conflict still significantly positively predicted social anxiety, interparental conflict significantly negatively predicted psychological resilience ($\beta = -0.082$, $t = -3.526$, $p < 0.001$), and psychological resilience significantly negatively predicted social anxiety ($\beta = -0.392$, $t = -15.161$, $p < 0.001$), indicating that psychological resilience played a mediating role between interparental conflict and social anxiety. Perceived social support significantly positively predicted psychological resilience ($\beta = 0.594$, t=25.728, p<0.001), and the product term of interparental conflict and perceived social support significantly negatively predicted psychological resilience ($\beta = -0.095$, $t = -4.944$, $p < 0.001$), indicating that perceived social support played a moderating role between interparental conflict and psychological resilience. See Figure 1 for the complete path analysis.

Further, simple slope analysis results show (see Figure 2) that, at a high perceived social support level (M+1SD), interparental conflict significantly negatively predicts psychological resilience (βsimple = −0.187, $p < 0.001$); at a low perceived social support level (M-1SD), interparental conflict has no significant predictive effect on psychological psychological resilience (βsimple = 0.015, $p > 0.05$).

Gender Difference Test of Moderated Mediation Model

According to the above-mentioned viewpoint of the moderated mediation model, Model 7 in the SPSS macro was used to test the moderated mediation model in the groups of boys (577 people) and girls (766 people), with grade as control variable to analyze the moderated mediation model. The results showed that (see Table 4), in the male and female groups, interparental conflict and psychological resilience both had significant predictive effects on social anxiety, but in the female group, interparental conflict significantly predicted psychological resilience ($\beta = -0.111$, $t = -3.815$, $p < 0.001$), while in the male group, interparental conflict had no significant predictive effect on psychological resilience ($\beta = -0.029$, $t = -0.760$, $p > 0.05$). The significance of the mediation effect and the gender difference were tested by AMOS program.
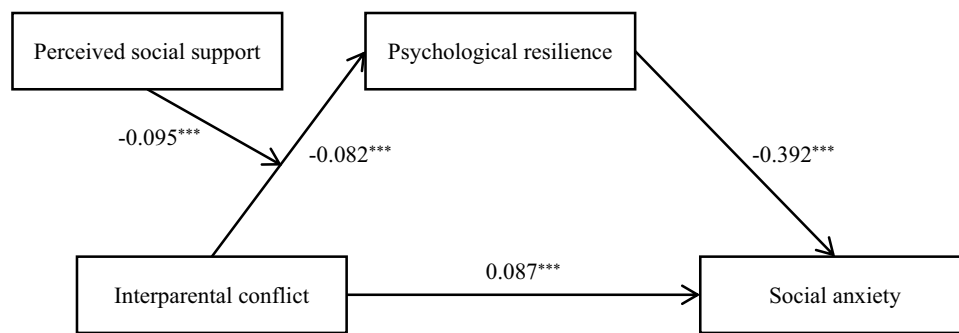
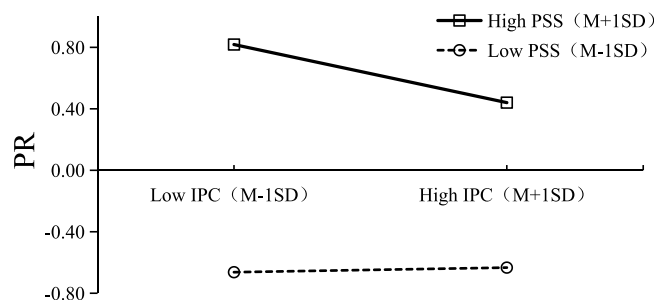**Figure 1** The Moderated Mediation Model(***p < 0.001).

Figure 2 Moderating effect of PSS on the relationship between IPC and PR.

The results showed that (Table 5), the mediation effect was significant in the female group, and the upper and lower limits of the Bootstrap 95% confidence interval did not contain 0; while the mediation effect was not significant in the male group, and the upper and lower limits of the Bootstrap 95% confidence interval contained 0.

In the female group, the product term of interparental conflict and perceived social support significantly predicted psychological resilience ($\beta = -0.106$, $t = -4.241$, $p < 0.001$); in the male group, the product term of interparental conflict and perceived social support also predicted psychological resilience ($\beta = -0.068$, $t = -2.262$, $p < 0.05$). This indicates that there is no gender differences in the moderating effect of perceived social support on the relationship between interparental conflict and psychological resilience.

Table 4 The Mediation Effect Analysis of Male and Female Groups

Regression Equation		Male (N=577)					Female (N=766)				
		Goodness-of-Fit Indices			Regression Coefficient and Significance		Goodness-of-Fit Indices			Regression Coefficient and Significance	
Dependent variable	Predictor variable	R	R²	F	β	t	R	R²	F	β	t
PR		0.653	0.426	141.909***			0.615	0.378	154.126***		
	IPC				−0.029	−0.760				−0.111	−3.815***
	PSS				0.626	18.511***				0.572	17.897***
	IPC×PSS				−0.068	−2.262*				−0.106	−4.241***
SA		0.361	0.130	43.026***			0.485	0.235	117.038***		
	IPC				0.090	2.130*				0.079	2.443*
	PR				−0.311	−8.111***				−0.466	−13.397***

Note:*p<0.05;**p<0.01;***p<0.001.
Abbreviations: IPC, Interparental conflict. PR, Psychological resilience; PSS, Perceived social support; SA, Social anxiety.

Table 5 The Mediating Effect of Psychological Resilience on Different Gender Groups at Different Levels of Perceived Social Support

Gender	Indirect Effect Values	Boot LLCI	Boot ULCI
Male	0.021	−0.002	0.051
Female	0.049	0.021	0.079

Discussion

In this study, we examined the relationships between interparental conflict and social anxiety, and how psychological resilience mediates this relationship, and how perceived social support moderates the relationship between interparental conflict and psychological resilience in Chinese college students. We also explored the gender differences in the moderated mediation model. The results indicated that: (1) interparental conflict positively predicts social anxiety; (2) interparental conflict affects social anxiety through psychological resilience; (3) the relationship between interparental conflict and psychological resilience is moderated by perceived social support; (4) the mediating effect was found only in women; (5) the moderating effect was no gender difference.

Interparental Conflict and Social Anxiety

Our results confirmed that interparental conflict was robustly positively associated with social anxiety, which was consistent with previous studies showing that college students are more prone to social anxiety if exposed to high levels of interparental conflict.[1,9,33] This phenomenon can be explained through emotional security theory (EST), which posits that a higher level of prior exposure to interparental conflict predisposed children to exhibit heightened and more negative emotional responses and emotional safety will be reduced, which will lead to maladjustment, such as social anxiety.[28] Therefore, in a family environment where interparental conflicts often occur, college students are more likely to have negative emotional responses to their parents' relationship, which in turn leads to social anxiety.[20]

The Mediating Role of Psychological Resilience

The study also found that psychological resilience mediates the relationship between interparental conflict and social anxiety, supporting Hypothesis 2. It can be seen that interparental conflict affects colleges' social anxiety through psychological resilience. College students experiencing prolonged interparental conflict tend to exhibit lower psychological resilience and higher levels of social anxiety. Our research adds more credence to the spillover hypothesis of family system theory.[40,41] According to this theory, the positive or negative experiences gained by parents from the marriage relationship spill over into their parenting behavior, which influences the development of children. Therefore, frequent and intense interparental conflicts prevent college students from perceiving the warmth of the family. Also, their parenting style is affected. Consequently, they become timid and feel helpless, which impairs their ability to cope with conflicts and setbacks. Thus, their psychological resilience diminishes.[42,79] In addition, this study supports the resilience framework proposed by Kumpfer.[47,80] When external stressors undermine the internal stable state of an individual, there are interactions between the internal psychological resilience factors (cognitive, emotional or will, etc) and the external environment, which enables the individual to reach a new stable state by adapting to the stress through learning and adjustment strategies. Therefore, when interparental conflict arises, there is interaction between the internal psychological resilience of college students and the external negative environment. Due to negative influence, this psychological resilience is reduced, thus resulting in social anxiety. It is also implied that social anxiety can be avoided by adjusting emotions, reassessing parental relationships, and strengthening the will to resist negative factors.

The Moderating Role of Perceived Social Support

The present study partially confirmed Hypothesis 3 by demonstrating that perceived social support moderates the relationship between interparental conflict and psychological resilience. However, the finding was not consistent with the previous studies that the higher the perceived social support, the more buffered the college students were from the

stressful effects of negative events[55,56]. Specifically, compared to college students with low perceived social support, those with high perceived social support are more susceptible to the impact of interparental conflict on psychological resilience. The reverse buffering effect of social support can explain this phenomenon. According to this theory[81,82], excessive social support may reduce individuals' ability to cope with negative situations and increase the negative impact of negative events on individuals' psychological behavior. Chinese college students are facing many stressors, such as long-term preparation for graduate school or civil service entrance exams. At the same time, interparental conflicts may also bring other stressors to them, such as insecurity.[83] If they perceive too much social support, their ability to cope with negative interpersonal relationships in the family is weakened, and the perceived support from others may have expectations (eg, not to worry about interparental conflicts, but to focus more on how to become a first-class master or civil servant). Therefore, the perception of such social support is more pressure than comfort, which in turn exacerbates the negative predictive effect of interparental conflict on their psychological resilience.

Gender Difference

The gender difference test found that the mediating effect of psychological resilience was only significant in the female group but not in the male group, supporting Hypothesis H4a. This indicates that the psychological resilience of female college students is more susceptible to being affected and weakened by interparental conflicts. In contrast, male college students' resilience remains unaffected. The possible reason is the difference in social gender role expectations.[59] According to this theory, females attach more importance to the relationships among family members,[84] and they are generally expected to assume more responsibility for maintaining family emotions, with higher sensitivity shown in interpersonal relationships.[85] Therefore, female college students are not only more sensitive to parental relationship but also more likely to be expected to assume the responsibility of mediating parental conflict and maintaining family harmony. As a result, they are subjected to greater social role pressure, which easily affects their psychological resilience, thus hindering them from effectively regulating their emotions and behaviors in the face of social pressure. Ultimately, social anxiety are developed. In contrast, males are viewed as family breadwinners. Assuming more financial and social responsibilities, they display strong, independent traits[86] and are more likely to control emotions and solve problems rationally. At the same time, the independent and strong qualities of men are also emphasized by the traditional Chinese culture of "Heaven is moving and the gentleman is striving for self-improvement". It is suggested that male college students can deal with interparental conflict objectively and calmly, avoid the impact on their psychological resilience, and then better recover and adjust their mental state, so as to reasonably express or control their emotions. Thus, social anxiety is avoided.

Importantly, there was no gender difference in the moderating role of perceived social support, thus the H4b was not supported. The results suggest that perceived social support can moderate the effects of interparental conflict on psychological resilience in Chinese male and female college students. The results show that the moderating effect of perceived social support is consistent across gender. The potential reasons are as follows. On the one hand, the rapid development of China has presented Chinese male and female college students with more equitable learning opportunities and growth environment,[87] to accept the educational concept of "gender equality",[88] which prompts their pursuit of independence.[89] Therefore, the lower perceived level of social support made them more independent in coping with interparental conflict, with higher psychological resilience shown. Thus, the negative effects diminished. On the other hand, most Chinese people do not expect too many negative family events to be known by outsiders, due to Chinese people's face culture of "Domestic shame should not be made public". If there are too many people knowing about "dirty laundry" at home, they will "lose face" and experience more negative emotions. Therefore, the high level of perceived social support means that more people know the negative events of college students' parental conflict, which increases their sense of shame, reduces their ability to cope with parental conflict, and leads to a decline in psychological resilience.

Strengths and Limitations

There is no doubt that this study has certain theoretical value and practical worth. On the one hand, this study combines cognitive factors (psychological resilience) and interpersonal factors (parent–child relationships, perceived social support) to explore social anxiety and analyze the gender differences of mediating effect and the moderating effect on social anxiety,

further enriching the theoretical research on social anxiety. On the other hand, the finding had practical value for the prevention of social anxiety. From a cognitive perspective, CBT therapy is applicable to prevent and intervene in social anxiety. For example, the cognitive (eg, exaggeration of threat) and emotional (eg, fear of fear) problems can be solved through relaxation techniques, problem-solving strategies, and exposure practices.[90] In addition, parents can prevent social anxiety of college students by building harmonious conjugal relationships and reducing the frequency of conflict. Last but not least, the gender difference in mediating role reminds educators of the significance attached to cultivating the independent quality of female college students and enhancing their psychological resilience. This is crucial to avoiding the negative impact of interparental conflict and reducing social anxiety. According to the results of gender differences in moderating role, educators should provide a moderate level of perceived social support for contemporary Chinese male and female college students, which avoids the negative impact of high-level perceived social support.

Certainly, there are some limitations in this study. First, a cross-sectional study was designed in this study, which did not show a longitudinal effect of interparental conflict on social anxiety. Therefore, it is necessary to use a longitudinal design to explore this change in the future. Second, the data were collected from the self-reports of the participants, which may give rise to some bias. In the future, self-reported results can be verified through peer nomination methods and other psychological research methods (such as observation, experiment, interview, etc) to enhance the reliability of the data. Finally, this study is limited to exploring the gender differences in psychological factors from the physiological perspective, which means that the psychological factors of transgender people are not explored from the perspective of gender identity, such as psychological resilience,[91] depression, anxiety, etc. In future studies, more research will be conducted on transgender resilience and anxiety in the context of Chinese culture, which highlights the global diversity of mental health.[92]

Conclusion

The findings of this study are as follows: (1) Interparental conflict positively predicts social anxiety; (2) The relationship between interparental conflict and social anxiety was mediated by psychological resilience; (3) Perceived social support showed an reverse buffering effect on the relationship between interparental conflict and psychological resilience. Specifically, compared to college students with low perceived social support, those with high perceived social support are more susceptible to the impact of interparental conflict on psychological resilience; (4) Gender differences exist in the mediating effect of psychological resilience but not in the moderating effect of perceived social support. These results demonstrate a necessity for educators not only to focus on cultivating the mental resilience of females and improving their ability to cope with negative family environments but also to maintain the face of male and female college students and their mental health.

Data Sharing Statement

The datasets generated during and/or analyzed during the study are available from the corresponding author upon reasonable request.

Ethics Statement

This study follows the Declaration of Helsinki and was approved by the Ethics Committee of Anhui Normal University. All participants signed an informed consent form before starting the questionnaire and received a reward after completing the questionnaire.

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Disclosure

The authors declare that the research was conducted without any commercial or financial relationships that may be construed as a potential conflict of interest.

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