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Structural model of Suicidal Thoughts based on Parenting Styles with the Mediating Role of Anxiety and Depression in Students

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ABSTRACT

Introduction: It is concerning that high-risk behaviors are so prevalent among teenagers, as this poses a serious threat to their health and well-being. Unfortunately, many teenagers turn to suicide as a way to cope with their feelings of depression and anxiety during this period of their lives. In an effort to better understand this issue, a study was conducted to explore the relationship between parenting skills and suicidal thoughts among students, with anxiety and depression serving as mediators in this structural equation model.

Materials and Methods: The research method used in this study was correlational description using the structural equation modeling method. The study was conducted on 390 second high school students (208 males and 182 females) in the city of Ilam, and the students were selected using a two-stage cluster sampling method. Data collection was performed through self-reporting using Beck's suicide thought questionnaire, Baumrind's parenting styles, and Beck's anxiety and depression in students. The structural equation modeling method was used to analyze the data.

Results: The study found that there was a significant direct relationship between parenting styles and suicidal thoughts ($P<0.001$), anxiety, and depression ($P<0.001$). Additionally, the direct relationship between anxiety and depression, and suicidal thoughts was positive and significant ($P<0.001$). Furthermore, the indirect relationship between parenting styles on suicidal thoughts, mediated by the role of anxiety ($\beta=0.521$, $P=0.001$) and depression ($\beta=0.780$, $P=0.001$), was also significant.

Conclusion: the findings of this study highlight the importance of teaching parenting skills and the mediating role of anxiety and depression in students' suicidal thoughts. These results can have practical implications for improving the psychological well-being of this age group.

Keywords: Parenting styles, Suicidal thoughts, Anxiety, Depression, Students

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Introduction

Suicide is a significant public health concern, resulting in the deaths of approximately 800,000 to one million people per year worldwide and ranking as the second leading cause of death among individuals aged 15 to 29 years (1). his complex issue involves a series of stages, including suicidal thoughts, suicide plans, and suicide attempts (2). Suicidal thoughts range from a vague desire to die to a complete suicide plan and are considered one of the strongest predictors of suicidal behavior (3). In addition to deaths caused by suicide, thoughts and ideation of suicide also attract attention (4). To address this pressing issue, it is crucial to invest in research and education around suicide prevention, and develop effective prevention and intervention strategies to promote the overall health and well-being of individuals and communities worldwide (5).

While suicidal behavior can occur in all age groups, adolescence is considered a critical developmental period for this issue (6). This stage of life is associated with rapid changes, such as changes in family structure, leaving the family, and increasing access to education, which can contribute to the onset of suicidal thoughts and behaviors. It is notable that in many countries, the highest rate of suicide is attributed to teenagers and young people (7). Suicide is the fourth leading cause of death in the world among individuals aged 15 to 29 years. Furthermore, research shows that approximately 19.8% of teenagers experience suicidal thoughts, and almost one-third of them plan to commit suicide during their teenage years. Of those who have a plan, approximately 60% will commit suicide, often within a year of the onset of suicidal thoughts (8). A range of factors, known as risk factors, can contribute to suicidal thoughts and behaviors. Identifying and addressing these risk factors is essential to prevent individuals from attempting suicide (9).

Parenting style is an important factor to consider in the context of suicidal thoughts and behaviors. Research conducted by Mitchell, Cero, and Littlefield (10) demonstrated that adolescents who perceive their parents to be authoritarian are more likely to experience suicidal thoughts. Furthermore, adolescents whose parents exert high levels of control and low levels of affection have twice the risk of suicidal thoughts and three times the risk of intentional self-harm. Parental hostility is also associated with suicidal behavior (11). These findings highlight the importance of understanding the influence of parenting styles on children's behavior in both their present and future lives. By promoting positive parenting practices and fostering healthy parent-child relationships, we can work towards reducing the incidence of suicidal thoughts and behaviors among youth (12).

Depression is a significant risk factor for suicidal thoughts and behaviors. Individuals experiencing depression are more likely to have suicidal thoughts, and in some cases, these thoughts may lead to suicide attempts. Research has identified depression as a cognitive risk factor for suicidal thoughts, indicating that individuals with depression may be more likely to experience negative and distorted thinking patterns that increase the risk of suicidal ideation. Furthermore, epidemiological evidence suggests that depressed children and adolescents who frequently have active suicidal thoughts (i.e., have a history of previous suicide attempts) are more likely to commit fatal suicide than those who have passive suicidal thoughts (13). In a study conducted by Jasper et al. (14), it was found that individuals with depression and anxiety disorders are more at risk of suicidal thoughts than others. Another study by Mo, Li, and Zhu (2), found that depressive and anxiety symptoms were risk factors for suicidal ideation in a sample of 11,133 Chinese students. These findings highlight the importance of identifying and treating

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depression and anxiety in individuals who may be at risk of suicidal thoughts and behaviors. Providing appropriate mental health support and interventions can help prevent suicide and promote the overall well-being of individuals and communities. Anxiety is also considered a significant risk factor and predictor of suicidal thoughts. Clinicians may use anxiety symptoms as a screening tool when assessing suicidal ideation and risk. Evaluating and treating anxiety symptoms in patients who are at risk of suicide is essential because anxiety and related disorders have a statistically significant relationship with suicidal thoughts (15). A meta-analysis conducted to investigate the relationship between anxiety and its disorders as risk factors for suicidal thoughts reviewed 65 articles up to 2014 and found that anxiety is a statistically significant predictor of suicidal thoughts. Furthermore, Pourhossein et al. (16) determined that individuals with high suicidal thoughts have a higher anxiety score. These findings highlight the importance of addressing anxiety symptoms in individuals who may be at risk of suicidal thoughts and behaviors. By providing appropriate mental health support and interventions, we can help reduce the incidence of suicide and promote the overall well-being of individuals and communities.

Limited research on the formation of suicidal thoughts currently exists, with most studies focusing on simple relationships between variables. It is necessary to conduct research that can provide a more precise framework and causal model to structurally explain the direct and indirect effects of independent and mediating variables. Some previous studies have investigated this issue, (17-19). Awareness of suicidal thoughts (5) is crucial in preventing suicidal behavior, especially in Ilam province, which is among the three most dangerous provinces for suicide in the age group of 15 to 25 years (20). Therefore, this research aims to investigate the predictive role and effect of parenting styles (permissive, authoritarian, and authoritative) and the mediating variables of depression and anxiety on the formation of suicidal thoughts among high school students in the city of Ilam. The ultimate goal is to determine whether the proposed causal model is an appropriate fit?

Materials and Methods

The research used a descriptive research method in the form of correlation type with the structural equation modeling method. The statistical population of the study consisted of all male and female secondary school students enrolled in the academic year 2022 in the city of Ilam, totaling 10,500 students. To ensure consistency with the structural equation model, the sample size needed to be at least 15 times the number of observed variables (21). In this study, a coefficient of 15 was assigned to each observed variable to determine the sample size, and to account for incomplete questionnaires, a sample size of 400 was selected. The study collected 390 completed answer sheets from the subjects, consisting of 208 boys and 182 girls.

The study employed a multistage random cluster sampling method to gather data. Five neighborhoods were selected from the ten districts of Ilam using this method in conjunction with a simple random sampling method. One girl’s high school and one boy’s high school were chosen from each neighborhood, and two classes were selected from each high school. The research criteria required participants to be aged between 14 to 18 years, living in the city of Ilam, having no physical disabilities, chronic diseases, or medication, no hospitalization during the last year, and not receiving psychotherapy at the same time and during the last year. Those who provided incomplete answers to the questionnaires showed signs of confusion, or were not satisfied with continuing cooperation were excluded from the research. The data was collected using standardized questionnaires, including the Beck Suicidal Thoughts Inventory,

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Baumrind Parenting Styles Questionnaire, Beck Anxiety Inventory, and Beck Depression Inventory.

Beck Suicidal Thoughts Inventory (BSSI): The 19-question questionnaire is designed to assess the severity of attitudes, behaviors, and suicide planning. Its validity has been established through Cronbach's alpha of 0.95, and its concurrent validity with the depression scale and general health questionnaire is 76% (22). This self-assessment tool uses a three-point scale ranging from 0-2 to assess attitude, behavior, and planning to commit suicide. The total score is calculated by summing the scores, which can range from 0-38. This scale has high reliability, which was determined through the use of Cronbach's alpha coefficient of 0.9 and the test-retest method, with a reliability of 0.74 (23).

Parenting Styles Questionnaire by Baumrind: The 30-item questionnaire is based on Baumrind's 1991 theory about permissive, authoritarian, and decisive behavior patterns. Statements No. 1, 6, 10, 13, 14, 17, 19, 21, 24, and 28 relate to permissive behavior, Statements No. 2, 3, 7, 9, 12, 16, 18, 25, 26, and 29 relate to authoritarian style, and phrases number 4, 5, 8, 11, 15, 20, 22, 23, 27, and 30 relate to raising children authoritatively and reassuringly. In this questionnaire, parents indicate their opinions based on a 5-point Likert scale. Hashemi, Dartaj, Saadipour, and Asadzadeh (24) calculated the reliability of three subscales for authoritative, domineering, and permissive styles, respectively, as 0.92, 0.85, and 0.81. In terms of validity, the questionnaire showed that mother's authoritarianism has an inverse relationship with liberation (-0.38) and her logical authority (-0.48). Similarly, father's authoritarianism has an inverse relationship with his liberation (-0.50) and logical authority (-0.52). In another study by Rostaminejad and Shaukti Rad (25), the reliability of the parenting methods questionnaire for the permissive, assertive, and autocratic dimensions was reported as 0.78, 0.81, and 0.88, respectively.

Beck Anxiety Inventory (BAI): Beck's anxiety questionnaire (26) consists of 21 questions, scored on a four-point Likert scale from 0=not at all to 3=extremely. Beck et al. (26) reported a Cronbach's alpha coefficient of 0.92 for this tool and established its validity by showing that it correlates with the revised scale of Hamilton's anxiety rating (r=0.51) and Hamilton's depression rating scale (r=0.25). Rafiei and Saifi (27) reported a reliability coefficient of 0.90 for this tool and identified five factors (main components) to explain the dispersion in this questionnaire, which accounts for 58.54% of the total dispersion in anxiety values.

Short Back Depression Inventory (BDI-13): The Beck depression questionnaire was first introduced in 1961 by Beck and her colleagues (28). The 13-question short form of Beck's depression Iranian version was completed by Rajabi. Each question in this questionnaire has 4 sentences, each of which depicts a symptom of depression from low (score zero) to high (score three). Based on the analysis of the main components, two factors were obtained: The first factor, negative emotion towards oneself, accounted for 43.9% of the variance, and the second factor, apathy, accounted for 8.6% of the variance in the questionnaire items. The Cronbach's alpha coefficient and mean for the entire questionnaire were 0.86 and 0.82, respectively, and the correlation coefficient between the short form and the 21-question form of the Beck depression questionnaire was 0.67 (29). The overall score of each person in the Beck questionnaire is obtained by summing the scores across all aspects (30).

The data collection process involved visiting girls' and boys' secondary high schools. After explaining the purpose of the study to the participants and obtaining written informed consent from their parents, the questionnaires were completed

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through self-reporting by male and female students.

Statistical Analyses

To analyze the data obtained from the questionnaires, descriptive statistics indicators such as mean, standard deviation, skewness, and kurtosis were used, and the highest and lowest scores were considered. The statistical method of the research was structural regression equations, which were analyzed using SPSS version 24 and Amos version 23 software.

Results

In the present study, the participants' mean age was 16.65, with a standard deviation of 2.85. Of the total participants, 208 people (53.3%) were boys, and 182 people (46.7%) were girls. In terms of education level, 116 people (29.7 percent) were in the first level, 138 people (35.4 percent) were in the second level, and 136 people (34.9 percent) were in the third level.

The statistical indicators related to the research variables such as the lowest score, the highest score, the mean, and the standard deviation are shown in Table 1.

Table 1. Statistical indices of the research variables.

Variables	Scor	Range
Suicidal thoughts	5.72 ± 3.82	0 - 37
Anxiety	29.64 ± 9.79	21 - 84
Depression	6.32 ± 3.93	0 - 39
Permissive parenting style	8.68 ± 5.20	0 - 30
Authoritarian parenting style	8.66 ± 5.37	0 - 30
Assertive parenting style	21.86 ± 4.76	8 - 30

Data are shown as mean Sd, or number.

According to the findings presented in Table 2, there appears to be a notable and positive correlation between various parenting styles - including permissive, authoritarian, and assertive - as well as anxiety and depression with suicidal thoughts. Interestingly, a negative correlation was discovered between assertive parenting style and suicidal thoughts. Additionally, the data suggests that a permissive parenting style does not have any significant relationship with suicidal thoughts.

Table 2. Correlation matrix of variables of parenting styles, anxiety, and depression with suicidal thoughts.

Variables	Suicidal thoughts	Anxiety	Depression	Permissive parenting styles	Authoritarian parenting styles	Assertive parenting style
Suicidal thoughts	1	0.541**	0.780**	0.023	0.363**	-0.466**
Anxiety		1	0.555**	0.184*	0.227*	0.350**
Depression			1	0.241**	0.299**	-0.450**
Permissive parenting styles				1	0.437**	0.212*
Authoritarian parenting styles					1	-0.056
Assertive parenting style						1

**Correlation is significant at the P < 0.01.
*Correlation is significant at the P < 0.05.

In the subsequent step, the estimated parameters of the structural model of parents' parenting styles based on suicidal thoughts - while considering the mediating role of anxiety and depression - were examined using the maximum likelihood estimation approach. Table 3 exhibits the estimated parameters of the research model obtained through the maximum likelihood method, comprising of standardized path

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coefficients and the significance of these coefficients.

Table 3 shows that all path coefficients (direct effects) are significant. The model fit indicates that authoritarian parenting has a direct effect on negative and meaningful suicidal thoughts (P<0.001), as does assertive parenting (P<0.001). Similarly, permissive parenting has a direct effect on positive and meaningful anxiety (P<0.003), while authoritarian parenting has a direct effect on positive and significant anxiety (P<0.004). Assertive parenting has a direct effect on negative and significant anxiety (P <0.001), and permissive parenting has a direct effect on positive and significant depression (P<0.001). Additionally, authoritarian parenting has a direct effect on positive and significant depression (P<0.001), while assertive parenting has a direct effect on negative and significant depression (P<0.001). The direct effects of anxiety on positive and significant suicidal thoughts (P<0.001) and depression on positive and significant suicidal thoughts (P<0.001) are also significant. These results suggest that the structural model of the research has a good fit.

Table 3. Satisfied parameters in the structural model of parents' parenting styles based on suicidal thoughts with the mediating role of anxiety and depression.

Direction	β	P value
Authoritarian parenting style ⟶ Suicidal thoughts	-0.297	0.001
Assertive parenting style ⟶ Suicidal thoughts	-0.319	0.001
Easy parenting style ⟶ Anxiety	0.144	0.003
Authoritarian parenting style ⟶ Anxiety	0.137	0.004
Assertive parenting style ⟶ Anxiety	-0.204	0.001
Permissive parenting style ⟶ Depression	0.231	0.001
Authoritarian parenting style ⟶ Depression	0.293	0.001
Assertive parenting style ⟶ Depression	-0.273	0.001
Anxiety ⟶ Suicidal thoughts	0.521	0.001
Depression ⟶ Suicidal thoughts	0.780	0.001

To check the size and significance of the indirect effects of the model, the bootstrap method with 1000 times resampling was used, and the results are presented in Table 4. According to the results presented in Table 4, the indirect paths analyzed in relation to the values obtained and the 95% confidence interval of the indirect paths of parenting styles on suicidal thoughts, with the mediation of the role of anxiety and depression, were confirmed through the bootstrap estimation method.

Table 4. The size and significance of the indirect effects of the structural model of measurement.

Variables	Bootstrap				
	Boot	Bias	Std.Error	Bca 95% Confidence Interval	
				Lower	Upper
Easy parenting style ⟶ Depression ⟶ Suicidal thoughts	0.1883	0.0001	0.0119	0.0853	0.1951
Authoritarian parenting style ⟶ Depression ⟶ Suicidal thoughts	0.1865	0.0001	0.0321	0.0822	0.1721
Assertive parenting style ⟶ Depression ⟶ Suicidal thoughts	-0.1815	0.0001	0.0281	-0.0853	-0.0701
Easy parenting style ⟶ Anxiety ⟶ Suicidal thoughts	-0.1013	0.0001	0.0124	-01657	-0.651
Authoritarian parenting style ⟶ Anxiety ⟶ Suicidal thoughts	0.1712	-0.0001	0.0233	0.0651	0.1541
Assertive parenting style ⟶ Anxiety ⟶ Suicidal thoughts	-0.1079	0.0001	0.0263	-0.1364	0.0660

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Discussion

A causal model of suicidal thoughts was presented in this study, with a focus on the influence of parenting styles and the mediating impact of depression and anxiety.

The study found a positive and significant correlation between authoritarian parenting style and suicidal thoughts, and a negative and significant correlation between assertive parenting style and suicidal thoughts. The results indicate that an easy parenting style has no significant relationship with suicidal thoughts. These findings are consistent with previous studies, such as Donat et al. (31) which have also found a link between parenting styles and suicidal thoughts. The study further revealed that teenagers with authoritarian parents, who have high control and low affection, are at twice the risk of suicidal thoughts and three times the risk of intentionally harming themselves. Additionally, parental hostility was found to be associated with suicidal behaviors. Similar findings were reported by Ali Babaei, Atadakht, and Sharifi Fard (32), in their study on predicting suicidal thoughts based on parenting styles. Lipson and Sonneville (33), in their study on the prevalence and correlation of suicidal thoughts among high school students aged 15-17, also found that having understanding parents has a negative relationship with suicidal thoughts.

These results are in line with Mafakheri's research (34), which explored the impact of parenting styles on suicidal thoughts in Tehran students. The study revealed a negative effect of assertive parenting style on suicidal thoughts, and a positive effect of authoritarian parenting style on the development of suicidal thoughts among students in Tehran. Choi et al.'s research (35), which was conducted among 11,071 students in eight schools in South Korea, found that students with authoritarian parents had more favorable attitudes towards suicidal thoughts and behavior compared to those with democratic and permissive parents. These students believed that suicide could be justified in certain circumstances and that individuals have the right to choose to end their lives.

The present explanation suggests that parents adopting different parenting styles, particularly authoritarian and assertive styles, can significantly affect the occurrence or non-occurrence of suicidal thoughts in students. Authoritarian parents, who exercise high levels of control and limited communication with their children, may contribute to the formation of suicidal thoughts. On the other hand, assertive parents who exhibit a firm yet supportive parenting style may create positive relationships and effective interaction, leading to predictable and consistent behaviors in children. By providing a supervisory and supportive role, this process can largely prevent the formation of maladaptive thoughts and behaviors, particularly suicidal thoughts, in children. The study also found that permissive and authoritarian parenting have a positive and significant direct effect on depression, whereas assertive parenting has a negative and significant direct effect on depression. These findings are consistent with previous research, , (36, 37). Depression during adolescence can negatively impact academic, social, and emotional performance, and is a risk factor for absenteeism from school, drug use, and suicidal behavior. However, this disorder is often less diagnosed before adolescence and young adulthood, and even if diagnosed, it is often treated inappropriately. Depression has become increasingly common among teenagers and affects its victims at a very young age, with around 16% of people experiencing depression for the first time between the ages of 11-13. This highlights the significant role and importance of parenting and how parents interact with their children. Several studies in the last decade have reported the rate of depression among teenagers ranging from 8% to more than

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20%. Riahi et al. (38) reported in a study that 5% of adolescents aged 13 to 15 years suffer from depression. It is noteworthy that many mental health problems in adulthood are the continuation of childhood and adolescent problems and are caused by the traumatic interaction of parents with their children (39).

In explaining the research findings, it can be observed that parenting styles can be divided into two categories: responsiveness or intimacy and reassurance, and parental expectations. When expectations are strict or goals and expectations are unclear, the authoritarian pattern is more likely to lead to depression and anxiety. In this atmosphere, feelings of inferiority, lack of self-confidence, and a sense of inefficiency increase, while the levels of expectations of compatibility increase and the reception of affection decreases, leading to an increased risk of depression. On the other hand, permissive and authoritarian parenting practices indicate inappropriate interaction and unfair control (40).

The study also found that the direct effect of permissive and authoritarian parenting on anxiety was positive and significant, whereas the direct effect of assertive parenting on anxiety was negative and significant. These findings are consistent with previous studies (41, 42), and provide further evidence for the link between parenting styles, anxiety, depression, and suicidal thoughts.

According to Yaffe (43) children and adolescents with anxiety disorders are more likely to be raised by non-authoritative parents, such as those with authoritarian and permissive parenting styles, who tend to use excessive control, inhibit autonomy, and exhibit inconsistency. The study discusses some of the etiological conditions under which anxiety in children is most likely to be caused by these parenting patterns and describes the interaction between parent and child characteristics in this context. In their research titled "Investigating the relationship between suicidal thoughts, depression, anxiety, resilience, daily stress, and mental health in Tehran University students," Pourhossein et al. (16) found that suicidal thoughts have a significant and negative correlation with resilience and self-esteem, while anxiety, depression, mental health, and daily stress are positively correlated with suicidal thoughts.

The present research finding underscores the significance of family factors and relationships, including parent-child relationships and parenting methods, in shaping a child's personality and mental health. As the family serves as the foundation for human growth and balance, the basis of parents' performance has a significant impact on the formation of children's thoughts, behavior, and emotions (44). While anxiety in children and adolescents can be influenced by various factors such as genetics, physiological and hormonal changes, and life experiences, the role of behavior, control, and parenting of parents is a prominent factor in the production and incidence of anxiety (45).

Furthermore, the study found a positive and significant direct effect of depression and anxiety on suicidal thoughts. Blanco (46) supports these findings in their study entitled "A Stochastic Model for Predicting Suicide Risk in Honduran Students," where they provide evidence to support the direct effects of depression in predicting suicidal thoughts and behavior. Pervin and Ferdowshi (47) also found that depression, loneliness, and hopelessness can predict suicidal thoughts in students. Choi et al. (35) in their study in South Korea found that depression and anxiety symptoms are significantly related to suicidal thoughts after adjusting for auxiliary variables affecting suicidal thoughts. These findings suggest that depressive and anxiety symptoms are an independent risk factor for suicidal ideation. Harlina and Besral (19), in their research entitled "Factors Affecting the Structural Equation Model of Suicidal Thoughts among Students," found that depression, anxiety, stress, and social support have a direct and indirect effect on

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student suicide. Jasper (14) and Bentley et al. (48), conducted a meta-analysis reviewing 65 articles up to 2014 to investigate the amount and clinical application of anxiety and its disorders as risk factors for suicidal thoughts. Their findings showed that anxiety is a significant statistical predictor for suicidal thoughts, which is consistent with the results of the present study.

Depression has been found to play a crucial role in the development of suicidal thoughts. This is because depression is associated with repetitive negative thinking, and this type of thinking is linked to various psychological inefficiencies, including maladaptive rumination, which can be interpreted as an ineffective coping strategy (49). The primary characteristics of cognitive symptoms and rumination are worry, threat revision, and ineffective coping behaviors. Dysfunctional cognitive beliefs can reinforce and exacerbate these symptoms (50), and this negative and depressive cognition can predict suicidal thoughts (51). Based on this, monitoring the level of depression among students in schools can serve as an indicator of suicidal thoughts and effective and timely intervention can be pivotal in preventing suicidal behaviors.

Anxiety has been found to play a significant role in predicting suicidal thoughts in high school students. These results further support the existing literature on the direct effect of anxiety on suicidal thoughts in similar samples. Adolescence is a critical developmental period where individuals are increasingly confronted with various interpersonal challenges at home and school. Considering that anxiety, ranging from low to severe, can be associated with social withdrawal and a lack of skills, severe anxiety symptoms may interfere with adolescent development and result in increased isolation, despair, and suicidal thoughts. Although the present study focused solely on suicidal ideation, further research is required to investigate whether adolescent anxiety is longitudinally associated with attempted suicide or completed suicide.

Limitation and Recommendation

It is important to note that the present research has some limitations that need to be taken into account when drawing conclusions and generalizing the results. These limitations include: Although the data obtained in this research are consistent with the tested structural model, caution should be exercised when using them to establish cause-and-effect relationships. The fact that this research was conducted in Ilam city means that generalizing the results to other societies should be done with caution and with consideration of cultural and regional differences. Since the sample studied was limited to high school students, the generalization of the results to other populations with different demographic characteristics, such as age and education, is also limited.

To address these limitations, it is recommended that: Researchers conduct longitudinal studies to provide stronger evidence regarding the paths leading to suicidal thoughts and the differences between these paths in individuals who experience such thoughts. The role of other variables, such as parents' mental health and personality traits, should be investigated as predictive variables in separate models. In addition to self-report questionnaires, other evaluation methods should be used in parallel to increase the accuracy of the results.accuracy of the results.

Conclusion

Based on the effects of parenting styles on students, families, and relevant officials in the educational system, it is recommended that appropriate training be arranged to help parents identify their children's mental states and teach them parenting skills. Effective communication between parents and teenagers should also be emphasized in such training programs.

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Moreover, it is suggested that counseling services provided in schools should pay attention to the training of parenting skills. This approach can be effective in identifying and formulating programs aimed at improving mental health and reducing suicidal thoughts among students. By providing such training, schools can play an important role in promoting a healthy and supportive environment for students.

Ethical Considerations

It is worth noting that this article is based on a Ph.D. thesis in the field of psychology that was approved by the Medical Ethics Committee of the Islamic Azad University of Ilam Branch. The code of ethics for the study was IR.IAU.ILAM.REC.1402.009. This ensures that the research was conducted in accordance with ethical standards and guidelines, and that the rights and well-being of the participants were protected throughout the study.

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Author's contributions

All the authors of this article played an equal role in the design, conceptualization, methodology, data collection, statistical data analysis, drafting, editing, and finalization of this article.
Mohamad Sadegh Darvishi and Sattar Kikhavani designed the study, collected data, and participated in manuscript preparation. *Fathola Mohamadian* prepared the manuscript and helped study the design. *Vahid Ahmadi* performed Statistical analysis and performed intervention. The authors have read and approved the content version of the manuscript. And also, *Vahid Ahmadi* edited the English text of the article.

Conflict of interest

There is no conflict of interest among the authors.

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