

Exploring the Interplay of Social Anxiety Symptoms and Family Perception among Chinese Adolescents: A Psychosocial Investigation

Yuhan Wang^{1,a,*}

¹*Department of Psychology, University of Rochester, Rochester, 14627, United States of America*
a. ywang348@u.rochester.edu

**corresponding author*

Abstract: Anxiety among children and adolescents has received significant attention. Nonetheless, the inquiry into social anxiety and its relationship with family dynamics, particularly within the Chinese culture, remains less explored. This study undertakes the task of bridging this scholarly void through the employment of a comprehensive questionnaire survey. Data from 308 participants aged 13 to 17 were collected through a questionnaire facilitated by the Sojump platform. The survey employed the Interaction Anxiousness Scale (IAS) and the Adolescent Student Family Satisfaction Scale (ASFSS). Results reveal high internal reliability ($\alpha=0.963$) for IAS and ideal reliability ($\alpha=0.973$) for ASFSS. A strong negative correlation ($r = -0.548$) emerged between family satisfaction and social anxiety symptoms. This study addresses the underexplored relationship between these factors, contributing to the understanding of adolescent mental health dynamics within the familial context. Future research is recommended to incorporate longitudinal designs to enhance the breadth and depth of findings. Additionally, investigating mediating factors and developing family-centered interventions could yield valuable insights for shaping mental health interventions for adolescents.

Keywords: Chinese adolescents, social anxiety, family dynamics

1. Introduction

The exploration of anxiety among children and adolescents has gained substantial prominence in recent times. While extensive research has delved into genetic, behavioral, and cognitive factors contributing to anxiety in this population, a growing awareness has emerged concerning the intricate interplay between anxiety and family dynamics. Globally, an increasing number of publications are dedicated to provide more insights on this pivotal relationship.

Notably, the connection between anxiety and the family context holds significant implications. Children and adolescents, being particularly vulnerable to conditions such as depression and anxiety, have garnered considerable attention. Remarkably, Kessler et al. have illuminated that approximately 50% of lifetime occurrences of mental disorders originate during adolescence, with 75% manifesting by the age of 24. This underscores the critical nature of addressing mental health issues during this developmental stage, given their potential reverberations into adulthood [1,2].

Within this context, the influence of family dynamics on anxious youth has become a focal point. Research by Dadds et al. has elucidated that parents of anxious children often inadvertently prompt

their children to perceive ambiguous social situations as threatening [3]. This parental behavior can significantly shape how children respond to their environment. Additionally, Barrett et al. have shown that training parents to guide their anxious children in interpreting and constructively addressing perceived threats has proven highly effective, resulting in an 88% reduction in children's anxiety levels [4].

Nevertheless, while the existing literature has provided valuable insights into anxiety among adolescents, targeted investigations toward the relationship between social anxiety and family dynamics in Chinese adolescents remain scarce. Prior studies have illuminated the correlations between parental emotional warmth, rejection, and attachment among Chinese adolescents [5]. However, the family dynamics, particularly in terms of the adolescent's perspective, remain less explored. As such, this paper seeks to delve into the intricate relationship between anxiety tendencies in children and adolescents and their family dynamics in Chinese adolescents. By shedding light on this dynamic interplay in a relatively less explored population, the study aims to contribute to a deeper understanding of the multifaceted nature of anxiety in young individuals and to potentially inform interventions that can positively impact their mental well-being in the Chinese context.

2. Literature Review

The intricate landscape of social anxiety among adolescents warrants comprehensive investigation, especially within the unique cultural context of China. This literature review examines recent research shedding light on the prevalence of social anxiety, its familial correlates, and the interplay of cultural dynamics.

2.1. Prevalence of Social Anxiety among Chinese Adolescents

The Social Survey Center of China Youth Daily and the Questionnaire Website undertook a joint survey that encompassed 2001 individuals aged 18-35. The findings illuminate a concerning trend, with 64.2% of respondents acknowledging some form of "social blockage" in their psychological or behavioural spheres. Among these, 26.7% experienced impediments in offline social interactions, 17.0% in online interactions, and 20.5% grappling with both realms simultaneously [6]. These statistics emphasize the urgent need to delve into the factors contributing to social anxiety among Chinese adolescents, while concurrently devising interventions to mitigate its prevalence.

2.2. Adolescent Development and Social Anxiety

Adolescence marks a critical developmental phase characterized by numerous psychological and social changes, often presenting challenges that influence an individual's self-concept, interpersonal relationships, and overall well-being [7]. Among the myriad of challenges, social anxiety symptoms have gained prominence due to their potential to significantly impact various aspects of adolescents' lives. Social anxiety is defined as a severe and persistent fear of one or more social or performance situations in which the person is exposed to strangers or to potential peer scrutiny. This condition has received significant attention and is common in China's cultural environment [8].

2.3. Familial Factors and Their Role

The interplay between social anxiety symptoms and family dynamics represents a dynamic area of research that has garnered substantial interest within the field of psychology. The family environment plays a crucial role in shaping adolescents' emotional and psychological development, making it a central focus for understanding the onset, maintenance, and treatment of social anxiety symptoms [9].

While substantial evidence exists supporting the genetic inheritance of social anxiety or shyness, the supporting data for family correlation is also imperative [10]. In a correlational study and an extreme group comparison study conducted by Bögels et al, the authors revealed that solely family sociability (children's and mothers' reports) and children's perception of overprotection of the mother predicted social anxiety [10]. However, they were unable to draw the conclusion that children's social anxieties were related to parental warmth and rejection. By contrast, a cross-sectional study conducted in China uncovered intriguing dynamics. While both parental rejection and emotional warmth exhibited significant correlations with perceived attachment to both the father and the mother, anxious rearing showed a connection solely with parental attachment among younger adolescents. Surprisingly, overprotection demonstrated no discernible relationship with parental attachment at all [5]. These discrepancies were attributed to distinct cultural perceptions of parental and peer relationships.

2.4. Cultural Norms and Family Influences

Embedded within Chinese cultural norms is an emphasis on familial unity and collectivism, which compounds the need to investigate the intricate nexus between social anxiety and family perceptions in the lives of Chinese adolescents. As noted by Yang et al., the history of cultural influence on family construction can be traced back to the Tang dynasty. This is because China's ethical perspective centers around the family rather than the individual. Consequently, the core value of Chinese cultural norms is the family. In the past, families were organized around ancestral halls, genealogies, and ancestral property, rather than the modern concept of nuclear families consisting of one husband, one wife, and one child. Instead, they were composed of numerous smaller families coming together. Therefore, Chinese people bear extensive responsibilities and obligations toward their families. Beyond ensuring the family's progress, they strive to ensure the family's continuation. To achieve all this, educating children becomes of paramount importance [11].

However, empirical studies paint a nuanced picture. In an extended research on adolescents-parent conflict to a sample of lower-class Chinese adolescents in HongKong, the researchers recognized that the familial conflicts in Chinese adolescents were not either less frequent or intense compared to their European-American counterpart. This paradox arises partly from the lack of democracy in Chinese families and the developing autonomy among contemporary Chinese adolescents [12]. These findings underscore that while familial factors wield significant influence in the development of Chinese adolescents, the notion of unanimity in Chinese families is more complex, with the prevalence of conflicts aligning with that in European-American families.

3. Method

3.1. Participants

This study aimed to examine the relationship between social anxiety tendencies and levels of family satisfaction among adolescents in China. Data collection was conducted via a questionnaire distributed to adolescents across China without any regional limitations. The study focused exclusively on participants aged 13 to 17 years to ensure data integrity and relevance. To enhance the sample size and the precision of the investigation, data collection was facilitated through the utilization of Sojump, a platform comparable to Amazon Mechanical Turk. Participants were given the option to complete the survey anonymously, and they self-administered the questionnaire. A total of 308 valid responses were included in the final analysis.

3.2. Assessments and Measures

The primary objective of this study was to delve into the intricate interplay between symptoms of social anxiety and familial perceptions among Chinese adolescents. To address this objective, the survey employed two key measurement scales: the Interaction Anxiousness Scale (IAS) and the Adolescent Student Family Satisfaction Scale (ASFSS).

The selection of these scales was guided by existing research studies. Zhen's work, for instance, provided validation for the use of ASFSS by yielding an impressive internal consistency Cronbach's α coefficient of 0.935. This study further demonstrated the scale's validity through confirmatory factor analysis (CFA) [13]. Another influential study conducted by Li et al. scrutinized the IAS, establishing its reliability and validity among Chinese college students. This investigation concluded that the Chinese version of the IAS was a dependable instrument for gauging social anxiety in Chinese adolescents [14].

It is important to highlight that the selection of these two scales was grounded in thorough research available through the China National Knowledge Infrastructure. This repository of knowledge facilitated the choice of measurement tools that were specifically attuned to the social context of China, thereby ensuring greater accuracy and relevance in the study's context.

3.3. Coding

Interaction Anxiety Scale (IAS) questions were organized and coded according to their original order from Q1 to Q14, and Adolescent Students Family Satisfaction Scale (ASFSS) questions were organized and coded according to their original order from Q1 to Q23.

4. Data Analysis

4.1. Reliability Analysis

The reliability coefficient of the Interaction Anxiousness Scale (IAS) is 0.963 (see Table 1). The findings demonstrate a strong correlation between the analysis items and the ideal reliability level, which accurately sums up the great dependability quality of the data. Adolescent Students Family Satisfaction Scale (ASFSS) yielded a reliability coefficient of 0.973 (see Table 1), which synthetically describes the reliability quality of the data excellent.

Table 1: Reliability statistics.

Reliability statistics		
	Cronbach Alpha	number of items
IAS	0.963	15
ASFSS	0.973	26

Table 2: Overall reliability analysis.

Simplified format for reliability

Table 2: (continued).

Cronbach alpha	sample size	number of items
0.877	308	41

The standardized reliability coefficient, which is based on the overall reliability coefficient, is 0.877, suggesting great overall reliability for the questionnaire (see table 2).

Table 3: Frequency analysis.

Frequency statistics(n=308)		
name	option	frequency
Your gender	female	165
Your gender	male	143
Your age range	13-14	165
Your age range	15-17	143
Your age range	18	0
Your age range	Under 12	0

As can be seen from Table 3: the result of frequency analysis by Your age shows: female frequency is 165; male frequency is 143. The result of frequency analysis by Your age range shows: 13-14 frequency is 165; 15-17 frequency is 143; 18 frequency is 0; Under 12 frequency is 0.

4.2. Correlation Analysis

Pearson correlation analysis was used to examine the significance and direction of linear correlation between two variables.

Table 4: Correlation Analysis.

	Mean	Std	IAS	ASFS
				S
IAS	2.598	0.976	Pearson correlation	1
			SIG.(two-tailed)	

Table 4: (continued).

ASFSS 3.378 0.938	Pearson correlation	- 0.548**	1
		SIG.(two-tailed)	0.000

The correlation coefficient between IAS and ASFSS is -0.548, and presents a significant level of 0.01 , which indicates that IAS and ASFSS have a significant negative correlation.

5. Results

5.1. Interaction Anxiousness Scale (IAS)

The internal consistency of the Interaction Anxiousness Scale (IAS) was evaluated using Cronbach's alpha coefficient. The obtained Cronbach's alpha coefficient for the IAS was 0.963, suggesting high reliability. The analysis items (Q1-Q14) exhibited good correlation, further supporting the scale's reliability. In summary, the study's data displayed an excellent reliability coefficient of 0.963, indicating a high quality of data reliability.

5.2. Adolescent Students Family Satisfaction Scale (ASFSS)

The reliability of the Adolescent Students Family Satisfaction Scale (ASFSS) was assessed through Cronbach's alpha coefficient. The calculated Cronbach's alpha coefficient for the ASFSS was 0.973, indicating a high level of reliability. The individual items (Q1-Q26) within the scale exhibited a strong correlation, reinforcing the reliability of the scale. In conclusion, the ASFSS demonstrated a reliability coefficient of 0.973, signifying an excellent level of data reliability.

5.3. Adolesce Reliability Statistics

The overall reliability analysis was conducted to assess the combined reliability of both scales. The Cronbach's alpha coefficient for the combined scales was found to be 0.877. With a sample size of 308 respondents and a total of 41 items, the overall standardized reliability coefficient of 0.877 confirmed the excellent reliability of the questionnaire as a whole.

5.4. Frequency Analysis

Frequency analysis was performed to understand the distribution of responses across different categories. The frequency distribution by gender indicated that 165 respondents identified as female, while 143 respondents identified as male. The age range distribution revealed that 165 respondents were between the ages of 13-14, and 143 respondents were between the ages of 15-17. No respondents fell under the age of 12, and none were aged 18.

5.5. Correlation Analysis

Pearson correlation analysis was utilized to investigate the relationship between the Interaction Anxiousness Scale (IAS) and the Adolescent Students Family Satisfaction Scale (ASFSS).

- The mean score for IAS was 2.598, with a standard deviation of 0.976.
- The mean score for ASFSS was 3.378, with a standard deviation of 0.938.

The Pearson correlation coefficient between IAS and ASFSS was found to be -0.548. This significant negative correlation, with a significance level of 0.01, indicated that as interaction anxiousness increased, family satisfaction tended to decrease. The strong negative correlation between IAS and ASFSS highlights the relationship between these two variables within the context of the study.

In summary, the reliability analysis demonstrated high internal consistency for both scales, the frequency analysis provided insights into the respondents' characteristics, and the correlation analysis unveiled a significant negative relationship between interaction anxiousness and family satisfaction among adolescent students.

6. Discussion

The goal of this study is to investigate the relationship between social anxiety symptoms and family satisfaction level in Chinese adolescents. The results of this investigation revealed a robust internal reliability for both measurement scales: a Cronbach's alpha coefficient of 0.963 for the Interaction Anxiousness Scale (IAS) and an impressive 0.973 for the Adolescent Student Family Satisfaction Scale (ASFSS). These elevated reliability levels underscore the dependability of the instruments employed, further bolstered by their consistent performance within the Chinese cultural and social context, as evidenced by previous research. The meticulous selection of questions drawn from established scales, as supported by prior literature, serves to heighten the efficiency and reliability of this study. Consequently, the survey responses accurately gauge the spectrum of social interaction anxiety symptoms and family satisfaction levels among Chinese adolescents.

Turning to the results, a significant and strong negative correlation emerged between family satisfaction and social anxiety symptoms among Chinese adolescents ($r = -0.548$). This finding indicates that as family satisfaction increases, the likelihood of experiencing social anxiety symptoms decreases. While the influence of family dynamics on depression and anxiety in adolescents is well-recognized, the connection specifically between social anxiety and familial factors has received comparatively less attention. The current study fills this gap, further advancing the prevailing notion that the mental well-being of adolescents is intricately intertwined with the dynamics of their family environment.

Moreover, the implications of this study extend to potential interventions for socially anxious adolescents. By highlighting the substantial impact of family satisfaction on mitigating social anxiety symptoms, this research offers valuable insights into effective approaches for intervention strategies. Recognizing the crucial role families play in shaping adolescents' mental health, interventions could be tailored to leverage positive family dynamics as a means to alleviate social anxiety and promote overall well-being.

In summary, this study's findings provide a nuanced understanding of the relationship between social anxiety and family satisfaction among Chinese adolescents. By filling a research gap and offering practical implications for intervention, this study contributes to the broader conversation surrounding adolescent mental health and the pivotal role of family dynamics in shaping their experiences.

6.1. Limitations

While this study has yielded statistically significant findings, it is imperative to acknowledge its limitations, which can offer valuable insights for shaping future investigations in this pertinent field. The following limitations deserve attention:

6.1.1. Scale Applicability for Non-Student Adolescents

The present study employed the Adolescent Student Family Satisfaction Scale (ASFSS) to assess family satisfaction. Despite the scale's demonstrated high internal reliability, it is essential to acknowledge its original design for Chinese adolescent students. There is a possibility that its effectiveness might vary when applied to non-student adolescents. It is worthy of notice that although China employs a free nine-year compulsory education that allows all children to receive education until they graduate middle school, some children are not able to complete their compulsory education due to various reasons (e.g. financial problems), or enroll in high school. In subsequent research, employing more comprehensive scales that encompass a broader spectrum of adolescents, including those not enrolled in educational institutions, could enhance the accuracy and generalizability of family satisfaction assessment, thereby minimizing potential biases.

6.1.2. Regional Representation and Accessibility

While this study aimed to capture a nationwide sample across China, it is pertinent to address the issue of regional representation. The variation in response rates from some remote regions of China could be attributed to factors such as internet accessibility limitations. Consequently, caution must be exercised when attempting to generalize the findings to regions that might have limited internet penetration or technological infrastructure. Future studies should consider employing diverse recruitment strategies to ensure a more equitable representation across all geographical regions within China.

In a nutshell, the limitations highlighted in this study should be taken into consideration while interpreting the findings. Addressing these limitations in future research endeavors will not only enhance the validity and generalizability of the results but also contribute to a more comprehensive understanding of the intricate relationship between social anxiety symptoms and family satisfaction levels among Chinese adolescents.

6.2. Recommendations for Future Studies

While this study has provided valuable insights into the relationship between social anxiety and family satisfaction among Chinese adolescents, future research could benefit from longitudinal designs. Long-term studies tracking the development of social anxiety symptoms and family dynamics over time could uncover dynamic patterns and shed light on causal relationships, offering a more comprehensive understanding of these complex interactions. Future studies could investigate potential mediating and moderating factors that influence the relationship between social anxiety and family satisfaction. Factors such as peer relationships, parental communication styles, and cultural norms might play significant roles in shaping these dynamics.

By addressing these areas, future studies can build upon the foundations laid by this research, contributing to a more holistic understanding of social anxiety and family dynamics among adolescents and fostering the development of targeted interventions to support their mental well-being.

7. Conclusion

In conclusion, this study establishes a significant correlation between social anxiety symptoms and family satisfaction levels among Chinese adolescents. The measurement scales displayed high internal reliability (Cronbach's alpha: IAS = 0.963, ASFSS = 0.973), affirming their credibility within the cultural context. By meticulously selecting questions from established scales, the study accurately gauged social interaction anxiety and family satisfaction. A strong negative correlation ($r = -0.548$) emphasizes that higher family satisfaction relates to lower social anxiety symptoms. This bridges the

gap in understanding the specific link between social anxiety and family dynamics. The study's implications extend to interventions, suggesting that positive family dynamics could alleviate social anxiety symptoms.

Acknowledging limitations, the use of the ASFSS for non-student adolescents requires caution, prompting a need for comprehensive scales. Regional representation concerns suggest diverse recruitment strategies for equitable sampling. In future, longitudinal designs could uncover dynamic patterns and causal links. Exploring mediators like peer relationships and cultural norms could deepen comprehension. In essence, this research advances knowledge on the relationship between social anxiety and family satisfaction among Chinese adolescents, offering practical insights for intervention and laying groundwork for future inquiries.

References

- [1] R. C Kessler, P. Berglund, O. Demler, R. Jin, K. R Merikangas, & E. E Walters. *Arch. Gen. Psychiat.*, 62(6). 593. (2005).
- [2] W. E Copeland, L. Shanahan, E. J Costello, & A. Angold. *Arch. Gen Psychiat.*, 66(7). 764. (2009).
- [3] M. R Dadds, K. J Sheffield, & J. F Holbeck, *J Abnorm. Child. Psych.*, 18(2). 121-129. (1990).
- [4] P. M Barrett, M. R Dadds, & R. M Rapee. *J. Consult. Clin. Psych.*, 64(2). 333-342. (1996).
- [5] P. R Mothander, & M. Wang. *Youth. Soc.*, 46(2). 155-175. (2011).
- [6] China Youth Nets. Survey finds more than 60% of young people feel they have a "social lag" (2023), Available online at: https://m.gmw.cn/2023-05/05/content_1303363927.htm.
- [7] A. Orben, L. Tomova, & S. J Blakemore. *Lancet. Child. Adolesc.*, 4(8). 634-640. (2020).
- [8] American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders* (2013), Available online at: <https://doi.org/10.1176/appi.books.9780890425596>.
- [9] A. S Morris, J. S Silk., L. Steinberg, S. S Myers, & L. R Robinson. *Soc. Dev.*, 16(2). 361-388. (2007).
- [10] S. M Bögels, A. van Oosten, P. Muris, & D. Smulders. *Behav. Res. Ther.*, 39(3). 273-287. (2001).
- [11] S. Yang, & M. Zhao. *J. Yanbei. Norm. Univ.*, G812. 92-94. (2016).
- [12] J. Yau, & J. G Smetana. *Child. Dev.*, 67(3). 1262-1275. (1996).
- [13] Zhen Yu-Ping, *Adolescent Students Family Satisfaction: Structure and Correlation Factors* (2009), Available online at: <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD2010&filename=2009230405.nh>.
- [14] D. Li, Z. Li, & Z. Wang. *J. Appl. Psychol.*, 1-12. (2023).