

The Impact of Grief Experience Following Parental Loss on Students' Academic Engagement: The Mediating Role of Cognitive Emotion Regulation and Teacher Support

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Article Info

Article type:

Original Research

How to cite this article:

Shafiei Rad, A. & Ghanbarpour, Z. (2026). The Impact of Grief Experience Following Parental Loss on Students' Academic Engagement: The Mediating Role of Cognitive Emotion Regulation and Teacher Support. *International Journal of Education and Cognitive Sciences*, 7(5), 1-15.

<https://doi.org/10.61838/kman.ijecs.401>



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ABSTRACT

Purpose: The present study aimed to investigate the impact of grief experience resulting from parental loss on students' academic engagement, with a particular focus on the mediating roles of cognitive emotion regulation and perceived teacher support.

Methods and Materials: This study employed a correlational design using structural equation modeling (SEM). The statistical population consisted of bereaved secondary school students who had experienced parental loss in Karaj during the 2026–2027 academic year. A total of 210 students were selected through cluster random sampling. Data were collected using the Academic Engagement Scale developed by Reeve (2013), the Student Perceptions of Classroom Climate Questionnaire by Ruzek et al. (2010), the Cognitive Emotion Regulation Questionnaire by Gamefski and Kraaij (2006), and the Grief Experience Questionnaire by Barrett and Scott (1989). Descriptive statistics, Pearson correlation analysis, and structural equation modeling were conducted using SPSS version 26 and AMOS software.

Findings: The results demonstrated that the proposed structural model exhibited satisfactory goodness-of-fit indices, indicating an acceptable fit between the theoretical model and the observed data. Grief experience following parental loss had a significant direct effect on academic engagement. In addition, cognitive emotion regulation and teacher support were found to exert significant effects on academic engagement. The mediation analysis further revealed that grief experience indirectly influenced academic engagement through both cognitive emotion regulation and teacher support. The indirect pathways were statistically significant, suggesting that students' ability to regulate emotions cognitively and the level of support they receive from teachers play important roles in explaining the relationship between bereavement and academic engagement.

Conclusion: The findings highlight the critical role of emotional and educational support mechanisms in mitigating the adverse effects of parental loss on students' academic functioning. Enhancing adaptive cognitive emotion regulation strategies and strengthening teacher support may promote higher levels of academic engagement among bereaved students and facilitate their adjustment to the challenges associated with parental loss.

Keywords: Parental Loss Grief Experience, Academic Engagement, Cognitive Emotion Regulation, Teacher Support, Bereaved Students, Structural Equation Modeling.

1. Introduction

Academic engagement has emerged as one of the most important indicators of students' educational success, psychological adjustment, and long-term developmental outcomes. Contemporary educational theories conceptualize academic engagement as a multidimensional construct encompassing behavioral, cognitive, emotional, and agentic dimensions that reflect the extent to which students actively participate in learning activities, invest effort in academic tasks, experience positive emotions toward learning, and proactively contribute to their educational experiences (Reschly & Christenson, 2022; Wang & Eccles, 2023). Research consistently demonstrates that academically engaged students exhibit higher levels of achievement, persistence, motivation, psychological well-being, and school satisfaction compared with their less engaged peers (Qian & Saidin, 2025; Wang & Eccles, 2023). Consequently, identifying the factors that facilitate or hinder academic engagement has become a central concern in educational psychology and school mental health research.

Academic engagement is influenced by a complex interplay of individual, familial, emotional, and contextual variables. Among these factors, adverse life experiences and psychological stressors have been recognized as significant threats to students' capacity to remain actively engaged in academic activities (Gerowitz et al., 2022; Qian & Saidin, 2025). One of the most profound and potentially disruptive experiences during childhood and adolescence is the loss of a parent. Parental loss represents a major developmental challenge that can affect multiple domains of functioning, including emotional adjustment, social relationships, cognitive processes, and educational performance (Dantan et al., 2026; Worden, 2018). The death of a parent often disrupts adolescents' sense of security, stability, and emotional support, creating substantial obstacles to healthy psychological development and successful academic participation.

Bereavement following parental loss has increasingly attracted scholarly attention because of its pervasive and long-lasting consequences. According to grief theories, bereavement involves a multidimensional process characterized by emotional, cognitive, behavioral, and social reactions to the death of a significant attachment figure (Worden, 2018). During adolescence, when individuals are already navigating complex developmental transitions, the loss of a parent can intensify emotional distress and interfere with adaptive coping processes. Systematic evidence

indicates that bereaved children and adolescents are at increased risk for depression, anxiety, loneliness, emotional dysregulation, behavioral difficulties, and diminished academic functioning (Dantan et al., 2026; Hay et al., 2025). Such difficulties may compromise students' ability to concentrate, maintain motivation, and actively engage in classroom learning activities.

The educational consequences of parental bereavement have been documented across diverse cultural and educational contexts. A systematic review conducted by Elsner et al. demonstrated that bereaved children and adolescents frequently experience poorer educational outcomes, including reduced academic achievement, increased absenteeism, concentration difficulties, and lower levels of school engagement compared with non-bereaved peers (Elsner et al., 2022). Similarly, recent investigations have shown that bereaved students often report lower levels of academic participation and greater educational challenges as they attempt to cope with grief-related emotional burdens (Hale, 2026; Hay et al., 2025). These findings suggest that grief resulting from parental loss may constitute a substantial risk factor for academic disengagement.

Although the negative impact of bereavement on academic functioning has been established, the psychological mechanisms through which grief influences academic engagement remain insufficiently understood. Contemporary theoretical perspectives emphasize the importance of emotion regulation processes in explaining how stressful life events affect educational and psychological outcomes. Emotion regulation refers to the processes through which individuals influence the experience, expression, and management of their emotional responses (Nambiar, 2023; Zhang et al., 2019). Among the various forms of emotion regulation, cognitive emotion regulation has received considerable attention because it involves the conscious cognitive strategies individuals use to interpret, evaluate, and manage emotionally challenging experiences.

Cognitive emotion regulation encompasses both adaptive and maladaptive strategies. Adaptive strategies, such as acceptance, positive refocusing, positive reappraisal, planning, and perspective-taking, facilitate constructive coping and psychological adjustment. In contrast, maladaptive strategies, including self-blame, rumination, catastrophizing, and blaming others, tend to exacerbate emotional distress and impede effective adaptation (Shahab, 2023; Zhang et al., 2019). Research has consistently demonstrated that adaptive cognitive emotion regulation is

associated with better psychological well-being, resilience, and academic functioning, whereas maladaptive strategies are linked to emotional difficulties and poorer educational outcomes (Chen-Bouck et al., 2024; Romo et al., 2025).

The relationship between cognitive emotion regulation and academic outcomes has become increasingly evident in recent years. A systematic review and meta-analysis conducted by Romo et al. revealed that adaptive emotion regulation strategies are positively associated with academic achievement and educational success, whereas maladaptive strategies negatively predict academic performance across secondary and university student populations (Romo et al., 2025). Similarly, Chen-Bouck et al. reported that students who effectively regulate their emotions are more likely to adopt mastery-oriented academic goals and demonstrate higher levels of academic performance (Chen-Bouck et al., 2024). Additional evidence suggests that effective cognitive emotion regulation contributes to increased motivation, persistence, and engagement in learning activities (Golchoubi, 2023; Nambiar, 2023). Consequently, cognitive emotion regulation may serve as an important explanatory mechanism linking bereavement experiences to students' academic engagement.

The relevance of emotion regulation becomes particularly salient in the context of parental bereavement. Adolescents who experience the death of a parent are frequently confronted with intense emotional reactions, including sadness, guilt, anger, loneliness, fear, and uncertainty. The extent to which these emotional experiences are managed effectively may significantly influence subsequent adjustment and functioning (Dantan et al., 2026; Worden, 2018). Emerging evidence indicates that emotion regulation may function as a protective factor that mitigates the adverse consequences of bereavement. For example, Listaunsanti and Setyawan found that emotion regulation mediates the relationship between parental bereavement and academic resilience among adolescents, suggesting that students who utilize adaptive regulatory strategies are better able to maintain positive educational outcomes despite experiencing significant loss (Listaunsanti & Setyawan, 2025). These findings highlight the importance of investigating cognitive emotion regulation as a mediating mechanism in the relationship between grief and academic engagement.

In addition to individual psychological resources, social and environmental factors play a crucial role in shaping students' educational experiences following adverse life events. Within the school environment, teacher support has

been identified as one of the most influential contextual factors promoting academic success, motivation, and engagement (Amerstorfer & Frein von Munster-Kistner, 2021; Tao et al., 2022). Teacher support refers to students' perceptions that teachers provide academic assistance, emotional encouragement, respect, understanding, and opportunities for meaningful participation in learning activities. Supportive teacher-student relationships create a positive classroom climate that fosters students' sense of belonging, competence, and motivation.

A substantial body of research has demonstrated the positive effects of teacher support on educational outcomes. Meta-analytic evidence indicates that perceived teacher support is significantly associated with higher levels of student engagement and academic achievement across educational settings (Tao et al., 2022). Similarly, Jia and Cheng found that teacher social support positively influences students' emotions and learning engagement in both American and Chinese classrooms (Jia & Cheng, 2024). Other studies have shown that supportive teacher-student relationships enhance academic motivation, classroom participation, persistence, and educational satisfaction (Amerstorfer & Frein von Munster-Kistner, 2021; Ansong et al., 2024). Teacher support has therefore been recognized as a critical protective factor within educational environments.

The significance of teacher support may be especially pronounced for students coping with parental loss. Following bereavement, adolescents often experience diminished emotional resources and increased vulnerability to psychological distress. During this period, supportive relationships with teachers may provide stability, understanding, and encouragement that facilitate adaptation and educational continuity. School-based support systems have increasingly been emphasized as essential components of bereavement interventions for children and adolescents (Salloum et al., 2025). Evidence from bereavement research suggests that supportive educational environments can buffer the negative effects of grief and contribute to improved psychosocial and academic outcomes (Hale, 2026; Salloum et al., 2025). Consequently, teacher support may function as an important mediator through which grief experiences influence academic engagement.

Theoretical frameworks of student engagement further support the integration of cognitive emotion regulation and teacher support into explanatory models of academic functioning. Self-system and motivational development theories propose that students' engagement is shaped by

interactions between personal resources and contextual supports (Bordbar, 2021; Reschly & Christenson, 2022). Adaptive emotional processes enhance students' capacity to cope with challenges and maintain involvement in learning, whereas supportive educational relationships reinforce motivation, competence, and participation. Thus, both cognitive emotion regulation and teacher support are likely to contribute significantly to understanding how bereaved students maintain or lose academic engagement.

Recent educational research has increasingly emphasized the multidimensional nature of engagement and the importance of examining both psychological and contextual determinants simultaneously. Studies investigating classroom environments have demonstrated that supportive educational climates and teacher professional practices significantly contribute to students' academic performance and engagement (Ansong et al., 2024; Arifin et al., 2024). Likewise, research examining learning environments has shown that supportive instructional practices enhance students' motivation and participation in academic activities (Hutain & Michinov, 2022). These findings suggest that academic engagement cannot be fully understood without considering the interplay between students' internal emotional processes and the external support systems available to them.

Despite the growing literature on bereavement, emotion regulation, teacher support, and academic engagement, several important gaps remain. First, relatively few studies have examined the direct impact of grief resulting specifically from parental loss on academic engagement among adolescent students. Second, limited research has simultaneously investigated cognitive emotion regulation and teacher support as mediating mechanisms in this relationship. Third, much of the existing evidence has focused on academic achievement rather than engagement, despite engagement being a more proximal and comprehensive indicator of students' educational functioning (Qian & Saidin, 2025; Reschly & Christenson, 2022). Finally, there remains a need for empirical investigations within diverse cultural contexts to enhance understanding of how bereaved adolescents navigate educational challenges.

Addressing these gaps is particularly important because adolescence represents a critical developmental period during which educational engagement significantly influences future academic trajectories, career opportunities, and psychosocial well-being. Understanding the factors that promote engagement among bereaved students can inform

the development of targeted school-based interventions, teacher training programs, and psychological support services designed to facilitate resilience and educational success (Hay et al., 2025; Salloum et al., 2025). Moreover, identifying mediating mechanisms may contribute to more precise theoretical explanations of how grief affects educational functioning.

Although not directly related to bereavement, broader research on adaptive systems and sustainable developmental outcomes underscores the importance of supportive environments and effective regulatory processes in maintaining positive functioning under challenging conditions (Wirawan, 2024). Such perspectives further reinforce the value of examining both individual and contextual resources in understanding students' responses to adversity.

Therefore, the present study aimed to investigate the impact of grief experience resulting from parental loss on students' academic engagement through the mediating roles of cognitive emotion regulation and teacher support among bereaved secondary school students.

2. Methods and Materials

2.1. Study Design and Participants

In terms of purpose, the present study is applied, and in terms of its implementation nature, it is a correlational study based on structural equation modeling. The statistical population of the present study included bereaved secondary school students who had experienced parental loss in Karaj during the 2026–2027 academic year. To access the target population, students' school records were used. The inclusion criteria consisted of at least three months having passed since the experience of parental bereavement, willingness to participate in the study, and the exclusion criteria included unwillingness to participate in the study and failure to respond properly to the questionnaires. Regarding sample size determination in structural equation modeling, Loehlin (1992) and Kline (2015) suggested that the sample size should be at least 100 and preferably 200; as a general recommendation, the desirable sample size in structural equation modeling has been reported to be 200 participants. On the other hand, sample size is also determined based on the number of observed variables in the model. Usually, allocating 15 participants for each observed variable is recommended. Therefore, given the presence of 14 observed variables and an allocation coefficient of 15, the sample size was calculated as 210 participants, who were selected from

among bereaved upper-secondary school students using cluster random sampling. Accordingly, Karaj was divided into eastern, western, northern, and southern districts, and the northern district was randomly selected through a lottery. From this district, schools with the highest frequency of bereaved students due to parental loss were selected using convenience sampling based on family information recorded in the students' files. Subsequently, from each school, bereaved students who had experienced parental loss were selected from classes using simple random sampling.

2.2. Measures

Reeve's Academic Engagement Scale (AES) (2013): This questionnaire was developed by Reeve in 2013. The purpose of developing this questionnaire was to assess the level of academic engagement. The questionnaire consists of 17 items and four subscales: agentic, behavioral, cognitive, and emotional engagement. The questionnaire is scored on a seven-point Likert scale. Reeve (2013) examined the validity of this questionnaire through confirmatory factor analysis, the results of which showed that all items had significant factor loadings above 0.44 and that the model had an acceptable fit. The reliability of the questionnaire was also assessed through internal consistency coefficients, and Cronbach's alpha coefficients were reported as 0.94 for behavioral engagement, 0.88 for cognitive engagement, 0.78 for emotional engagement, and 0.82 for agentic engagement. In Iran, the psychometric properties of this questionnaire were examined by Ramazani and Khamsan (2017). In their study, construct validity was examined and confirmed using confirmatory factor analysis, and the fit indices were evaluated as acceptable. Its reliability, based on Cronbach's alpha, was 0.92 for the total questionnaire and 0.79, 0.79, 0.87, and 0.85 for the behavioral, cognitive, emotional, and agentic subscales, respectively.

Student Perceptions of Classroom Climate Questionnaire by Rowe et al. (2010): In the present study, the Student Perceptions of Classroom Climate Questionnaire developed by Rowe et al. (2010) was used to examine teacher support. This questionnaire consists of 26 items and four subscales, including eight items assessing teachers' academic and personal support, eight items assessing peers' academic and personal support, four items assessing academic competence, and six items assessing school satisfaction. In the present study, only the items related to teacher support were used. The questionnaire is scored on a Likert scale ranging from one to four. The reliability of these dimensions,

using Cronbach's alpha, has been reported as 0.87 for teacher support, 0.90 for peer support, 0.79 for academic competence, and 0.86 for satisfaction. Its validity has also been confirmed using confirmatory factor analysis. In the study by Abbasi et al. (2018), the reliability coefficient obtained using Cronbach's alpha for the teacher support dimension was 0.78.

Cognitive Emotion Regulation Strategies Questionnaire by Garnefski and Kraaij (2006): The short form of the Cognitive Emotion Regulation Strategies Questionnaire developed by Garnefski et al. (2006) was used to measure cognitive emotion regulation. The questionnaire consists of 18 items and nine subscales of cognitive emotion regulation strategies, each of which is measured by two items on a five-point scale. Therefore, the lowest score for each cognitive emotion regulation strategy is 2, and the highest score is 10. The midpoint score for each strategy is 6. In this questionnaire, a higher score indicates greater use of that cognitive strategy by the individual. Positive cognitive emotion regulation strategies include acceptance, positive refocusing, refocusing on planning, positive reappraisal, and putting into perspective, while negative strategies include self-blame, rumination, catastrophizing, and other-blame. The Persian version of this scale was validated by Samani and Jokar (2007). Garnefski et al. (2002) reported alpha coefficients for the subscales of this questionnaire ranging from 0.71 to 0.81. In the study by Golchoubi (2023), the reliability of the questionnaire based on Cronbach's alpha was 0.777 for positive cognitive emotion regulation and 0.782 for negative cognitive emotion regulation. Composite reliability was 0.794 for positive cognitive emotion regulation and 0.789 for negative cognitive emotion regulation.

Grief Experience Questionnaire (GEQ) by Barrett and Scott (1989): The Grief Experience Questionnaire (GEQ) was designed and developed by Barrett and Scott in 1989 to measure grief reactions. The reliability and validity of this questionnaire were examined by Mahdipour et al. (2009) among a group of Iranian students with grief experience. The questionnaire consists of 34 items and evaluates seven components: guilt, efforts to justify and cope, somatic reactions, feelings of abandonment, judgment by oneself or others, shame or embarrassment, and stigmatization. It is scored on a five-point Likert scale ranging from never to always. The score range is between 34 and 102, with higher scores indicating greater grief. In the study by Mahdipour et al. (2009), construct validity was examined using two methods: principal component analysis and convergent

validity through calculating the correlation between the Grief Experience Questionnaire and the GHQ and SCL-25. In addition, the reliability of the questionnaire was obtained through Cronbach's alpha, which was 0.88 for the total scale and ranged from 0.40 to 0.86 for the components.

2.3. Data Analysis

To analyze the data, descriptive statistical methods, including mean, standard deviation, skewness, and kurtosis, and inferential statistical methods, including the Kolmogorov–Smirnov test to examine the normality of data distribution and Pearson correlation analysis, were used through SPSS version 26. Structural equation modeling was also performed using the advanced AMOS software. Questionnaire instruments were used for data collection.

3. Findings and Results

In correlational studies using a structural equation modeling approach, skewness and kurtosis values are used to examine the type of data distribution, namely whether the data are normal or non-normal. Accordingly, in the skewness and kurtosis table, the absolute value of no kurtosis value should exceed 3, and the skewness value should range between -1 and +1, indicating data normality. In the following section, descriptive statistics, including mean, standard deviation, median, skewness, and kurtosis, are reported for grief experience as the independent variable; adaptive cognitive emotion regulation, maladaptive cognitive emotion regulation, and teacher support as mediating variables; and academic engagement as the dependent variable. As stated, the type of data distribution, whether normal or non-normal, is also examined.

Table 1

Descriptive Statistics and Examination of the Distribution Type of the Research Variables

Research variables	Mean	Median	Skewness	Standard error of skewness	Kurtosis	Standard error of kurtosis
Guilt	24.453	24.000	0.036	0.129	0.148	0.256
Justification and coping	18.225	18.000	0.120	0.129	0.017	0.256
Somatic reactions	15.367	15.000	0.017	0.129	-0.345	0.256
Feelings of abandonment	10.981	11.000	0.195	0.129	-0.144	0.256
Judgment by oneself or others	11.072	11.000	0.326	0.129	0.011	0.256
Shame or embarrassment	11.403	12.000	0.006	0.129	0.129	0.256
Stigmatization	9.475	9.000	0.062	0.129	0.447	0.256
Grief experience	100.975	101.000	0.119	0.129	-0.103	0.256
Acceptance	6.108	6.000	0.145	0.129	0.335	0.256
Positive refocusing	6.022	6.000	-0.002	0.129	0.243	0.256
Refocusing on planning	6.117	6.000	-0.035	0.129	-0.347	0.256
Positive reappraisal	6.231	6.000	-0.146	0.129	0.092	0.256
Putting into perspective	5.886	6.000	-0.184	0.129	0.104	0.256
Adaptive cognitive emotion regulation	3.036	3.000	-0.028	0.129	-0.226	0.256
Self-blame	5.664	6.000	0.105	0.129	-0.167	0.256
Rumination	5.467	5.000	0.108	0.129	0.011	0.256
Catastrophizing	6.167	6.000	0.053	0.129	0.099	0.256
Other-blame	6.006	6.000	0.061	0.129	-0.179	0.256
Maladaptive cognitive emotion regulation	2.913	2.875	0.136	0.129	-0.210	0.256
Teacher support	19.094	19.500	0.019	0.129	-0.323	0.256
Behavioral engagement	16.086	16.000	-0.012	0.129	-0.460	0.256
Agentic engagement	19.394	19.000	0.073	0.129	-0.454	0.256
Cognitive engagement	17.417	17.000	-0.124	0.129	-0.094	0.256
Emotional engagement	16.122	16.000	-0.093	0.129	-0.283	0.256
Academic engagement	69.019	69.000	0.001	0.129	-0.444	0.256

Table 1 reports the descriptive indices of skewness, kurtosis, mean, and median for the research variables. As stated, skewness and kurtosis values can be used to examine the type of data distribution, namely whether the data are normal or non-normal. Therefore, based on the skewness values, which ranged between -1 and +1, and the kurtosis

values, which ranged between -3 and +3, it can be stated that the distribution of the data is normal. In addition to the results related to skewness and kurtosis values, it can also be stated that in studies with more than 40 participants, normality tests such as the Shapiro–Wilk or Kolmogorov–Smirnov tests are not required, whereas these tests may be

used when the sample size is below 40. Since the present study had a relatively large sample size, the data can be considered normally distributed based on the central limit theorem. In the present study, the sample size was also greater than 40; therefore, based on the central limit theorem, the data distribution can be considered normal. One of the

assumptions for conducting structural equation modeling and path analysis is the existence of a linear relationship between independent and dependent variables. Therefore, Pearson correlation analysis was used to examine the relationships among the research variables.

Table 2

Correlation Matrix of the Research Variables

Row	Variable	Statistic	1	2	3	4	5
1	Grief experience	Correlation coefficient	1	-	-	-	-
		Significance level	-	-	-	-	-
2	Adaptive cognitive emotion regulation	Correlation coefficient	-0.577**	1	-	-	-
		Significance level	0.001	-	-	-	-
3	Maladaptive cognitive emotion regulation	Correlation coefficient	0.589**	-0.516**	1	-	-
		Significance level	0.001	0.001	-	-	-
4	Teacher support	Correlation coefficient	-0.311**	0.280**	-0.254**	1	-
		Significance level	0.001	0.001	0.001	-	-
5	Academic engagement	Correlation coefficient	-0.339**	0.551**	-0.480**	0.434**	1
		Significance level	0.001	0.001	0.001	0.001	-

** Significant at the 0.01 error level. * Significant at the 0.05 error level.

As the results of the Pearson correlation test in Table 2 show, the bivariate correlations among the independent, dependent, and mediating variables were statistically significant at the 0.01 level, either negatively or positively. After examining the linear relationships, that is, correlations, among the variables, it was necessary to examine the

absence of multicollinearity among the research variables. Multicollinearity occurs when two or more independent variables are highly correlated. The assumption of no multicollinearity was examined using the variance inflation factor (VIF) and tolerance coefficient.

Table 3

Multicollinearity Indices Among Predictor Variables

Variables entered into the model (independent variables)	Tolerance	VIF
Grief experience	0.539	1.855
Adaptive cognitive emotion regulation	0.612	1.633
Maladaptive cognitive emotion regulation	0.605	1.653
Teacher support	0.885	1.130

As the indices in Table 3 show, given the high tolerance values, which are above 0.1 and close to 1, and the low VIF values, which are below 10, the likelihood of multicollinearity among grief experience, adaptive cognitive emotion regulation, maladaptive cognitive emotion regulation, and teacher support is low. After examining the required assumptions, structural equation modeling was conducted in AMOS to examine the intended research objectives. In this model, grief experience due to parental

loss was considered the independent or exogenous variable, academic engagement was considered the dependent or endogenous variable, and adaptive cognitive emotion regulation, maladaptive cognitive emotion regulation, and teacher support were considered mediating variables. In the following section, the research model is presented in the standardized coefficient mode, and the research hypotheses are examined based on the obtained results.

Table 4
Findings of the Research Relational Model

Latent variable	Path	Indicator	Factor loading	t-value	Significance level
Grief experience	→	Guilt	0.656	-	-
Grief experience	→	Justification and coping	0.655	10.716	0.001
Grief experience	→	Somatic reactions	0.628	10.340	0.001
Grief experience	→	Feelings of abandonment	0.641	10.517	0.001
Grief experience	→	Judgment by oneself or others	0.640	10.506	0.001
Grief experience	→	Shame or embarrassment	0.599	9.919	0.001
Grief experience	→	Stigmatization	0.745	11.909	0.001
Adaptive cognitive emotion regulation	→	Acceptance	0.662	-	-
Adaptive cognitive emotion regulation	→	Positive refocusing	0.646	10.001	0.001
Adaptive cognitive emotion regulation	→	Refocusing on planning	0.666	10.238	0.001
Adaptive cognitive emotion regulation	→	Positive reappraisal	0.607	9.506	0.001
Adaptive cognitive emotion regulation	→	Putting into perspective	0.623	9.712	0.001
Maladaptive cognitive emotion regulation	→	Self-blame	0.594	-	-
Maladaptive cognitive emotion regulation	→	Rumination	0.626	8.767	0.001
Maladaptive cognitive emotion regulation	→	Catastrophizing	0.635	8.854	0.001
Maladaptive cognitive emotion regulation	→	Other-blame	0.621	8.723	0.001
Teacher support	→	q1	0.771	-	-
Teacher support	→	q2	0.800	16.214	0.001
Teacher support	→	q3	0.793	16.052	0.001
Teacher support	→	q4	0.821	16.732	0.001
Teacher support	→	q5	0.791	15.994	0.001
Teacher support	→	q6	0.787	15.903	0.001
Teacher support	→	q7	0.788	15.916	0.001
Teacher support	→	q8	0.784	15.817	0.001
Academic engagement	→	Behavioral engagement	0.721	-	-
Academic engagement	→	Agentic engagement	0.754	15.524	0.001
Academic engagement	→	Cognitive engagement	0.756	15.953	0.001
Academic engagement	→	Emotional engagement	0.728	15.718	0.001

Figure 1

Research Model in the Standardized Regression Coefficient Mode

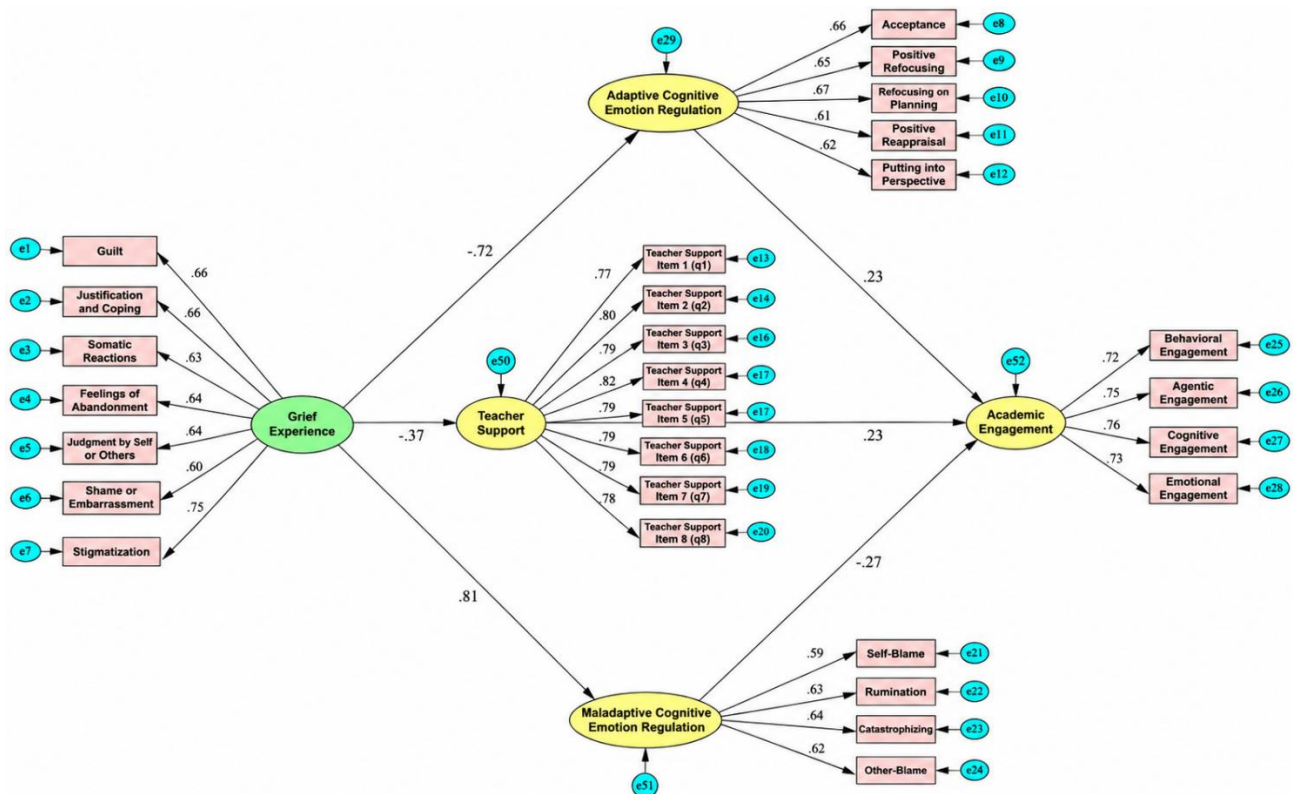


Table 4 reports the indices related to the research variables based on the results of structural equation modeling. The significance or non-significance of factor loadings was examined based on the t-value. A relationship is confirmed at the 0.05 error level when the t-value is greater than 1.96 or smaller than -1.96, indicating a significant positive or significant negative relationship, respectively. Paul Kline stated that indicators with factor loadings below 0.30 or test statistics smaller than the absolute value of 1.96 indicate weak indicators and should

be removed from the measurement model. Figure 1 presents the research model in the standardized regression coefficient mode for examining the research hypotheses. The results of Table 4 show that all indicators related to the latent variables of grief experience, adaptive cognitive emotion regulation, maladaptive cognitive emotion regulation, teacher support, and academic engagement had acceptable t-values, greater than the absolute value of 1.96, and acceptable factor loadings, greater than 0.30. Therefore, these indicators are considered appropriate for measuring the research variables.

Table 5

Fit Indices of the Research Relational Model

Fit indices	Desired value	Index values	Interpretation
Chi-square	-	1041.487	-
Degrees of freedom	-	344	-
Chi-square to degrees of freedom ratio (χ^2/df)	Less than 5	3.028	Acceptable
Goodness-of-fit index (GFI)	Greater than 0.90	0.914	Acceptable
Adjusted goodness-of-fit index (AGFI)	Greater than 0.80	0.851	Acceptable
Root mean square error of approximation (RMSEA)	Less than 0.10	0.075	Acceptable
Root mean square residual (RMR)	Less than 0.05	0.041	Acceptable
Comparative fit index (CFI)	Greater than 0.90	0.961	Acceptable
Normed fit index (NFI)	Greater than 0.90	0.913	Acceptable
Incremental fit index (IFI)	Greater than 0.90	0.962	Acceptable

According to Table 5, the comparative fit index (CFI) and the goodness-of-fit index (GFI), as the main model fit indices, were above 0.90, indicating confirmation of the model. The chi-square to degrees of freedom ratio was 3.028, which is below 5 and is considered acceptable for confirming the research model. In addition, considering that the root mean square error of approximation (RMSEA), for

which lower values are considered indicative of a better model, was obtained as 0.075, the model demonstrated an acceptable fit. Therefore, based on the obtained values, the research relational model has adequate fit. In the following section, the research objectives are examined based on the results obtained from the research model.

Table 6

Direct Path Effects Among the Research Variables

Predictor variable	Path	Criterion variable	Unstandardized coefficient (B)	Standardized coefficient (β)	t-value	Significance level
Grief experience	→	Adaptive cognitive emotion regulation	-0.196	-0.724	-8.836	0.001
Grief experience	→	Maladaptive cognitive emotion regulation	0.198	0.814	8.604	0.001
Grief experience	→	Teacher support	-0.057	-0.375	-6.035	0.001
Adaptive cognitive emotion regulation	→	Academic engagement	0.797	0.232	3.188	0.001
Maladaptive cognitive emotion regulation	→	Academic engagement	-0.750	-0.266	-3.920	0.001
Teacher support	→	Academic engagement	1.419	0.233	4.479	0.001

In the research model, the direct effects of grief experience due to parental loss on adaptive cognitive emotion regulation, maladaptive cognitive emotion regulation, and teacher support, as well as the direct effects of adaptive cognitive emotion regulation, maladaptive cognitive emotion regulation, and teacher support on academic engagement, were examined. The findings are reported separately below. Based on the study findings in Table 6, the following results were observed:

First, grief experience due to parental loss had a significant negative direct effect on adaptive cognitive emotion regulation ($B = -0.196$, $Sig = 0.001$, $t = -8.836$) with a path coefficient of $\beta = -0.724$, and on teacher support ($B = -0.057$, $Sig = 0.001$, $t = -6.035$) with a path coefficient of $\beta = -0.375$. Moreover, grief experience had a significant positive direct effect on maladaptive cognitive emotion regulation ($B = 0.198$, $Sig = 0.001$, $t = 10.345$) with a path coefficient of $\beta = 0.814$.

Second, adaptive cognitive emotion regulation ($B = 0.797$, $Sig = 0.001$, $t = 3.188$) with a path coefficient of $\beta = 0.232$, and teacher support ($B = 1.419$, $Sig = 0.001$, $t = 4.479$) with a path coefficient of $\beta = 0.233$, had significant positive

direct effects on academic engagement. In contrast, maladaptive cognitive emotion regulation had a significant negative direct effect on academic engagement ($B = -0.750$, $Sig = 0.001$, $t = -3.920$) with a path coefficient of $\beta = -0.266$.

In this study, the mediating effects of cognitive emotion regulation, both adaptive and maladaptive, and teacher support in the relationship between grief experience due to parental loss and students' academic engagement were examined. To examine the indirect effects of the independent variable on the dependent variable, the following conditions must first be met. The first condition is that the significance of the relationship between the independent variable and the mediator must be confirmed, and the second condition is that the significance of the relationship between the mediator and the dependent variable must be confirmed. Then, if the above conditions are met, the indirect path coefficient is obtained by multiplying the path coefficient between the independent variable and the mediator by the path coefficient between the mediator and the dependent variable. The results are reported below.

Table 7
Indirect Path Effects Among the Research Variables

Independent variable	Path	Mediating variable	Path	Dependent variable	Direct effect	Indirect effect
Grief experience	→	Adaptive cognitive emotion regulation	-	-	-0.72	-
Grief experience	→	Maladaptive cognitive emotion regulation	-	-	0.81	-
Grief experience	→	Teacher support	-	-	-0.37	-
-	-	Adaptive cognitive emotion regulation	→	Academic engagement	0.23	-
-	-	Maladaptive cognitive emotion regulation	→	Academic engagement	-0.27	-
-	-	Teacher support	→	Academic engagement	0.23	-
Grief experience	→	Adaptive cognitive emotion regulation	→	Academic engagement	-	-0.17 = (-0.72 × 0.23)
Grief experience	→	Maladaptive cognitive emotion regulation	→	Academic engagement	-	-0.22 = (0.81 × -0.27)
Grief experience	→	Teacher support	→	Academic engagement	-	-0.09 = (-0.37 × 0.23)

Based on the results of Table 7 and the examination of the stated conditions, the following findings were obtained:

Grief experience due to parental loss had a significant negative indirect effect on students' academic engagement through the mediating variable of adaptive cognitive emotion regulation, with a path coefficient of $\beta = -0.17$.

Grief experience due to parental loss had a significant negative indirect effect on students' academic engagement through the mediating variable of maladaptive cognitive emotion regulation, with a path coefficient of $\beta = -0.22$.

Grief experience due to parental loss had a significant negative indirect effect on students' academic engagement through the mediating variable of teacher support, with a path coefficient of $\beta = -0.09$.

4. Discussion and Conclusion

The present study examined the impact of grief experience resulting from parental loss on students' academic engagement through the mediating roles of cognitive emotion regulation and teacher support among bereaved secondary school students. The findings demonstrated that grief experience due to parental loss had a significant negative effect on adaptive cognitive emotion regulation and teacher support and a significant positive effect on maladaptive cognitive emotion regulation. Furthermore, adaptive cognitive emotion regulation and teacher support positively predicted academic engagement, whereas maladaptive cognitive emotion regulation negatively predicted academic engagement. Finally, grief experience exerted significant indirect negative effects on academic engagement through adaptive cognitive emotion regulation, maladaptive cognitive emotion regulation, and teacher support. Overall, the findings support a multidimensional explanatory model in which both individual emotional processes and contextual educational

supports shape the academic functioning of bereaved adolescents.

One of the most important findings of the present study was that grief experience resulting from parental loss significantly reduced adaptive cognitive emotion regulation and increased maladaptive cognitive emotion regulation. This finding is consistent with theoretical perspectives emphasizing that bereavement is not only an emotional experience but also a cognitive challenge that affects how individuals interpret, process, and manage emotionally significant events (Worden, 2018). The death of a parent disrupts adolescents' assumptions about safety, predictability, and emotional security, often leading to intense feelings of sadness, guilt, abandonment, uncertainty, and helplessness. Under such circumstances, adolescents may find it difficult to employ adaptive cognitive strategies such as acceptance, positive reappraisal, and planning. Instead, they may increasingly rely on maladaptive strategies such as rumination, catastrophizing, and self-blame. These findings align with previous evidence indicating that adverse emotional experiences are associated with impaired cognitive emotion regulation capacities and greater use of maladaptive coping mechanisms (Shahab, 2023; Zhang et al., 2019). Similarly, research has demonstrated that emotionally distressed adolescents frequently experience difficulties regulating their emotions constructively, which can further exacerbate psychological maladjustment (Golchoubi, 2023; Nambiar, 2023).

The observed relationship between parental bereavement and cognitive emotion regulation may also be explained through developmental and attachment-based frameworks. The loss of a parent removes a primary source of emotional guidance and co-regulation at a time when adolescents continue to rely on significant adults for emotional support. Consequently, bereaved students may experience deficits in emotional processing and coping resources, increasing

vulnerability to maladaptive cognitive responses. These interpretations are consistent with findings indicating that parental bereavement is associated with elevated emotional distress and reduced psychological adjustment among children and adolescents (Dantan et al., 2026; Hay et al., 2025). Furthermore, the results correspond with the findings of Listaunsanti and Setyawan, who reported that emotion regulation represents a key mechanism through which parental bereavement influences educational resilience and adaptation (Listaunsanti & Setyawan, 2025).

Another important finding was that grief experience due to parental loss negatively predicted perceived teacher support. Although teacher support is generally considered an external environmental resource, students' perceptions of support are often influenced by their emotional and psychological states. Bereaved adolescents may become socially withdrawn, emotionally detached, or less likely to seek help from teachers, which may reduce their perception of available support. In addition, grief-related difficulties such as concentration problems, emotional instability, and reduced classroom participation may interfere with the development of positive teacher-student interactions. This finding is consistent with literature suggesting that bereavement can negatively affect social functioning and interpersonal relationships within educational settings (Elsner et al., 2022; Hale, 2026). Research on bereaved students has shown that many young people feel misunderstood or unsupported in academic environments following the loss of a parent, particularly when educators lack adequate awareness of grief-related challenges (Hay et al., 2025; Salloum et al., 2025). Consequently, the experience of grief may indirectly diminish the protective role that teacher support ordinarily provides.

The results further revealed that adaptive cognitive emotion regulation positively predicted academic engagement. This finding supports contemporary theories of self-regulation and educational motivation, which emphasize the role of effective emotional management in sustaining learning-related behaviors and attitudes (Bordbar, 2021; Reschly & Christenson, 2022). Students who employ adaptive strategies such as acceptance, positive reappraisal, and planning are better able to manage emotional distress, maintain attention, regulate motivation, and persist in the face of academic challenges. These capacities facilitate greater involvement in learning activities and promote stronger behavioral, emotional, cognitive, and agentic engagement. The findings are consistent with previous studies showing that adaptive emotion regulation is

associated with improved academic achievement, educational persistence, and positive learning outcomes (Chen-Bouck et al., 2024; Romo et al., 2025). Moreover, adaptive cognitive regulation allows students to reinterpret stressful experiences in constructive ways, thereby preserving psychological resources needed for academic participation.

In contrast, maladaptive cognitive emotion regulation negatively predicted academic engagement. This finding is theoretically meaningful because maladaptive strategies such as rumination, catastrophizing, self-blame, and blaming others consume cognitive and emotional resources that could otherwise be directed toward learning activities. Students who repeatedly focus on negative thoughts and emotional experiences often experience reduced concentration, diminished motivation, and greater psychological distress, all of which interfere with academic involvement. These findings are consistent with evidence demonstrating that maladaptive cognitive emotion regulation is associated with poorer educational outcomes and lower academic performance (Chen-Bouck et al., 2024; Romo et al., 2025). Similarly, previous studies have reported that persistent rumination and self-blaming cognitions undermine students' ability to engage effectively in academic tasks and classroom activities (Golchoubi, 2023; Shahab, 2023). Therefore, maladaptive emotion regulation appears to represent a significant psychological barrier to educational engagement among bereaved students.

The present study also found that teacher support positively predicted academic engagement. This finding is highly consistent with a substantial body of educational research highlighting the importance of supportive teacher-student relationships in promoting student motivation, participation, and achievement (Amerstorfer & Frein von Munster-Kistner, 2021; Tao et al., 2022). Teachers serve not only as academic instructors but also as important social and emotional resources who influence students' perceptions of competence, belongingness, and support. When students perceive that teachers care about their well-being, provide assistance, and create positive learning environments, they are more likely to participate actively in educational activities and invest effort in learning. The current finding aligns with meta-analytic evidence indicating that teacher support exerts a significant positive effect on engagement and academic outcomes across educational contexts (Tao et al., 2022). Similarly, studies conducted in different cultural settings have demonstrated that teacher support enhances students' emotional experiences, learning engagement, and

academic performance (Ansong et al., 2024; Arifin et al., 2024; Jia & Cheng, 2024).

The significance of teacher support may be particularly pronounced among students experiencing parental loss. Following bereavement, adolescents often encounter disruptions in emotional stability and social support systems. In such circumstances, teachers may partially compensate for diminished familial support by providing encouragement, understanding, and guidance. Supportive teachers can foster a sense of belonging and security that helps bereaved students remain connected to school despite emotional difficulties. This interpretation is supported by school-based bereavement literature emphasizing the protective role of educators in facilitating adjustment and educational continuity following parental loss (Hale, 2026; Salloum et al., 2025). Thus, teacher support appears to function as a crucial environmental resource that promotes resilience and engagement among bereaved adolescents.

Perhaps the most important contribution of the present study concerns the indirect effects of grief experience on academic engagement through cognitive emotion regulation and teacher support. The findings demonstrated that grief experience negatively influenced academic engagement through reductions in adaptive cognitive emotion regulation, increases in maladaptive cognitive emotion regulation, and decreases in perceived teacher support. These results provide empirical support for the proposition that the relationship between bereavement and educational functioning is neither direct nor simple. Rather, parental loss appears to affect academic engagement through a series of interconnected psychological and social mechanisms.

The mediating role of adaptive cognitive emotion regulation suggests that students who maintain constructive emotional coping strategies despite experiencing grief are more likely to remain engaged in academic activities. This finding corresponds with previous research demonstrating that emotion regulation acts as a protective factor in the context of adversity and contributes to educational resilience (Listaunsanti & Setyawan, 2025; Romo et al., 2025). Likewise, the mediating role of maladaptive cognitive emotion regulation indicates that grief may undermine academic engagement by fostering dysfunctional cognitive responses that interfere with learning and motivation. These findings reinforce theoretical models emphasizing the importance of emotional self-regulation as a key determinant of educational adaptation (Chen-Bouck et al., 2024; Zhang et al., 2019).

Similarly, the mediating effect of teacher support demonstrates that educational environments play an important role in buffering the consequences of parental bereavement. Students who perceive greater support from teachers appear better able to maintain engagement despite experiencing significant personal loss. This finding aligns with ecological and motivational perspectives that conceptualize student engagement as the product of interactions between personal and contextual resources (Reschly & Christenson, 2022; Wang & Eccles, 2023). It also supports previous evidence indicating that supportive educational relationships contribute to resilience, adjustment, and positive academic outcomes among vulnerable student populations (Amerstorfer & Frein von Munster-Kistner, 2021; Tao et al., 2022).

Taken together, the findings of the present study suggest that grief resulting from parental loss affects students' academic engagement through both internal psychological pathways and external social pathways. Adaptive and maladaptive forms of cognitive emotion regulation represent important individual mechanisms through which bereavement influences educational functioning, whereas teacher support represents a critical contextual resource capable of mitigating the negative consequences of grief. These findings contribute to the growing literature on bereavement and educational psychology by providing a more comprehensive understanding of the factors that shape academic engagement among bereaved adolescents.

Several limitations should be considered when interpreting the findings of the present study. First, the correlational and cross-sectional design prevents definitive conclusions regarding causal relationships among the variables. Second, the study relied exclusively on self-report questionnaires, which may be influenced by social desirability bias and subjective perceptions. Third, the sample was limited to bereaved secondary school students in Karaj, which may restrict the generalizability of the findings to other age groups, educational levels, or cultural contexts. Fourth, the study did not consider potentially influential variables such as socioeconomic status, time elapsed since parental loss, cause of death, family functioning, or peer support. Finally, the study focused only on cognitive emotion regulation and teacher support as mediating variables, while other psychological and environmental factors may also contribute to explaining the relationship between grief and academic engagement.

Future studies should employ longitudinal designs to examine causal and developmental relationships among

grief experience, emotion regulation, social support, and academic engagement over time. Researchers may also investigate additional mediating and moderating variables such as resilience, self-efficacy, mindfulness, peer support, school climate, and family cohesion. Comparative studies involving different age groups, cultural contexts, and educational settings would enhance understanding of the generalizability of the findings. Furthermore, qualitative and mixed-method approaches could provide deeper insights into the lived experiences of bereaved students and the mechanisms through which they maintain academic engagement following parental loss. Intervention studies evaluating the effectiveness of emotion regulation training and school-based support programs for bereaved adolescents would also be valuable.

Schools should establish systematic support services for students experiencing parental bereavement and ensure that teachers receive training on recognizing and responding to grief-related challenges. Educational counselors and psychologists should implement programs that strengthen adaptive cognitive emotion regulation skills and reduce reliance on maladaptive coping strategies. Teachers should create supportive classroom environments characterized by empathy, understanding, flexibility, and encouragement for bereaved students. School administrators should promote collaborative approaches involving teachers, counselors, and families to identify students at risk of academic disengagement following parental loss. In addition, targeted interventions designed to enhance emotional coping, resilience, and school connectedness may help bereaved students maintain active participation in learning and achieve positive educational outcomes despite experiencing significant personal loss.

Authors' Contributions

All authors significantly contributed to this study.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We hereby thank all individuals for participating and cooperating us in this study.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the interview and participated in the research with informed consent. This study was approved by the Ethics Committee of Kermanshah University of Medical Sciences under the ethics code IR.KUMS.REC.1405.034.

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