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Research Paper

Modeling the Role of Parent-Child Conflict in Predicting Social Anxiety with the Mediation of Anxiety Sensitivity



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ABSTRACT

Objective: The present study aimed to predict social anxiety based on parent-child conflict and the mediating role of anxiety sensitivity.

Methods: The research methodology employed was structural equation modeling with the primary objective being to investigate anxiety sensitivity, social anxiety, and parent-child conflict among second-year high school students in Khorram Abad city during the academic year 2023-2024. A sample of 350 students was randomly selected using cluster sampling. The instruments utilized included the anxiety sensitivity questionnaire Floyd et al, social anxiety assessment Connor et al, and parent-child conflict measurement Fine et al Data analysis was conducted using SPSS26 and AMOS24 software.

Results: The results indicated that parent-child conflict had a direct, positive, and significant impact on students' social anxiety ($\beta=0.44$; $p<0.01$). Furthermore, parent-child conflict directly influenced students' anxiety sensitivity ($\beta=0.68$; $p<0.01$). Additionally, anxiety sensitivity had a direct and significant correlation with students' social anxiety ($\beta=0.41$; $p<0.01$). Overall, the findings suggest that the research model fits well.

Conclusion: The findings of the study show that conflicts between parents and children, along with sensitivity to anxiety, are important factors that can predict the level of social anxiety in students.

1. Introduction

In recent years, the mental health of children and adolescents has been treated as a fundamental challenge in the field of public health (O'Reilly et al., 2018). In 2019, the World Health Organization (WHO) stated that adolescence is critical for gaining emotional-social abilities and preventing mental health problems (Guthold et al., 2023). High school students are in a transition period of important growth and maturity. During this period, students who face psychological changes are vulnerable to psychological

problems (Yu et al., 2022), and among these issues and problems, social anxiety disorder (SAD) is one of the most common types of anxiety disorders (Noroozi Homayoon et al., 2024; Nordahl et al., 2022). This disorder is also known as social phobia, which is a chronic mental disorder with excessive fear in social settings and is characterized by fear of negative evaluation from others (Mohammadi et al., 2020). Usually, social anxiety manifests itself in early adolescence (Papachristou et al., 2018).

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However, it may occur earlier in childhood or later in adulthood and cause disruptions in a person's personal life, social interactions, career life, and other functional dimensions (Hadadi & Tamannaefar, 2022). According to the classification system of mental disorders (Fifth Edition), the prevalence of this disorder is estimated to be between 1/1 and 3/6 percent (American Psychiatric Association & Association, 2013). An Iranian study also reported a 10 percent prevalence of the disorder (Mohammadi et al., 2020); therefore, studies have shown that social anxiety is highly prevalent among students, and it is necessary to correctly identify and control the factors that influence the formation of this disorder after understanding the disorder correctly (Kooraki et al., 2023). According to this, students with this type of disorder usually consider themselves incomplete and downtrodden and are afraid that their disadvantages will be exposed to others (Baharshanjani & Taherifar, 2022). Therefore, in situations where others judge or evaluate them, they are usually considered and avoided as highly threatening and anxious; for example, situations faced by a teenager in school, such as presenting a seminar, taking exams, writing on a classroom board in front of others, and participating in after-school activities. There are other common situations involving social interactions, like starting conversations with peers, attending parties, talking on the phone, and making appointments, all of which can significantly disrupt people's performance in academic, career, and relationship areas (Rozen & Aderka, 2023).

Family issues are one of the main factors that seem to play a role in social anxiety, and among the family factors are conflicts between parents and adolescents, which seem to have a greater effect on social anxiety (He et al., 2024). The parent-child conflict is the lack of agreement and opposition of two people to each other, the inconsistency of opinions, goals, and behavior in the opposite direction of the other, as well as the conflicts between people due to inconsistent interests and differences of goals and perceptions (Lei et al., 2023). Teenagers experience conflict with their parents when their needs, instincts, and desires are unmet (Jahanbakhshi et al., 2024). Each person's different expectations and personal experiences also create a parent-child conflict (mehrabi koshki et al., 2023). However, most of the conflicts that arise in the family between adolescents and parents are caused by insufficient negotiation and dialogue skills between family members, a lack of agreement on rules and responsibilities, poor values and skills in problem-solving, poor communication skills, distorted cognitive

perceptions, weakness in the ability to understand the perspective of others, insufficient skill in controlling anger, poor decision-making skills, and courage (Lei et al., 2023). In addition, parent-child conflict in the family has the possibility of having destructive or constructive effects (Movahed et al., 2023); parental conflict with their children is destructive when it leads to anxiety in parents and children, social violence and turmoil, low self-esteem of children, social anxiety, and reduced adaptation of children in school (He et al., 2024). In addition, parent-child conflict can also have a positive aspect where it helps family members to know themselves and raise awareness of the different characteristics of others, to know communication problems in relationships, and to strengthen their energy and motivation to solve them (van Dijk et al., 2020).

Anxiety sensitivity also appears to be a psychological instrument that affects social anxiety (Stork et al., 2023; Hatami Nejad et al., 2024). Anxiety sensitivity is the fear of anxiety-related emotions that have a set of physiological, social, and cognitive symptoms (Hatami Nejad et al., 2024; Reiss et al., 1986). According to the fear-expectation model, anxiety sensitivity forms the basis for avoiding anxiety (Kazgan Kılıçaslan et al., 2022). Also, anxiety sensitivity is transmitted through genetics to later generations, will be considered a hereditary trait, and can perpetuate and strengthen existing anxiety symptoms (Gharib Bolouk et al., 2022; Womersley et al., 2021). Accordingly, anxiety sensitivity can be considered with the role of anxiety boosters and the background for the development of anxiety disorders (Papachristou et al., 2018). Anxiety sensitivity is a factor that can increase the predisposition to clinical diseases and change the course of these diseases (Kazgan Kılıçaslan et al., 2022). Today, anxiety sensitivity has three dimensions, including fear of physical worries, fear of lack of cognitive control, and fear of others observing anxiety, which are different dimensions of anxiety sensitivity that make a person more vulnerable to social anxiety due to the stigma they experience (Papachristou et al., 2018). There have been several studies on anxiety sensitivity and social anxiety in adolescents, and the results showed that adolescents with social anxiety disorder have higher levels of anxiety sensitivity than other non-anxious adolescents (Golombek et al., 2020). Anxiety sensitivity is also known as a common trait among people with social anxiety disorder (Stork et al., 2023). Also, the results of previous studies have shown that anxiety sensitivity plays a key role in the formation of social anxiety disorder (Nikolić et al., 2020).

Therefore, given the high prevalence of social anxiety and its potentially serious implications for students and their families, imposing additional burdens on the education, health, and treatment systems of the country, particularly the counseling and psychological services, understanding the motivation behind the development and perpetuation of this disorder, as well as identifying the influencing factors, is crucial in mitigating the symptoms of social anxiety. Social anxiety, a common issue among students, can lead to decreased academic performance, strained social relationships, and diminished quality of life. Hence, there is a pressing need for research to pinpoint factors that positively influence the persistence of this disorder. In this study, parent-child conflict is examined as a key factor shaping the individual's personality structure and the potential intermediary role of anxiety sensitivity, which may contribute to the perpetuation of social anxiety. Given the absence of prior research on the construction of a social anxiety model in students based on parent-child conflict and the mediating influence of anxiety sensitivity, the central inquiry of this study is whether anxiety sensitivity acts as a mediator in the association between parent-child conflict and social anxiety in students. To address this question, the research presents the conceptual model illustrated in figure 1.

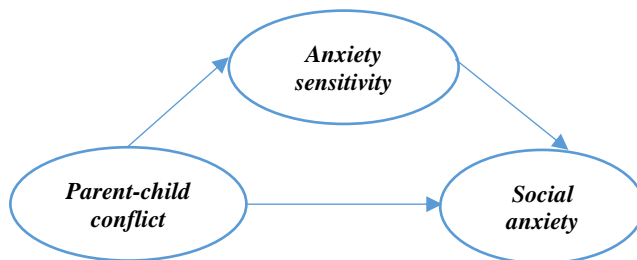


Figure 1. Proposed research model

2. Materials and Methods

The present study was a correlation of the type of structural equations. In the exogenous variable correlation model in this study, parent-child conflict is the mediating variable, anxiety sensitivity, and the endogenous variable is social anxiety. The statistical community in this study includes all secondary school students in the district of the city of Khorramabad in the academic year 2023–2024. To estimate the sample size in the opinion (Loehlin, 2004) and (Kline, 2023), the value of 100 is undesirable and more than 200 samples are desirable, and to adapt to the modeling of structural equations, the sample size should be at least 20 times the visible variable, so according to the number of visible variables and taking into account the probability of a drop in the sample size, the value of

350 samples was considered and entered into statistical analysis. The sampling method in this study was clustered randomly, so from the district schools of a secondary school in Khorramabad, 10 schools, and from each school, 2 classes were randomly selected. Being a student and consciously consenting to accountability were the criteria for entering the research, as well as not completing the questionnaire and not wanting to participate in the research, which were the criteria for leaving. Before the questionnaires were distributed to observe the ethics of the research, the purpose of the research was to explain how to implement it, to ensure that the principle of secrecy is maintained, and to give participants the right to choose to cooperate or withdraw while answering the questions of the questionnaires. It was also used to analyze data from SPSS26 and AMOS24 software.

Anxiety Sensitivity Index (ASI): The 16-question anxiety sensitivity questionnaire measures individual differences in anxiety sensitivity (Floyd et al., 2005). The sub-scales of the study (the number of questions in each dialect) include fear of physical worries (3-4-6-8-9-10-11-14), fear of lack of cognitive control (2-12-15-16), and fear of observing anxiety by others (1-5-7-13). They are calculated based on a five-degree Likert spectrum with a minimum possible score of 16 and a maximum of 80. Numerous studies have confirmed that internal stability and credibility are appropriate (Assayag et al., 2012). Its three scales have a high correlation with each other (0/83). This gauge has internal stability, open test stability, and good convergence with other anxiety gauges (Taylor et al., 2007). The questionnaire was validated by Foroughi et al. (2019) on students and was conducted using internal homogeneity, retesting, and verification factor analysis methods. The validity of the revised anxiety sensitivity index was carried out through its simultaneous implementation with the revised list of 90 indicators and the correlation coefficient of 0/56 Acquired (Foroughi et al., 2019). The coefficients of correlation between the revised index sub-scales of anxiety sensitivity with a total satisfactory score were between 0/74 and 0/68 it was. The correlation between the sub-scales was also between 0/40 and 0/68. The present study obtained a Cronbach's alpha coefficient of 0/76 for the overall anxiety sensitivity scale.

Parent-Child Relationship Scale (PCRS): A questionnaire on parental and adolescent conflict by Fine et al. (1983) was used to measure the variables of adolescent and parental conflicts. The tool has 15 questions that measure three ways to resolve conflict: reasoning, verbal aggression, and physical aggression (Fine et al., 1985). Questionnaire questions have six

options (Never = 0 more than once a month = 5) that indicate the incidence of behavior in each question. The first five questions of the questionnaire measure physical aggression, the second five measure verbal aggression, and the third measure physical aggression. The scores for the entire test range from 15 to 75, with a score of 15 indicating non-conflict and a score of 75 indicating the highest conflict.

This scale in the research of Fine et al. (1983) about 241 students (100 male and 141 female) with an alpha coefficient of 0/89 to 0/94 for the parent-related sub-scales, the alpha coefficients of 0/61 to 0/94 for the mother-related sub-scales, as well as the overall alpha of 0/96, has excellent internal equality of questions. The questionnaire was implemented in Iran by zabli et al. (2005) on 46 people, and its validity was reported for the entire test at 0/74 and for the sub-scales of reasoning at 0/58, verbal aggression at 0/65, and physical aggression at 0/82 (Mohammad Eini et al., 2020). In addition, the present study obtained a Cronbach's alpha coefficient for the entire questionnaire, which was equal to 0/80, which indicates the appropriate validity of the questionnaire.

Social Phobia Inventory (SPIN): The log contains 17 questions and was compiled by Connor et al. (2000). Also includes three sub-scales of fear (questions 1, 3, 5, 10, 14, and 15); avoidance of social confrontation (questions 4, 6, 8, 9, 11, 12, and 16); and physiological discomfort (questions 2, 13, 17, and 27) (Connor et al., 2000). Each question is scored 0 to 4 based on the Likert spectrum, so that in no case zero is a low score of 1, to a degree of 2, a high score of 3, and a very high score of 4. Its cutting point is a score of 19 or higher (Singh & Samantaray, 2022). The creators of the black

base obtained it by retesting in groups with a diagnosis of social anxiety disorder equal to 0/78 to 0/89 and reported Cronbach's alpha coefficient of 0/94 (Connor et al., 2000). Inside Iran, this blackness has been translated and normalized to examine the validity of simultaneous validity of its use and correlation with the checklist of mental disorders Dragotis, Lippman, and Quay (1977), the 0/70 and meaningful coefficients at the 0/01 level have been examined (Derogatis, 1977), and to examine the validity of the Cronbach's alpha coefficients for fear (0/94), avoidance (0/93), discomfort (0/94), and the entire scale (0/94) has been obtained. Moreover, the retest coefficients were obtained at a time interval of 2 weeks, and the correlation coefficients for the entire scale were 0/96, fear 0/95, physiological discomfort 0/96, and avoidance 0/94, which represents the black front and back of social anxiety in Iranian society (Hassanvand Amouzadeh et al., 2013). In foreign studies, Cronbach's alpha was used to examine the black end, which is 0/90 (Nakie et al., 2022). In another study, a coefficient of 0/94 was reported (Obadeji & Kumolalo, 2022). In the present study, Cronbach's alpha was used to check the reliability, and the alpha coefficient of the total questions was 0/82.

3. Results

The analysis showed that the participant demographics included 160 male students (45.7%) and 190 female students (54.3%). Among them, 97 (27.7%) were in the tenth grade, 116 (33.1%) in the 11th grade, and 137 (39.1%) in the twelfth grade. The average age was 16.70 (2.89) years.

Table 1. Descriptive statistics of research variables

Study variables	Mean	SD	Skewness	Kurtosis
Parent-Child Conflict	31/68	9/64	0/57	-1/64
Anxiety Sensitivity	39/53	15/29	-1/01	1/59
Social Anxiety	43/82	10/98	1/72	1/02

The above table presents the mean and standard deviation of the scores of the research variables. The next columns also show the curvature of the variables to normalize the data. As can be seen, the tilt and strain indicators of the obvious variables of the study are between -2 and 2+, indicating the normality of the distribution of variables and their suitability to perform modeling analysis of structural equations. Before analyzing the data, the assumptions of modeling structural equations were examined; in this regard, the normality of the distribution of variables was used through the Kolmogorov-Smirnov test, where the results indicated the normal distribution of

the research variables ($p > 0/05$). Given that the modeling infrastructure of structural equations is based on the sample correlation matrix, it is reported in Table 2.

The results of Table 2 show that there is a meaningful correlation between all the variables of the study. To investigate the hypothesis of no self-correlation in the research error, the Durbin-Watson statistic was used, which obtained a value of 1/84; since the calculated value is in the range from 1/5 to 2/5, it can be stated that the hypothesis of no self-correlation has been confirmed. The co-linear hypothesis for the research exogenous variable was also examined using the

Tolerance coefficient and Variance Inflation Factors (VIF). The results showed that the co-linear hypothesis was confirmed, as the Tolerance coefficient in all variables was close to 1, and the factor values (VIF) in all were less than the critical limit of 2. The Kaiser-Meyer-Olkin index (KMO)

(0/81) and Bartlett index (df= 24 and p<0/01) indicated the fulfillment of the necessary assumptions for modeling structural equations (Loehlin, 2004). Table 3 shows the indicators of the validity of the research model.

Table 2. Correlation coefficient of research variables

Variable	1	2	3	4	5	6	7	8	9
1-Verbal aggression	1								
2-reasoning	0/57**	1							
3-Physical aggression	0/56**	0/75**	1						
4-Cognitive control	0/37**	0/44**	0/41**	1					
5-Physical worries	0/42**	0/49**	0/46**	0/66**	1				
6-Viewed by others	0/42**	0/49**	0/47**	0/63**	0/67**	1			
7-Physiological discomfort	0/48**	0/47**	0/46**	0/38**	0/39**	0/43**	1		
8-Avoiding social interaction	0/42**	0/49**	0/43**	0/46**	0/46**	0/48**	0/65**	1	
9-Fear	0/47**	0/49**	0/44**	0/47**	0/45**	0/49**	0/59**	0/61**	1

**P<0/01

Table 3. The fit indices of the research model

Fit indices	Recommended value	Calculated values
χ^2		41/23
the ratio of X2 to degrees of freedom (χ^2/df)	1-3	1/71
comparative fit index (CFI)	≥ 0.90	0/99
normed fit index (NFI)	≥ 0.90	0/97
Tuckere Lewis index (TLI)	≥ 0.90	0/98
Root mean of square error approximation (RMSEA)	< 0.08	0/04

The results of Table 3 show that, according to (Hu & Bentler, 1999), the model has a favorable fit. The

standard coefficients of the conceptual model paths are shown in Figure 2.

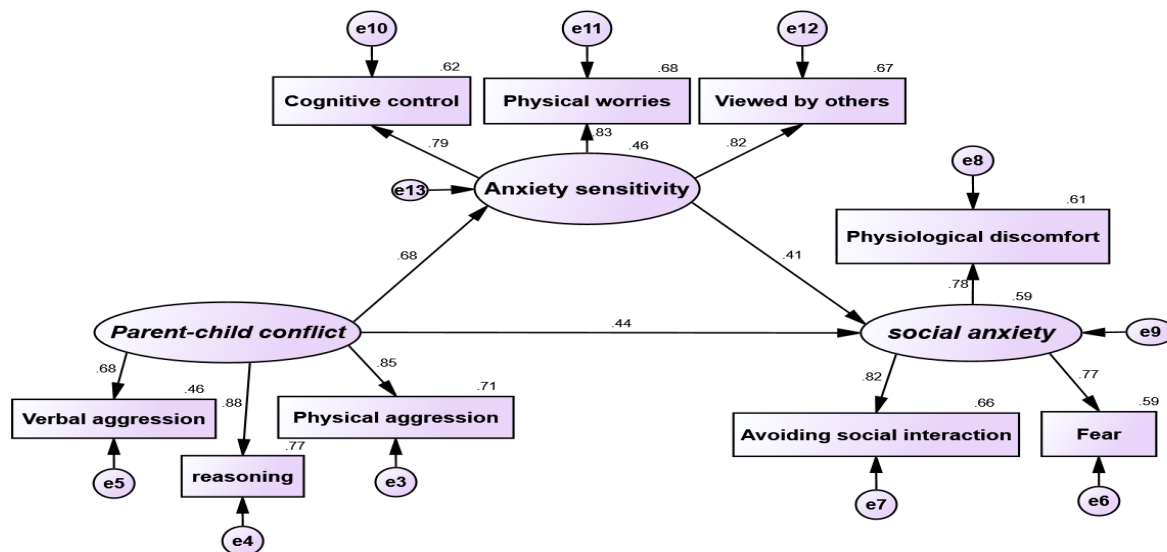


Figure 2. The final research model

Table 4 shows the direct effects between research variables.

Table 4. Standard and unstandardized coefficients of the research variables

predictor variable	dependent variable	β	T	SE	C.R	P	Result
Parent-Child Conflict	Social Anxiety	0/44	0/41	0/06	6/12	0/001**	approved
Parent-Child Conflict	Anxiety Sensitivity	0/68	0/67	0/05	11/43	0/001**	approved
Anxiety Sensitivity	Social Anxiety	0/41	0/39	0/06	5/63	0/001**	approved

**P<0/01

As shown in Table 4, the path coefficients related to the effect of the research variables at the 0/05 level are significant; the bootstrapping test with 2000 samples was then used to test the meaningful role of the anxiety

sensitivity mediator in the relationship between parent-child conflict and social anxiety. Table 5 also shows the indirect effects of the research.

Table 5. Results of the bootstrap test indirect effect of the research model

route	Indirect effect	upper limit	lower limit	sig
Parent-Child Conflict → Anxiety Sensitivity → Social Anxiety	0/27	0/153	0/014	0/003*

**P<0/01

According to the results of Table 5, the indirect path was confirmed. As a result, anxiety sensitivity has been able to mediate meaningfully between predictive and Angel variables in part, not in general. Parent-child conflict also explains 46 percent of anxiety sensitivity, and parent-child conflict and anxiety sensitivity explain 59 percent of social anxiety.

4. Discussion and Conclusion

The present study was conducted to determine the mediating role of anxiety sensitivity in the relationship between parent-child conflict and social anxiety. The research variables' direct and indirect relationship model was examined and tested in the present study. The results and findings show that the proposed model showed acceptable validity. The first findings of the study showed the causal and direct effect of parent-child conflict on social anxiety, which was associated with research by (Bakhshai & Azadi, 2020; Garcia et al., 2021; Knappe et al., 2012; Lei et al., 2023) that has been consistent with. In explaining the findings, it can be said that the family is the first social base where the child grows up and internalizes the norms of life and tries to increase his performance in life (Bakhshai & Azadi, 2020), however, if there is a conflict between the parent and the child and a conflict will arise when the parent and the child do not understand each other's desires and needs and if they do not agree to do a simple task (Mohammad Eini et al., 2020), for this purpose, after creating conflict, the child, considering that he spends the most time in the family environment and a family that is conflicted with each other, instead of creating an environment for the growth and excellence of the family, merely seeks to oppose and create new challenges (Knappe et al., 2012). The consequences of this conflict will be very vulnerable for a child in a critical development period whose self-image is forming (Garcia et al., 2021). As a result, the idea itself does not grow and feels weak and deficient in all adolescent affairs (He et al., 2024). Therefore, then the child avoids environments where others are present and needs to face the crowd; avoidance is in order to avoid the negative judgments of others, and

due to weakness in self-esteem and lack of awareness of abilities and talents, he strongly avoids facing these situations (Lei et al., 2023).

The results also showed an indirect and direct effect of parent-child conflict on anxiety sensitivity. This result is similar to previous studies (Heydariyan & Ghorbanzadeh, 2022; Narmandakh et al., 2021; Poursharifi et al., 2021; Saraeian & Amanuelahi, 2020). The results of previous research suggested that the conflict between father and child is the background of many cognitive and social problems (van Dijk et al., 2020). Therefore, one of the possible consequences is conflict anxiety sensitivity (Womersley et al., 2021). in particular, in the direction of the impact of the conflicts between parents and children, the research was carried out in order to evaluate the effectiveness of parental behavior training on parental stress and parental-child interactions; the results of this study showed that parental education intervention on parent stress and parent-child interactions has an effect, as well as parental educational intervention reduces parental stress and increases parental interactions (Saraeian & Amanuelahi, 2020), So it can be found that teaching parents to maintain interaction with the child and resolve family conflicts will cause the child to have low anxiety sensitivity and mental health. In a study comparing anxiety sensitivity and psychological problems between students and normal parents, it was found that students with separated parents had higher anxiety sensitivity and psychological problems than students with normal parents due to intra-family problems they experienced or witnessed inter-family conflicts (Heydariyan & Ghorbanzadeh, 2022). Alternatively, they have teenagers, and the tension and aggression they experience in the family environment causes them to internalize a feeling of anxiety in a way that will affect their future.

The findings also showed the direct and indirect causal effect of anxiety sensitivity on social anxiety. This is a study by (Allan et al., 2018; Brooke & Intriери, 2023; Karimi et al., 2024; Khakpoor et al., 2019; Nadri et al., 2024) that has been consistent. In explaining these findings, it can be stated that social anxiety disorder is

a complex and debilitating disorder that is perpetuated by some social and cognitive processes (Khakpoor et al., 2019). It is important to understand this disorder's root causes or factors contributing to its development to understand it more effectively. According to various theories and literature on this psychological structure, anxiety sensitivity can play a role in social anxiety disorder in different ways, for example, fear of being seen by others, fear of not having cognitive control, and physical worries (Hatami Nejad et al., 2024). Theoretical models, on the other hand, take into account an intangible way, such as the psychological pathology of social anxiety disorder. These models generally emphasize three areas in the development and maintenance of social anxiety disorder: cognitive distortions, behavior control, and the symbolism of social anxiety disorder. Whereas there is a close conceptual relationship between anxiety sensitivity and these factors, In a study conducted on a clinical sample, the results showed a direct and indirect effect of anxiety sensitivity and negative emotionality on social anxiety (Allan et al., 2018), also, in research conducted on students, anxiety sensitivity, emotional patterns, and cognitive fusion were shown as the underlying factors of social anxiety disorder (Karimi et al., 2024). In explaining this, it can be noted that anxiety sensitivity refers to the increased sensitivity and fear of feelings and symptoms associated with anxiety, such as increased heart rate, sweating, or tremors. This sensitivity can have a profound effect on the formation and retention of symptoms of social anxiety. People with social anxiety and high anxiety sensitivity may perceive an increased heart rate as a sign of being unchecked or having a panic attack. This misinterpretation of physical sensations exacerbates their anxiety symptoms and reinforces the belief that social situations are inherently threatening (Brooke & Intrieri, 2023; Karimi et al., 2024). In general, anxiety sensitivity can be associated with cognitive and psychological structures such as information processing or behavioral inhibition that exaggerate anxiety in social situations and ultimately lead to social anxiety disorder.

The study also has limitations, including that the research tool is compiled by a questionnaire, a type of self-reported tool that can cause errors. Other methods of data collection, including interviews, are recommended. According to the results of the study, students who develop social anxiety disorder have some psychological and social structures that contribute to the development of this debilitating disorder, which plays an influential role in the socialization of the student. The present study found

that parent-child conflict and anxiety sensitivity have a direct effect on social anxiety disorder. Therefore, given the importance of this disorder, which plays a debilitating role in the entire life of the student, it is recommended that specialists and assistants based in the school hold classes to manage stress and anxiety for students, as well as workshops focused on teaching effective communication of the interaction of the child's parents for parents. Psychotherapists are also advised to consider the theory of anxiety sensitivity in the treatment model of social anxiety disorder, as it can increase the understanding of symptoms as well as the dynamic method and treatment. Therefore, specialists are offered treatment programs to raise awareness, empower parents and students about constructive interaction with parents and children, and manage anxiety. In general, the results of the study have shown that parent-child conflict, directly and indirectly, affects the pathway of anxiety sensitivity in students with social anxiety disorder.

5. Ethical Considerations

Compliance with ethical guidelines

All ethical principles were taken into account in this article. Participants were informed about the research's purpose and its implementation stages. They were also assured of the confidentiality of their information and had the freedom to withdraw from the study at any time. Additionally, the research results would be made available to them upon request.

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Authors' contributions

MHN, NM & ESN: concept, design, the definition of intellectual content, manuscript editing, and manuscript review. MHN and NM: literature search, data acquisition, data analysis, manuscript preparation, editing, and review. NM & MHN: data analysis, statistical analysis, manuscript preparation, editing, and review. ESN and NM: manuscript editing and manuscript review.

Conflicts of interest

The authors declare no conflicts of interest.

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