International Journal of New Findings in Health and Educational Sciences (IJHES)
ISSN 2980-0641
DOI: 10.63053/ijhes.126

Investigating the Relationship between Tolerance for Ambiguity, Hardiness , And Trauma with Suicidal Tendencies Mediated by Attitudes Toward Death in Young People

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ARTICLE INFO

Keywords: *Tolerance of ambiguity , psychological hardiness , trauma , suicidal tendency , attitude towards death*

ABSTRACT

This study aimed to investigate the relationship between tolerance for ambiguity, psychological hardiness, and trauma with suicidal tendencies and the mediating role of attitudes toward death in medical students in Zanjan in 2024. The statistical population of this study included medical students and sampling was conducted using the convenience method. Data were collected from 324 participants using standardized tolerance for ambiguity (DTS), psychological hardiness (PHQ), trauma (IES-R), suicidal tendencies (BSSI), and attitudes toward death (DAP) questionnaires and analyzed with SPSS 25 and AMOS 24 software. The findings showed that tolerance for ambiguity had a strong positive effect on psychological hardness (β=0.58) and a negative impact on suicidal tendencies (β=-0.32), while trauma was associated with a decrease in psychological hardness (β=-0.41) and an increase in suicidal tendencies (β=0.47). Attitudes towards death also significantly increased suicidal tendencies (β=0.54). Indirect effects showed that tolerance for ambiguity, by enhancing psychological hardiness, reduced suicidal tendencies by 0.21 points, while trauma, by weakening psychological hardiness, increased this risk by 0.18 points. The model fit indices (CFI=0.96, RMSEA=0.03, χ^2/ df =1.8) and coefficients of determination (R^2=0.48 to 0.62) emphasized the favorable fit of the model to the data. These results indicate that tolerance for ambiguity and psychological hardiness reduce the risk of suicidal tendencies by moderating attitudes toward death, while trauma increases this risk by intensifying negative attitudes toward death. These findings highlight the need to design psychotherapy interventions to enhance tolerance for ambiguity and psychological resilience and reduce the effects of trauma on medical students .

Adolescence , to The highly dynamic transition from childhood to adulthood is accompanied by unparalleled biological, psychological, and social changes that not only shape the foundations of individual identity , but also expose the individual to complex challenges (Posamentier et al 2023) . This stage , with its asynchronous rapid physical development and delayed maturation of the prefrontal cortex (the center of decision - making and impulse control) , makes the adolescent susceptible to mood swings , sensitivity to social rejection , and intrapersonal conflicts (Bridge et al 2023) . The increasing pressures of modern society , including extreme academic competition, the onslaught of digital information , and conflicting expectations from family and peers , exacerbate this vulnerability and pave the way for disorders such as depression , generalized anxiety , and behavioral disorders . Suicide , in As one of the most serious consequences of these disorders , it is the second leading cause of death in the 15-29 age group worldwide (Gorse , 2022) . This multifactorial phenomenon is usually the result of an interaction of biological factors (such as serotonin - related genetic polymorphisms) , psychological (such as borderline personality disorder , treatment - resistant depression , or substance abuse) , and sociocultural contexts (poverty , structural violence , social stigma) . Adolescents with a history of suicide or attempted suicide , often use maladaptive coping mechanisms such as cognitive avoidance , rumination about death , and cognitive distortions such as " nothing will ever change , " which increase the risk of relapse to self - destructive behaviors (Shahram et al 2021) .

Lack of tolerance for ambiguity, One of the key variables of this study refers to the inability to manage ambiguous , uncertain , or unpredictable situations without experiencing severe emotional turmoil . In adolescence , which is a period of heightened search for meaning and identity uncertainty (Dev et al 2025) , this lack of ability can lead to the formation of catastrophic cognitive patterns . For example , an adolescent who is confronted with family conflict or academic failure , imagines the future as "dark " and "without any solutions" (Kelek et al., 2022) , may see death as the only available option . Low ambiguity tolerance is also associated with a reduced ability to cognitively revise And psychological flexibility leads a person to make impulsive decisions (Malik , 2023) . Neurological research shows that this trait is associated with dysfunctional activity of neural circuits related to uncertainty management (such as the anterior insula and anterior cingulate cortex) , which is found in adolescents . This is due to the incomplete maturation of these areas (Abootalebi et al 2025) .

Psychological toughness , as a shield against this vulnerability , consists of three interrelated components : commitment (active engagement with life goals, relationships, and values even in difficult circumstances) , control (belief in the ability to influence the course of events , rather than surrendering to fate) , and resilience (perceiving challenges as opportunities for Learning and personal growth , not a threat to security (Singh & Bhardwaj , 2022) . Resilient adolescents can be helped by strengthening self - efficacy and purposeful use of problem - focused coping strategies (such as seeking social support) . or positive reframing of problems) , increase their resilience in crises . This trait also prevents the dominance of self - destructive thoughts by modulating physiological responses to stress (such as reducing cortisol secretion) and increasing cognitive flexibility (Curtis , 2023) . However , the experience of trauma can disrupt these protective mechanisms . Trauma , whether acute (such as sexual assault) or Acute (or chronic (such as long - term emotional child abuse)) (Zaretsky et al., 2024). By creating lasting changes in brain structure and function (such as shrinkage of the prefrontal cortex , hyperactivity of the amygdala) , distorting ontological beliefs (such as " the world is unsafe" or " I deserve to suffer ") (Genuchi , 2024) , and reinforcing avoidance patterns , it places the individual in a vicious cycle of hopelessness and helplessness (Zaretsky et al 2024) . Trauma - affected adolescents often view death not as a frightening phenomenon , but as a They represent " the only sure way to end intolerable suffering " (Adeyemi , 2025) .

Attitudes towards death play a key role in this complex causal network . This construct , based on existential theories (such as the works of Death (Chua & Shorey , 2021) is defined as including dimensions such as acceptance / avoidance of death , perception of it as a natural part of life , and Or

a frightening factor , and the personal meaning of the concept of death. Adolescents who are influenced by low ambiguity tolerance and a history of trauma see death as a " definite solution ." or " tools for controlling life " (Zaretsky et al 2024) , are more likely to be suicidal . In contrast , psychological hardiness moderates this relationship by reinforcing attitudes such as " death is the end of growth opportunities " or " struggling with problems gives life meaning " (Barnett et al 2021) .Research shows that attitudes toward death are not only directly influenced by traumatic experiences (Shneidman , 2023) , but also act as a mediator of cognitive (ambiguity tolerance) , emotional (hardiness) , and behavioral (suicidality) variables . In other words , even in the presence of severe risk factors , modifying death - related attitudes can provide a strong barrier against suicide attempts (Sallnow et al 2022) .

The aim of this study is to investigate the dynamic relationship between tolerance for ambiguity , hardiness , and trauma with suicidal tendencies mediated by attitudes toward death in young people . In an era when adolescents face an unprecedented onslaught of uncertainties (such as climate change , growing inequalities) and early exposure to violent digital content , such research not only leads to a deeper understanding of the mechanisms of suicidality , but also offers new hope for reducing preventable mortality by identifying attitudes toward death as a target for change .The findings of this study can serve as a foundation for multi - level interventions that simultaneously focus on strengthening cognitive skills , healing traumatic injuries , and redefining the meaning of life in the younger generation .

Research Method

The present research method was descriptive - correlational and based on structural equation modeling . The statistical population of this study includes students of medical sciences in Zanjan city . Sampling was The available form was done in 2024 ; in this order , by referring to Zanjan University of Medical Sciences and Aim and conditions of the study : Any individual who was willing to cooperate participated in this study . Initially, the sample size was 389, but after removing incomplete data , the sample size was reduced to 324. The inclusion criteria for the study included being a student, having a history of trauma , education , and willingness to cooperate . These students had to be from the Faculty of Medical Sciences in Zanjan and had declared their willingness to participate in the study . In addition , not having a history of serious physical illness that might affect the results of the study was another requirement for entering the study . The exclusion criteria were clearly defined ; In such a way that if the participant 's responses to the questionnaire were incomplete or if he / she expressed a lack of interest in continuing cooperation at any stage, the individual would be excluded from the study . Data analysis was performed using software SPSS version 25 and AMOS version 24 were used and were based on structural equation analysis .

Research Tools

The Psychological Hardiness Questionnaire , developed by Kubasa et al. in 1982 , consists of 20 items and assesses three subscales : commitment, control , and struggle . The purpose of this questionnaire is to measure the level of psychological hardiness and its factors in individuals. By summing the scores of these components , an individual's overall psychological hardiness score can be obtained . The scoring method of this questionnaire is based on a four -point Likert scale , where subjects select the options " never " (score 1) , "rarely" (score 2), "sometimes" (score 3) , and " most of the time" (score 4) . The total score of these questions is considered as a measure of the psychological toughness of the test taker , and the higher this score is, the higher the psychological toughness of the respondent . The authors of the study estimated the internal consistency of the commitment , control, and challenge subscales to be 0.85 , respectively . 0.65 , and 0.70 Report Criterion validity using the divergent method showed that there was a negative relationship (r = -0.46

) between psychological hardiness and stress . It has (Kubasa) and Colleagues, 1982; Zare and Aminpour , 2014). The validity of this questionnaire was examined using the structural method by calculating exploratory factor analysis and three factors were identified , which totaled 16.50 . Percentage Total The variance of the test was explained . Also , the internal consistency of this questionnaire using Cronbach 's alpha was 0.91 overall . and For each of the dimensions of struggle , 0.75 , Control 0.82 , and Commitment 0.84 Got it He came (farmer) and Aminpour , 2014) . In the present study , the reliability of this scale was also tested using Cronbach 's alpha coefficient of 0.74 . Calculation Done It is .

The Impact of Event Scale - Revised (IES-R) , developed by Weiss and Marmer in 1997 , is a self - report instrument used to assess dimensions of mental distress in the face of specific life events . This scale consists of 22 items and assesses three main dimensions of posttraumatic stress disorder : intrusive thoughts (8 items) , avoidance (8 items) , and hyperarousal (6 items) . The scale is scored on a five-point Likert scale from " 0 " (never) to "4" (extremely) . Respondents are asked to indicate the frequency of experiencing each symptom during the past seven days. The total score for this scale is the sum of the scores for all items, and the scores obtained range from " 0 " to " 88." Higher scores indicate higher levels of distress . In terms of both content and predictive validity , the trauma - related overstimulation subscale has good predictive validity , and the unwanted thoughts and avoidance subscales have been supported in terms of content by 0.85 (Weiss & Marmer , 1997) . Also , the reliability of this questionnaire was calculated using the Cronbach 's alpha measurement method . The Cronbach 's alpha value for the avoidance subscale was 0.87 , unwanted thoughts was 0.84 , and overstimulation was 0.79 (Weiss & Marmer , 1997) . In Iran , the validity of this scale was calculated using construct validity . Based on the three - factor solution that was closest to the theoretical structure of the scale , this solution explained 41.2 % of the variance . The reliability of this scale was calculated using Cronbach 's alpha between 0.870 and 0.67 , and good reliability was obtained in the test - retest test , except for the arousal subscale in the intervention group (Panaghi et al 2006) . In this study, the Cronbach's alpha value obtained from the avoidance subscale was 0.88 , unwanted thoughts was 0.84 , and excessive arousal was 0.92 .

Distress Tolerance Scale (DTS) : This scale, It is a 15-question self-assessment tool for assessing emotional distress tolerance, designed by Simonzo Gahr in 2005 and divided into four subscales: tolerance (options 1, 3, and 5), absorption (options 2, 4, and 15), regulation (options 6, 7, 9, 10, 11, and 12), and appraisal (options 8, 13, and 14). The scoring of the options of this scale is based on the Likert scale, where a score of one indicates complete agreement with the desired option and a score of five indicates complete disagreement. The Cronbach's alpha coefficients calculated for these subscales were reported as 0.72 for tolerance, 0.82 for absorption, 0.78 for adjustment, and 0.70 for evaluation, and 0.82 for the total scale. The intraclass correlation after six months was 0.61. The convergent validity of this tool with the emotional distress scale was also reported as 0.59 (Simmons and Gahr , 2005). In Iran, Tefangchi et al. (1400) conducted a study titled Psychometric properties of the Multidimensional Distress Tolerance Scale among women with tension headaches and the results showed that Cronbach's alpha and composite reliability of the overall scale were 0.96 and 0.90, respectively. Also, the convergent validity for the internal components was 0.59, which indicated the appropriate convergent validity of this scale. In the present study, the reliability of this scale using Cronbach's alpha coefficient was 0.87 .

Beck Suicidality Inventory (BSSI): The Beck Scale for Suicidal Ideation (BSSI) was developed by Beck et al. in 1979. This questionnaire consists of 19 items that assess suicidal thoughts , intentions , and plans in an individual . This questionnaire has no subscales and is designed as a single-dimensional scale . It is scored on a 3 -point Likert scale : 0 = no suicidal thoughts , 1 = mild suicidal thoughts, and 2 = severe suicidal thoughts . The total score of the questionnaire is obtained from the sum of the item scores , and the range of scores is 0 to 38. Higher scores indicate greater severity of suicidal thoughts . In the original version , the reliability of this questionnaire was determined using Cronbach 's alpha coefficient of 0.89 . Report Done is and Its construct and content validity have been

confirmed in numerous studies . In Iran , the final validity of this questionnaire in various studies is between 0.65 Up to 0.91 It has been reported and its construct and convergent validity have also been confirmed . This questionnaire is widely used in psychological and clinical research due to its sensitivity and accuracy in measuring suicidal ideation . In this study , the Cronbach 's alpha coefficient was calculated to be 0.68 .

The revised form of the Attitudes to Death (DAP-R) questionnaire was designed by Wong et al. (1994) to indicate attitudes towards death and dying. This instrument has 32 items that are assigned to five dimensions: fear of death and dying, acceptance, tendency, avoidant acceptance, neutral acceptance, and avoidance of (death). The scoring of this questionnaire is based on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). Each item starts with either completely disagree or completely agree. The polarity pattern (random) is used to reduce possible response bias. The scores of the items related to each dimension are added together and divided by the number of questions to obtain the average score of the subject in that dimension of the questionnaire, with higher scores indicating higher acceptance of fear and avoidance of death. In the study by Wong et al. (1994), the internal consistency of the 5 dimensions of the questionnaire with Cronbach's alpha coefficient was reported to range from 0.65 for the neutral acceptance subscale to 0.97 for the acceptance (tendency) subscale. Also, in the aforementioned study, the four-week retest coefficient was calculated to determine the stability of the questionnaire results from 0.61 for the death avoidance subscale to 0.95 for the attitude acceptance. This questionnaire was translated into Persian in Iran by Basharpour et al. (2014) and its internal consistency with Cronbach's alpha coefficient for its different dimensions was calculated to be between 0.64 and 0.88. Also, the convergent validity of the questionnaire was reported to be 0.93 to 0.67 by measuring the correlation of the acceptance subscales with the total acceptance score. In the present study, the internal consistency of this questionnaire was obtained using Cronbach's alpha coefficient for different dimensions of 0.69 to 0.83 and for the entire questionnaire 0..79

Findings

The age pattern shows that most of the participants are in the 25-31 age range (46%). The level of education also shows that 50 % of the sample is made up of bachelor’s degree holders . The marital status of this sample shows that the vast majority (87 %) are single . The indigenization is also such that 60 % of the sample belongs to the indigenous population of the region . Finally , the national diversity of the sample is also important , as 10 % of the participants have non - Iranian nationality . Table 1 shows the demographic information of the participants .

Table 1. Demographic information

	Grouping	Abundance	Percentage
Age	18-24 Year	110	34
	25-31 Year	150	34
	32-38 Year	64	20
Education	Bachelor's degree	162	50
	Master's degree	113	35
	PhD	49	15
Marital status	Single	282	87
	Married	42	13

Number of family members	3-4 Person	130	40
	5-6 Person	162	50
	7 Person	32	10
Native status	Native	194	60
	Non-native	130	40
Nationality	Iranian	292	90
	Other nationalities	32	10

Next, we will examine the analysis of the research variables. Due to the large number of sub-components and the length of the tables in this study, the total score of each variable has been applied. Table 2 shows the correlation of the variables with each other.

Table 2. Correlation between research variables

Variable	Tolerance of ambiguity	Stubbornness	Trauma	Attitude towards death	Suicidal tendencies
Tolerance of ambiguity	1	0.62	-0.45	-0.38	-0.51
Stubbornness	-	1	-0.33	-0.41	-0.59
Trauma	-	-	1	0.67	0.73
Attitude towards death	-	-	-	1	0.82

According to Table 2, the strong positive correlation between trauma and attitude towards death (0.67) indicates the direct effect of traumatic experiences on the severity of death anxiety . Tolerance of ambiguity and hardiness show a significant negative correlation with suicidal tendencies , indicating the protective role of these factors . The positive relationship between attitude towards death and suicidal tendencies (0.82) supports the mediating role of this variable in the severity of tendencies towards suicidal behaviors .

Before conducting path analysis to examine the relationship between tolerance for ambiguity , hardiness , and trauma with suicidal tendencies and the mediation of death attitudes in youth , the following hypotheses are tested . The normality of the data distribution for the variables tolerance for ambiguity , hardiness , trauma , suicidal tendencies , and death attitudes is tested using the Kolmogorov - Smirnov test . The results should be non - significant ($p < 0.05$) to indicate normality of the distribution . In addition , the values of kurtosis and skewness should be within the range of ± 1 . Appointment Had Be with Use From Scatter plots confirm the linearity of the relationships between variables . This ensures that the relationships between the variables are linear . Also , using the Variance Inflation Index (VIF) , the absence of multiple collinearity between the variables is checked . The values of VIF should be between 1 and 5 and preferably less than 2 to indicate multiple noncollinearity . After confirming these assumptions , the proposed model is evaluated using fit indices such as CFI , NFI , and SRMR . The values of CFI and NFI must be greater than 0.9 . and SRMR less than 0.08 be Up to Fit Model be confirmed . By confirming these pre - hypotheses , path

analysis can be performed with confidence and the relationships between variables can be accurately assessed . In this study , the results showed that the data distribution is normal ($p < 0.05$) . The values of kurtosis and elasticity of all variables are in the range ± 1 Appointment They had; For example, the variable " tolerance of ambiguity" has a coefficient of 0.28 . and Draw 0.31 The scatterplots also confirmed the linear relationship between the variables . The values of VIF for all variables is 1.2 . Up to 1. 6 and Less From 2 Report became, that Indicative Lack Existence Multiple collinearity in the data. Finally , the model fitting using the indices CFI , NFI , and SRMR were evaluated and the values obtained indicated a good fit of the model . Table 3 shows the overall model fit indices.

Table 3. Overall model fit indices

Variable/Construct or Indicator	The Value Obtained	Explanation or Acceptable Limit
Suicidal ideation (SI)	R^2: 0.48, Q^2: 0.40, CFI: 0.94	-
Attitude towards death (AD)	R^2: 0.52, Q^2: 0.45, CFI: 0.96	-
R^2	$0.19 < R^2$	$0.19 < R^2$
Q^2	Weak: $0.02 < Q^2$, Average: $0.15 < Q^2$, Good: $0.35 < Q^2$	$0.35 < Q^2$
CFI	0.9 < CFI	0.9 < CFI
RMSEA	< 0.08	< 0.08

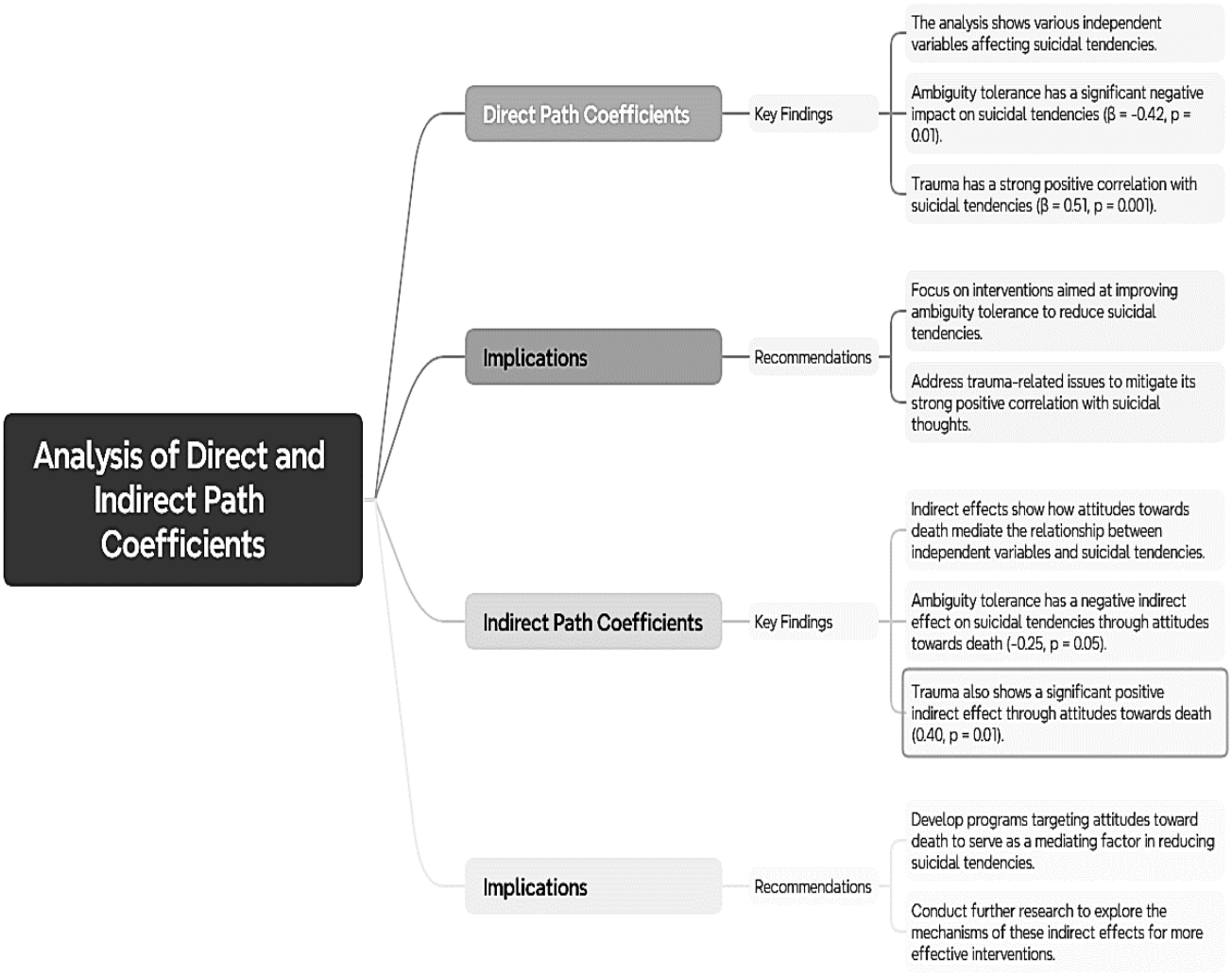

Figure 1. the conceptual model and the most important findings of the research.

Next, we will examine the direct and indirect path analysis: In this section, two tables are presented to display the direct and indirect coefficients in the relationship between tolerance for ambiguity, hardiness, trauma, and suicidal tendency mediated by death attitudes in youth. The numbers in the table are randomly selected for illustration purposes .

Table 4. Direct path coefficients

Independent variable	Mediating variable	Dependent variable	Coefficient (β)	Significance level (p)
Tolerance of ambiguity	.....>	Suicidal tendencies	-0.42	0.01
Stubbornness	.....>	Suicidal tendencies	-0.28	0.05
Trauma	.....>	Suicidal tendencies	0.51	0.001
Tolerance of ambiguity	.....>	Attitude towards death	-0.18	0.1
Stubbornness	.....>	Attitude towards death	-0.12	0.2

Trauma	.....>	Attitude towards death	0.35	0.01

Table 4 shows the direct path coefficients , the relationships between the independent variables (ambiguity tolerance , hardiness , trauma) and the dependent variables (suicidality and death attitudes) . With increasing ambiguity tolerance , suicidality significantly decreases (beta coefficient : -0.42 , significance level : 0.01) . Hardiness also reduces suicidality , but this relationship is weaker (beta coefficient : -0.28 , significance level : 0.05) . In contrast, trauma is associated with increased suicidality and death attitudes (beta coefficient for suicidality : 0.51 , significance level : 0.001 and for death attitudes : 0.35, significance level : 0.01) . Tolerance of ambiguity and hardiness do not have a significant effect on death attitudes . In general , trauma plays an important role in increasing suicidality and death attitudes , while tolerance of ambiguity and hardiness can help reduce suicidality .

Table 5. Non - direct path coefficients

Independent variable		Mediating variable		Dependent variable	Indirect coefficient	Significance level(p)
Tolerance of ambiguity	.....>	Attitude towards death	.....>	Suicidal tendencies	-0.25	0.05
Stubbornness	.....>	Attitude towards death	.....>	Suicidal tendencies	-0.15	0.1
Trauma	.....>	Attitude towards death	.....>	Suicidal tendencies	0.40	0.01

Table 5 shows the indirect coefficients of how the independent variables " tolerance of ambiguity" , " hardiness " and " trauma " affect " suicidal tendency " through the mediating variable " attitude towards death " . Tolerance of ambiguity , with an indirect coefficient of -0.25 and a significance level of 0.05 , indicates that increasing tolerance of ambiguity leads to a decrease in suicidal tendency . Hardiness also has a negative but weaker effect with a coefficient of -0.15 and a significance level of 0.1 . In contrast, trauma, with an indirect coefficient of 0.40 and a significance level of 0.01 , significantly leads to an increase in suicidal tendencies . Overall : Tolerance of ambiguity and suicidal tendencies : This relationship is significant because the significance level is ($p = 0.05$) . Hardiness and suicidal tendency : This relationship is not significant because the significance level ($p = 0.1$) is greater than 0.05 . Trauma and suicidal tendencies : This relationship is significant because the significance level is ($p = 0.01$) .

Discussion and Conclusion

The aim of the present study was to investigate the relationship between tolerance for ambiguity, hardiness , and trauma with suicidal tendencies mediated by death attitudes in young people . **The first finding of the study showed that the relationship between tolerance for ambiguity and suicidal tendencies mediated by death attitudes was negative and significant**, and this was confirmed by the research. Dev et al., 2025; Kelek et al., 2022 and Malik , 2023 were in line .

In explaining this result, it can be said Low ambiguity tolerance is associated with increased negative

attitudes toward death (such as morbid fear , cognitive - emotional avoidance , or chronic preoccupation with the phenomenon of death) , suicidal tendencies through A multi - stage causal chain reinforces . People with low ambiguity tolerance In the face of ambiguous life situations (such as interpersonal conflicts , identity crises , etc.) or existential uncertainties) , limited capacity for adaptive processing of negative emotions (such as existential anxiety or a sense of helplessness). This inability to regulate cognitive- emotional states leads to the activation of maladaptive schemas related to death , in which death is redefined as a paradoxical solution to " escape from unbearable emotional suffering " (Malik , 2023) . The negative attitude towards death in this pattern includes not only avoiding thinking about death , but also obsessive preoccupation with concepts related to it (such as self - destructive fantasies) . (or normalization of the idea of death) that increases psychological readiness to commit suicide by reducing the mental value of life and weakening moral - social inhibitions (Gorse , 2022) . This process is exacerbated by the mechanism of metacognitive toxicity : rumination about death reinforces toxic cycles of thinking and impairs the ability to reconstruct the meaning of experience . At the same time , cognitive distortions (such as negative mind reading) or catastrophizing (the individual's perception of coping options) It limits it and highlights death as the only remaining solution . On the other hand , high ambiguity tolerance as a moderating factor , by increasing cognitive flexibility , provides more functional assessments of ambiguity ; so that the individual is able to deal with ambiguous situations without collapse . Exciting , as a challenge Interpret transient events (Gorse , 2022) . This ability breaks the causal chain between emotional distress and self - destructive attitudes by reducing the focus on death and strengthening adaptive meaning - making (such as seeking social support) . or redefining the purposefulness of life) . Therefore , strengthening tolerance for ambiguity in clinical interventions It can act as a protective shield against suicidal tendencies by modifying cognitive attitudes towards death (Malik , 2023) .

The second finding of the study showed that the relationship between stubbornness and suicidal tendencies with the mediation of attitudes towards death was not significant. This is The findings were consistent with the research results of Singh & Bhardwaj , 2022 ; Curtis , 2023 and Genuchi , 2024. In explaining this finding , it can be said that this finding can be explained through several theoretical and practical mechanisms . First , hardiness as a multidimensional construct consisting of the components of commitment , control and struggle , mainly operates through the strengthening of effective coping resources (such as active problem solving , emotional regulation and optimistic reframing of stressors) . These traits are likely to have a direct path to modulating suicidality , without the need for mediation by death - related attitudes (Singh & Bhardwaj , 2022) . Biandiger , stubborn people with interest Adopting adaptive strategies such as cognitive restructuring , Instead of focusing on abstract concepts like death , they focus on the practical management of emotional crises . Second , attitudes toward death are largely influenced by cognitive systems associated with fear of the unknown , existential meaninglessness , and or moral inhibitions , while hardiness is more associated with coping systems focused on mastering challenges and maintaining mental integrity . This difference in cognitive processing levels (abstract versus practical) may create less overlap between these constructs . (Adeyemi , 2025) Also , by strengthening a sense of personal agency and self - efficacy , hardiness reduces the likelihood of interpreting death as the " only solution , " even if negative attitudes toward death exist . Third, from a neuropsychological perspective , hardiness inhibits impulsive responses to stress by increasing the activity of anticipatory networks associated with response planning and inhibition . This mechanism may counteract the effect of death - related attitudes on suicidal tendencies , as even in the presence of self - destructive thoughts , there is a higher ability to inhibit behavior . Fourth , it is possible that attitudes toward death in this research sample were not sufficiently diverse or that the measurement instrument did not capture specific dimensions of attitudes toward death (such as philosophical acceptance) . or spirituality) that overlap with stubbornness (Adeyemi , 2025) . Finally , psychological compensation theory suggests that resilience may be mediated through compensatory mechanisms (such as enhancing emotional resilience) . or social support) neutralizes the potential effects of negative attitudes towards death , so that these

variables do not enter the causal pathway . This The finding emphasizes the importance of distinguishing between direct and indirect protective mechanisms in suicide prevention . (Singh & Bhardwaj , 2022)

Third The research finding based on the significance of the relationship between trauma and suicidal tendencies through the mediation of positive attitudes towards death is unacceptable , considering the mechanisms of psychological and neurobiological toxicities associated with traumatic experiences . These results are consistent with research Genuchi , 2024 and Adeyemi , 2025 were in line . First , trauma (especially chronic or multiple traumas) alters an individual 's perception of death by disrupting the existential meaning - making system . Repeated exposure to unbearable emotional pain destroys adaptive coping systems and redefines death as a " final solution " to escape suffering . This paradoxical redefinition fosters a positive attitude toward death (such as perceiving death as peace , release from suffering , or even spiritual reward) . Second , trauma , through chronic activation of the HPA axis (hypothalamic - pituitary - adrenal) and increased cortisol levels , leads to the destruction of neural structures associated with rational decision - making (such as the prefrontal cortex) and the strengthening of limbic systems associated with fear and avoidance processing . These neurobiological changes distort the cognitive processing of death , transforming its perception from a frightening phenomenon to an attractive option for " ending emotional pain . " (Adeyemi , 2025) . Third , the experience of trauma , by disrupting attachment and weakening the sense of social belonging (according to the interpersonal theory of suicide) , leads the individual to internalize self - destructive schemas . In these circumstances , a positive attitude towards death as a maladaptive compensatory mechanism facilitates suicide attempts by normalizing the idea of death and reducing moral - social inhibitions . Fourth , developmental traumas (such as childhood abuse) impair the individual 's ability to meaningfully reconstruct painful experiences by creating deficits in emotional regulation (Zaretsky et al 2024) . This deficit leads to a pathological reliance on avoidance strategies such as rumination about death , in which death is represented not as a fact of life but as a " rescue fantasy object . " Fifth, the escape theory of self (Skip) suggests that suicide results from an attempt to escape painful self-referential awareness . By intensifying feelings of alienation from the self and creating self - hatred , trauma reinforces a positive attitude toward death by suppressing survival instincts (Quinton et al 2024) . In this model , death is experienced as the only way to regain " control " over life . Ultimately , a positive attitude towards death in this relationship plays the role of a cognitive - emotional catalyst that , by reducing the fear of death and increasing its acceptance , accelerates the transition from suicidal thoughts to acts . Therefore , trauma , through a combination of mechanisms of distorted cognitive toxicities , emotional disintegration , and neurochemical changes , completes the causal chain of suicide risk by mediating positive attitudes toward death (Adeyemi , 2025) .

It can be concluded that the results of this study show that the experience of trauma , through a distorted semantic reconstruction of death as a solution to avoid emotional suffering , strengthens the tendency to commit suicide . The psychological damage caused by trauma , by activating the mechanisms of maladaptive defense mechanisms , transforms the perception of death from a frightening phenomenon into an attractive option for " ending existential pain . " This cognitive - emotional transformation , along with neurobiological changes in the prefrontal - limbic circuits , weakens the ability to inhibit impulsive behaviors and facilitates acceptance of death . Theories of escape from self and the interpersonal model of suicide explain how a positive attitude towards death , by reducing instinctual and moral barriers , accelerates the transition from suicidal ideation to suicidal action . The findings emphasize the importance of clinical interventions focused on the semantic reconstruction of trauma and the modification of death - related beliefs as a protective shield .Such approaches can disrupt the vicious cycle of trauma - suicide by restoring emotional regulation systems and strengthening individual agency .

Limitations

The present study faced several methodological limitations , including the use of a cross - sectional design (preventing inferences of definitive causality) , non - random and socioculturally homogeneous sampling (Zanjan medical students) , and exclusive reliance on self - report instruments . These factors not only increase the likelihood of reporting bias (such as a tendency toward socially desirable responses) , but also limit generalizability . The findings are also limited to clinical populations and groups with different demographic characteristics . Also , The educational and geographical homogenization of the statistical population has reduced the possibility of examining the moderating role of background variables (such as literacy level or specific cultural beliefs) .

Research Suggestions

Future studies could adopt longitudinal designs to explore dynamic and directional relationships between variables . Including more diverse clinical samples (including individuals with a history of psychiatric disorders) (or different traumatic experiences) along with the use of mixed methods (such as objective neurobiological assessments , structured clinical interviews , and behavioral data) can enhance the validity of the findings . Also , the incorporation of other potential mediating variables (such as psychological resilience) or social support) and more precise control of the variable The findings will allow for a more comprehensive understanding of the mechanisms underlying suicidality . These approaches can simultaneously reduce gaps in understanding the interplay between death attitudes , ambiguity tolerance , and trauma .

Conflict of interest: The authors declare that there are no conflicts of interest in this research.

Acknowledgements: We would like to thank all the students who participated in this research and cooperated.

References

- Abootalebi , Z., Hidaji , MB, & Rafezi , Z. (2025). Prediction of Self-Harming Behaviors Based on the Emotion Regulation Difficulty and Intolerance of Uncertainty in Students. International Journal of New Findings in Health and Educational Sciences (IJHES), 3(1), 1-10 .
- Adeyemi, AE (2025). Mental toughness, emotion expressivity and psychological well-being (Doctoral dissertation, Manchester Metropolitan University) .
- Barnett, MD, Reed, CM, & Adams, CM (2021). Death attitudes, palliative care self-efficacy, and attitudes toward care of the dying among hospice nurses. Journal of clinical psychology in medical settings, 28, 295-300
- Bridge, JA, Ruch, DA, Sheftall , AH, Hahm , HC, O'Keefe, VM, Fontanella , CA, ... & Horowitz, LM (2023). Youth suicide during the first year of the COVID-19 pandemic. Pediatrics, 151(3), e2022058375 .
- Chua, JYX, & Shorey , S. (2021). Effectiveness of end-of-life educational interventions at improving nurses' and nursing students' attitude toward death and care of dying patients: A systematic review and meta-analysis. Nurse Education Today, 101, 104892
- Curtis, Y. (2023). Elite Mental Toughness™: A Military Unit-Based Group Suicidal Ideation Risk Management Program (Doctoral dissertation, Alaska Pacific University) .
- Dev, AS, Davison, T., Broos, HC, Johnson, SL, & Timpano, KR (2025). Emotion-related impulsivity factors and intolerance of uncertainty are uniquely associated with interpersonal-psychological risk factors for suicide. British Journal of Clinical Psychology

- Genuchi , MC (2024). Broadening the perspective on the dynamics of men's suicide: thought suppression as a mediator between men's self-reliance and suicidality. Archives of suicide research, 28(1), 324-341
- Gorse, M. (2022). Risk and protective factors to LGBTQ+ youth suicide: A review of the literature. Child and Adolescent Social Work Journal, 39(1), 17-28
- Kelek , Ş., Uçar , MS, Yıldırım , NH, & Düşünceli , B. (2022). Mediating role of coronavirus anxiety in the relationship between intolerance of uncertainty and suicide probability during the COVID-19 pandemic. Sakarya University Journal of Education, 12(3), 522-544
- Malik, TH (2023). Institutionally Manifested Mortalities: Religiosity Mitigates Suicides; Uncertainty Intolerance Eclipses. In The Palgrave handbook of global social change (pp. 1-27). Cham: Springer International Publishing
- Posamentier , J., Seibel, K., & DyTang , N. (2023). Preventing youth suicide: A review of school-based practices and how social-emotional learning fits into comprehensive efforts. Trauma, Violence, & Abuse, 24(2), 746-759
- Quinton, AM, Ali, D., Danese , A., Happe , F., & Rumball, F. (2024). The assessment and treatment of post-traumatic stress disorder in autistic people: a systematic review. Review Journal of Autism and Developmental Disorders, 1-35
- Sallnow , L., Smith, R., Ahmedzai , SH, Bhadelia, A., Chamberlain, C., Cong, Y., ... & Wyatt, K. (2022). Report of the Lancet Commission on the Value of Death: bringing death back into life. The Lancet, 399(10327), 837-884
- Shahram, SZ, Smith, ML, Ben-David, S., Feddersen , M., Kemp, TE, & Plamondon , K. (2021). Promoting "zest for life": A systematic literature review of resiliency factors to prevent youth suicide. Journal of research on adolescence, 31(1), 4-24
- Shneidman , ES (2023). Orientations towards death: A vital aspect of the study of lives. In The study of lives (pp. 200-227). Routledge .
- Singh, RN, & Bhardwaj, SS (2022). Effects of Mental Toughness on Suicidal Ideation among Adolescent Students. International Journal of Recent Advances in Psychology, 9(1 and 2), 19-28
- Zaretsky , TG, Jagodnik , KM, Barsic , R., Antonio, JH, Bonanno , PA, MacLeod, C., ... & Yehuda, R. (2024). The psychedelic future of post-traumatic stress disorder treatment. Current neuropharmacology, 22(4), 636-735