




The Predictive Model of Hope Based on Attachment Styles and Time Perspective with the Mediation of Self-Esteem in Students

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ABSTRACT

Objective: The present study aimed to provide a predictive model of hope based on attachment styles and time perspective with the mediation of self-esteem in students.

Methods and Materials: The research method was descriptive-correlational and path analysis. The statistical population of this study included all undergraduate students of non-governmental universities in Tehran, who were studying in the academic year 2019-2020. The statistical sample included 480 students selected using the cluster random sampling method. The tools used included the Attachment Style Questionnaire (ASQ) (Hazan & Shaver, 1987); the Time Perspective Questionnaire (TPQ) (Zimbardo & Boyd, 1999); the Self-Esteem Questionnaire (SEQ) (Rosenberg, 1979), and the Hope Questionnaire (HQ) (Simpson, 1999). Data analysis was performed using path analysis with SPSS and AMOS software version 23.

Findings: The results showed that secure, avoidant, and ambivalent attachment styles, time perspective, and self-esteem have a significant correlation with hope in students ($p < .01$). Also, secure, avoidant, and ambivalent attachment styles, time perspective, and self-esteem have a significant direct effect on students' hope ($p < .01$). Additionally, bootstrap results indicated that self-esteem has a significant mediating role in the relationship between attachment styles and time perspective with students' hope ($p < .01$). Finally, the model had a good fit.

Conclusion: Considering the significant mediating role of self-esteem, it is necessary for therapists and counselors to use appropriate psychological training to increase self-esteem in students, thereby improving their hope.

Keywords: Hope, Attachment Styles, Time Perspective, Self-Esteem

1. Introduction

The higher education system is the most comprehensive institution responsible for nurturing talent, fostering creativity, training specialized and efficient human

resources, and promoting scientific socialization. The environment and curriculum in which students and graduates of universities in any field of study can learn and internalize a set of values, beliefs, and essential capabilities to shape their academic identity, in addition to a set of technical and

specialized knowledge and information. These beliefs, attitudes, and spirits provide students with motivation, emotional energy, and personal strength to sacrifice for science, play their role as graduates and academic individuals properly (Chen & Jiang, 2019). In this regard, the more dynamic the university environment is, the more eagerly students pursue their goals, engage in studies with more interest, and experience less burnout (Abdelrahman, 2020). Unfortunately, in recent years, emotional, psychological, and social problems among students have been increasing at an alarming rate, to the extent that abnormal phenomena such as decreased mental health, tendency towards substance abuse, and academic decline have become serious obstacles affecting university progress (Meens et al., 2018), which has also impacted students' levels of hope. According to Schneider's hope theory, as psychological, behavioral, and social harm increases, individuals' levels of hope decrease (Wang et al., 2023).

Hope can be the ability to cope with individual problems, playing a significant role in successfully navigating various life stages. This feature can even accelerate an individual's progress in various aspects of life (Snyder et al., 2002; Sympson, 1999; Taghilo & Latifi, 2016). Therefore, hope is considered one of the human coping resources for adapting to problems (Welch, 2014). Hope is defined as the ability to believe in a better feeling in the future. It is a cognitive set based on the feeling of success derived from various sources and pathways (Munoz et al., 2022). Hope stimulates individual activity with its pervasive force, enabling them to gain new experiences, create fresh energy, and is described as a dynamic, powerful, multidimensional healing factor, playing an important role in adapting to problems (Rand et al., 2020).

In addition to hope, attachment styles are variables that, influenced by individuals' developmental and growth processes, can play a constructive or destructive role in shaping their internal and external relationships, affecting their future (Chung & Choi, 2014; Dunkel et al., 2016; Hazan & Shaver, 1987; Huis in 't Veld et al., 2011; Koelkebeck et al., 2017; Munoz et al., 2022; Nickisch et al., 2020; Pahlevan Sharif et al., 2021; Ringer et al., 2014; Shorter et al., 2022; Widom et al., 2018; Young et al., 2020). The results of prior research (Pahlevan Sharif et al., 2021; Ringer et al., 2014) have shown that attachment styles can have a significant relationship with individuals' hope. Attachment is a deep emotional bond with specific individuals in life, leading to pleasure in interaction and a sense of calm during stress when near them (Dunkel et al.,

2016). Attachment styles include secure, avoidant, and ambivalent. Children with insecure attachment patterns also face problems in adulthood in romantic, friendly, sexual, and collective adaptive behaviors (Chung & Choi, 2014; Parsakia et al., 2023). Adults with an ambivalent attachment style describe love as an obsession and tend to experience romantic relationships characterized by excessive jealousy, emotional highs and lows, and a strong desire for emotional bonding. Individuals' attachment styles can have a pervasive impact on their relationships with others (Shorter et al., 2022). Some studies indicate that men who felt more comfortable in their relationships before marriage and in their youth reported higher marital satisfaction after marriage (Nickisch et al., 2020).

Another variable that has a significant relationship with hope and creates optimism and a positive outlook towards the future, thereby improving individuals' hope, is time perspective. The results of previous research (Rahimi et al., 2019; Taghilo & Latifi, 2016) support this claim. Time perspective refers to the way individuals and cultures give meaning to the flow of human experiences within specific temporal frameworks of past, present, and future; in other words, time perspective is a cognitive style related to how individuals relate to the past, present, and future and how these representations affect their thoughts and ultimately their behaviors (McKay & Cole, 2020). Time perspective is the most prominent construct for operationalizing individual differences in perspectives on time. In most models, time perspective is introduced as a construct focused on conceptualizing individuals' orientation solely towards the future (Dreves & Blackhart, 2019). Various researchers (O'Neill et al., 2022; Tomich & Tolich, 2021) have supported the role of time perspective in relation to constructs such as decision-making self-efficacy, individuals' future orientation, and life planning. In the comprehensive model of time perspective, five dimensions are conceptualized: the past-negative dimension reflects a negative and distressing perspective on past events, which may be based on actual negative experiences or negative reconstructions of past events (Tomich & Tolich, 2021). The past-positive dimension reflects a warm and emotional perspective on the past. The future orientation indicates a concern for achieving goals, delaying gratification, and avoiding wasting time. The present hedonistic dimension involves living in the moment, immediate gratification, and pleasure-seeking. The present fatalistic dimension reflects a sense of hopelessness towards the future and an inability to

connect present behavior with future outcomes (Rudzinska-Wojciechowska et al., 2021).

One of the variables that can improve hope in individuals and impact their meaning in life is self-esteem (Mashiach-Eizenberg et al., 2013). Self-esteem can influence individuals' psychological and emotional strength, leading to adaptive and normative behaviors in maladaptive conditions (Zhang et al., 2023). The results of prior research (Barberis et al., 2023; Basharpour & Eyni, 2022; Ghorbani Dolatabadi, 2021; Golan et al., 2023; Hao, 2023; Huis in 't Veld et al., 2011; Kajbaf et al., 2021; Mashiach-Eizenberg et al., 2013; Park & Gentzler, 2023; Ringer et al., 2014; Wang et al., 2023; Widom et al., 2018; Zadafshar & Akrami, 2020; Zhang et al., 2023) have shown that self-esteem can mediate between psychological, emotional, cognitive, and social variables. Self-esteem is considered one of the determinants of human behavior. In fact, individuals' perceptions and judgments of themselves determine how they deal with various issues. Self-esteem is the positive or negative evaluation of oneself and the feeling one has about oneself (Hao, 2023). Park and Gentzler (2023) consider self-esteem the main element of success in life, believing that self-esteem is a continuous and variable process that influences our behaviors, choices, and decisions. Low self-esteem leads to emotional and behavioral problems in individuals. Self-esteem is the degree of credibility, acceptance, and value individuals consider for themselves (Park & Gentzler, 2023). A mentally healthy individual also has higher self-esteem and is successful in relationships with others. Those with lower self-esteem avoid social interactions, become isolated, and then depressed. In fact, an individual who can recognize their goals and desires and logically and rationally fight obstacles in achieving them has sufficient self-esteem (Golan et al., 2023).

The necessity of conducting this research should be noted as one of the fundamental factors in sustainable and comprehensive development is paying special attention to the young population, particularly students, as a thoughtful and intellectual group. Nurturing students' talents and capabilities in harmony with societal needs and changes can pave the way for achieving defined goals and fulfilling a nation's ideals. Undoubtedly, diverse and numerous factors, both quantitatively and qualitatively, affect universities and students, constantly presenting a new image and definition of them. It is evident that students play a primary role in the country's development program as the main axis. Therefore, addressing the numerous issues and challenges they face and finding solutions for them are essential duties of the higher

education system and universities. Based on theoretical and empirical emphasis on concepts such as psychological status and academic performance, research and examination of students' mental health is an inevitable necessity, as students with mental and physical health and high motivation and success are the real assets of society and will guarantee sustainable development. Research on the dimensions and components of these variables and their potential relationships can introduce effective and efficient practical strategies and measures. In summary, various factors have been examined by domestic and foreign researchers in the field of psychological, cognitive, and social issues affecting students' hope, but significant efforts to design a predictive model for students around the topic of hope have not been made in our country. Therefore, the present study aimed to provide a predictive model of hope based on social support and meaning in life with the mediation of self-esteem in students.

2. Methods and Materials

2.1. Study Design and Participants

The research method was descriptive-correlational and path analysis. The statistical population of this study included all undergraduate students of non-governmental universities (including Islamic Azad University and non-profit, non-governmental universities) in Tehran who were studying in the academic year 2019-2020. According to statistics provided by the "Ministry of Science, Research, and Technology _ Institute for Research and Planning in Higher Education," the statistical population of this study was approximately 169,650 individuals. The statistical sample included 480 undergraduate students from non-governmental universities selected using the multi-stage cluster random sampling method. The sample selection method was as follows: six universities were randomly selected from among the non-governmental universities in Tehran, and 12 faculties were randomly selected from these universities (6 universities and 12 faculties). Then, with ethical considerations in using research questionnaire results (including maintaining confidentiality, obtaining informed consent from volunteers, explaining research objectives to participants, considering participants' right to withdraw from completing the research questionnaires, and assigning and recording codes for questionnaires from all subjects), research questionnaires were administered to 480 students. Considering an average of 30 students per class, the research questionnaires were distributed in 16 classes of these

faculties. After collecting the questionnaires and excluding distorted and incomplete questionnaires, 452 students remained in the study. To compensate for the reduction in subjects, an additional 28 students were selected and asked to complete the research questionnaires. The mean and standard deviation of participants' age were 20.06 and 2.42 years, respectively. Additionally, 312 participants (65%) were female, and 168 (35%) were male. The inclusion criteria for the study were being a student, studying at non-governmental universities, not taking psychiatric medication, not receiving psychological intervention in the last six months, and being between 18 to 25 years old. The exclusion criteria were incomplete and distorted responses and withdrawal from completing the questionnaires.

2.2. Measures

2.2.1. Hope

The Hope Questionnaire was first developed in 1999 by Simpson with 48 items. In this questionnaire, participants are asked to rate the importance and satisfaction of six life domains (social domain, academic domain, romantic relationships, family domain, job domain, and leisure domain) on a Likert scale (from 0 to 8). Within each of the six domains, participants are asked to rate the extent to which each item applies to them on an 8-point scale from 1 (completely wrong) to 8 (completely right). Separate domain scores are obtained by summing the scores of 8 items within each domain (ranging from 8 to 64), and the total score of the Hope Questionnaire is obtained by summing the scores of 48 items (ranging from 48 to 384) (Simpson, 1999). Snyder, Feldman, Shorey, and Rand (2002) reported a Cronbach's alpha or overall item consistency of 0.93 in their study. The subscale alpha coefficients ranged from 0.89 to 0.93 (Snyder et al., 2002). In the study by Mousavi and Houman (2013), the reliability of the subscales was estimated using internal consistency (Cronbach's alpha) as follows: social relationships subscale 0.835, academic subscale 0.853, romantic relationships subscale 0.899, family relationships subscale 0.90, job subscale 0.85, and leisure subscale 0.90, ranging from 0.835 to 0.90 (Barani et al., 2019). In the present study, the reliability of the social domain, academic domain, romantic relationships, family domain, job domain, leisure domain, and total score of the Hope Questionnaire was calculated using Cronbach's alpha as 0.82, 0.86, 0.81, 0.85, 0.83, 0.88, and 0.89, respectively.

2.2.2. Time Perspective

The Time Perspective Questionnaire was developed by Zimbardo and Boyd in 1999. This self-report questionnaire includes 66 questions and 5 subscales that measure attitudes and behaviors related to time. The 5 subscales include past-negative (10 items: items 4, 5, 16, 22, 27, 33, 34, 36, 50, and 54), present hedonistic (18 items: items 1, 8, 12, 17, 19, 23, 26, 28, 31, 32, 35, 37, 42, 44, 46, 48, 52, and 55), future (13 items: items 6, 9, 10, 13, 18, 21, 24, 30, 40, 43, 45, 51, and 56), past-positive (10 items: items 2, 7, 11, 15, 20, 25, 29, 41, 47, and 49); transcendental future (items 57, 58, 59, 60, 61, 62, 63, 64, 65), and present-fatalistic (15 items: items 3, 14, 38, 39, 53, and 66). Items are scored on a 5-point Likert scale based on how much each state matches the participants' beliefs. The questionnaire score range is between 66 and 330. Items 5, 16, 22, 27, 33, 34, 36, 50, and 54 are reverse scored. Zimbardo and Boyd (1999) reported Cronbach's alpha coefficients for the subscales ranging from 0.74 to 0.82 in a sample of individuals aged 15 to 62 years. The construct convergent and divergent validity results were reported to be satisfactory (Zimbardo & Boyd, 2008). Nozari (2012) reported Cronbach's alpha coefficients for all subscales ranging from 0.74 to 0.82. Additionally, this researcher reported a content validity of 0.88 for this questionnaire (Mohammadi Moghaddam, 2016; Rahimi et al., 2019; Taghilo & Latifi, 2016). In the present study, the reliability of the past-negative, present hedonistic, future, past-positive, and present-fatalistic subscales was calculated using Cronbach's alpha as 0.74, 0.76, 0.77, 0.79, and 0.78, respectively, and the overall questionnaire reliability was 0.77.

2.2.3. Self-Esteem

The Self-Esteem Questionnaire was developed by Rosenberg in 1979. This questionnaire consists of ten items that measure an individual's positive and negative feelings about themselves. According to its creator, this tool is a unidimensional scale, although in recent years, it has been emphasized for its two positive and negative factors (Rosenberg, 1979). This questionnaire is scored on a two-point Likert scale (agree: one point; disagree: zero points). The questionnaire score range is between 0 and 10, with higher scores indicating greater self-esteem. The correlation of the Self-Esteem Questionnaire with the Life Satisfaction Test was reported as 0.43 in a group of adolescents and 0.54 in a sample of students. In the study by Mohammadi (2005), the reliability of this scale was reported on a sample of

students at Shiraz University using Cronbach's alpha as 0.69 and using split-half reliability as 0.68. Additionally, test-retest reliability coefficients of this scale were reported as 0.77, 0.73, and 0.78 with intervals of one week, two weeks, and three weeks, respectively. The construct validity of this questionnaire was reported as 0.86 in Iran (Basharpour & Eyni, 2022). In the present study, reliability using Cronbach's alpha was obtained as 0.82. One questionnaire item: I can do things as well as others.

2.2.4. Attachment Styles

The 21-item Attachment Styles Questionnaire was developed by Basharat (2000) based on the Adult Attachment Scale by Hazan and Shaver (1987) to assess three attachment styles: secure, avoidant, and ambivalent. In this questionnaire, 7 items each belong to the secure (items 1 to 7), avoidant (items 8 to 14), and ambivalent (items 15 to 21) attachment styles. This questionnaire is scored using a five-point Likert scale, where "never" is scored as 1 and "almost always" is scored as 5. Basharat (2000) assessed the content validity of this scale by evaluating the correlation coefficients of scores from four psychology experts. Simultaneous administration of this scale with the

Coopersmith Self-Esteem Inventory confirmed the validity of the Attachment Styles Questionnaire. Farzadi (2015) reported concurrent validity coefficients for this questionnaire as 0.77 for the secure style, 0.81 for the avoidant style, and 0.83 for the ambivalent style. Hazan and Shaver (1987) reported a test-retest reliability of 0.81 and Cronbach's alpha of 0.78 for the entire questionnaire. Collins and Read (1994) reported a Cronbach's alpha of 0.79 for this tool. In the study by Ziaienejad (2016), the Cronbach's alpha coefficients for secure, avoidant, and ambivalent styles were 0.77, 0.78, and 0.73, respectively (Pahlevan Sharif et al., 2021). In this study, the reliability of the secure, avoidant, and ambivalent attachment styles was calculated using Cronbach's alpha as 0.75, 0.79, and 0.74, respectively. One questionnaire item: I cannot trust what others say.

2.3. Data analysis

In the present study, path analysis and SPSS and Amos version 23 software were used for statistical analysis.

3. Findings and Results

Table 1 shows the mean and standard deviation of the research variables.

Table 1

Descriptive Findings of Research Variables

Variable	Mean	Standard Deviation	Skewness	Kurtosis
Secure Attachment	21.23	4.39	-0.79	-1.10
Avoidant Attachment	18.84	4.52	-0.52	-0.80
Ambivalent Attachment	18.93	4.54	-0.26	-0.42
Time Perspective	179.63	16.22	-0.33	-0.66
Self-Esteem	7.01	2.92	-0.65	-1.33
Hope	206.07	28.81	-0.40	-1.22

Table 1 shows the mean and standard deviation of the variables examined in this study (hope, secure attachment, avoidant attachment, ambivalent attachment, time perspective, and self-esteem). Before presenting the results of the Pearson correlation test analysis, the assumptions of parametric tests were assessed. Accordingly, the results of the Shapiro-Wilk test indicated that the assumption of normal distribution of the sample data was met for the variables of hope ($P = 0.42$; $F = 0.89$), secure attachment ($P = 0.15$; $F = 0.74$), avoidant attachment ($P = 0.41$; $F = 0.88$), ambivalent attachment ($P = 0.17$; $F = 0.80$), time perspective

($P = 0.50$; $F = 0.92$), and self-esteem ($P = 0.41$; $F = 0.89$). Additionally, the assumption of homogeneity of variances was assessed using Levene's test, which was not significant, indicating that the assumption of homogeneity of variances was met for the variables of hope ($P = 0.51$; $F = 0.96$), secure attachment ($P = 0.63$; $F = 0.69$), avoidant attachment ($P = 0.31$; $F = 1.43$), ambivalent attachment ($P = 0.44$; $F = 0.82$), time perspective ($P = 0.42$; $F = 0.85$), and self-esteem ($P = 0.38$; $F = 1.14$). Now, we will present the results of inferential tables.

Table 2

Pearson Correlation Analysis Between Secure, Avoidant, Ambivalent Attachment, Time Perspective, Self-Esteem, and Hope in Students

Variables	Secure Attachment	Avoidant Attachment	Ambivalent Attachment	Time Perspective	Self-Esteem	Hope
Secure Attachment	-					
Avoidant Attachment	-0.72**	-				
Ambivalent Attachment	-0.364**	-0.232**	-			
Time Perspective	-0.211*	-0.261**	-0.153*	-		
Self-Esteem	0.536**	-0.476**	-0.455**	0.493**	-	
Hope	0.366**	-0.407**	-0.333**	0.511**	0.614**	-

Based on the Pearson correlation coefficient in Table 2, it is clear that secure attachment, avoidant attachment, ambivalent attachment, time perspective, and self-esteem have a significant correlation with hope in students ($p <$

0.01). Next, we examine the prediction of hope based on secure, avoidant, ambivalent attachment, and time perspective with the mediation of self-esteem in students.

Table 3

Unstandardized and Standardized Regression Coefficients for the Pathways of the Predictive Model of Hope Based on Secure, Avoidant, Ambivalent Attachment, and Time Perspective with the Mediation of Self-Esteem in Students

Model Pathways	Unstandardized Coefficients	Standard Error	Critical Value (t)	Standardized Coefficients	Significance Level	R-squared
Secure Attachment → Self-Esteem	0.65	0.11	5.91	0.516	0.001	0.266
Secure Attachment → Hope	0.56	0.13	4.31	0.342	0.001	0.117
Avoidant Attachment → Self-Esteem	-0.507	0.10	-5.07	-0.416	0.001	0.173
Avoidant Attachment → Hope	-0.439	0.09	-4.88	-0.392	0.01	0.153
Ambivalent Attachment → Self-Esteem	-0.40	0.08	-5.01	-0.412	0.001	0.169
Ambivalent Attachment → Hope	-0.431	0.11	-3.92	-0.298	0.01	0.088
Time Perspective → Self-Esteem	0.65	0.12	5.42	0.478	0.001	0.228
Time Perspective → Hope	0.812	0.14	5.80	0.505	0.01	0.255
Self-Esteem → Hope	0.80	0.13	6.16	0.617	0.01	0.38

As seen in Table 3, secure attachment has a significant direct effect on self-esteem ($p < 0.05$, $\beta = 0.516$) and hope ($p < 0.05$, $\beta = 0.342$) in students, explaining 26.6% and 11.7% of the variance in these variables, respectively. On the other hand, avoidant attachment has a significant direct effect on self-esteem ($p < 0.05$, $\beta = -0.416$) and hope ($p < 0.05$, $\beta = -0.392$) in students, explaining 17.3% and 15.3% of the variance in these variables, respectively. Similarly, ambivalent attachment has a significant direct effect on self-esteem ($p < 0.05$, $\beta = -0.412$) and hope ($p < 0.05$, $\beta = -0.298$) in students, explaining 16.9% and 8.8% of the variance in these variables, respectively. Additionally, time perspective has a significant direct effect on self-esteem ($p < 0.05$, $\beta = 0.478$) and hope ($p < 0.05$, $\beta = 0.505$) in students, explaining 22.8% and 25.5% of the variance in these variables,

respectively. Finally, self-esteem has a significant direct effect on hope ($p < 0.05$, $\beta = 0.617$) in students, explaining 38% of the variance in this variable. To determine the adequacy of the proposed model fit, a combination of fit indices was used, and the results are presented in Table 4. Before explaining Table 4, it is important to note that a good model in terms of fit indices should have a non-significant chi-square, a chi-square to degrees of freedom ratio of less than 3, a goodness-of-fit index (GFI), a comparative fit index (CFI), and a normed fit index (NFI) greater than 0.95, an adjusted goodness-of-fit index (AGFI) greater than 0.90, a parsimony comparative fit index (PCFI) greater than 0.50, an incremental fit index (IFI) greater than 0.90, and a root mean square error of approximation (RMSEA) less than

0.09. It is crucial to mention that the main factor for judging model fit is the RMSEA, as it is not affected by sample size.

In the proposed model for the entire sample, the chi-square to degrees of freedom ratio (χ^2/df) was 2.07 (ideal value less than 3); the goodness-of-fit index (GFI) was 0.962 (ideal value greater than 0.95); the adjusted goodness-of-fit index (AGFI) was 0.925 (ideal value greater than 0.90); the incremental fit index (IFI) was 0.955 (ideal value greater than 0.95); the Tucker-Lewis index (TLI) was 0.976 (ideal value greater than 0.95); the comparative fit index (CFI) was

0.975 (ideal value greater than 0.95); the normed fit index (NFI) was 0.963 (ideal value greater than 0.95); and the root mean square error of approximation (RMSEA) was 0.063 (ideal value less than 0.09). These findings indicate an adequate fit for the proposed model. To examine the mediating role of self-esteem in the relationship between secure, avoidant, ambivalent attachment, and time perspective with hope in students, the results of the bootstrap test are analyzed.

Table 4

Bootstrap Test Results for Examining Indirect Pathways

Predictor Variable	Mediator Variable	Criterion Variable	Lower Limit	Upper Limit	Confidence Interval	Indirect Effects
Secure Attachment	Self-Esteem	Hope	0.16	0.33	0.95	0.196
Avoidant Attachment	Self-Esteem	Hope	-0.74	-0.25	0.95	-0.211
Ambivalent Attachment	Self-Esteem	Hope	-0.69	-0.27	0.95	-0.222
Time Perspective	Self-Esteem	Hope	0.21	0.56	0.95	0.253

Based on the results of the Sobel test in Table 4 and considering that zero is not within the range of the upper and lower scores, the mediating role of self-esteem in the relationship between secure, avoidant, ambivalent attachment, and time perspective with hope in students is confirmed.

4. Discussion and Conclusion

The present study aimed to provide a predictive model of hope based on attachment styles and time perspective with the mediation of self-esteem in students. The results showed that secure, avoidant, and ambivalent attachment styles, time perspective, and self-esteem have a significant correlation with hope in students. Additionally, secure, avoidant, and ambivalent attachment styles, time perspective, and self-esteem have a significant direct effect on hope in students. Moreover, bootstrap results indicated that self-esteem has a significant mediating role in the relationship between attachment styles and time perspective with hope in students.

The first finding of this study regarding the significant relationship between secure, avoidant, and ambivalent attachment styles with hope and the direct and significant effect of these variables on self-esteem and hope in students aligns with the results Munoz et al. (2022) on the role of attachment styles in the relationship between adverse childhood experiences and hope (Munoz et al., 2022); with the research of Pahlavan Sharif et al. (2021) on the role of attachment in predicting hope and life satisfaction in the elderly (Pahlevan Sharif et al., 2021); and with the report by

Ringer et al. (2014) on the relationship between attachment styles and hope in individuals (Ringer et al., 2014). To explain this finding, it can be said that when attachment style develops securely, this sense of security is transferred to future interpersonal relationships, particularly relationships with the surrounding environment (both in family and university). Therefore, individuals with secure attachment styles perceive social and family relationships as full of security and calmness and are not afraid of establishing relationships, considering relationships with others as full of intimacy and affection (Young et al., 2020). Such a process enables students with secure attachment to perceive their surrounding world as a safe and trustworthy place, improving their psychological strength and self-esteem, thereby exhibiting more hope for the future. Additionally, it should be noted that individuals who exhibited anxious and insecure attachment during childhood always have the perception that close individuals may not truly love them as much as they desire (Ringer et al., 2014). These individuals, while wanting to be completely one with their surroundings, are anxious, hesitant, and unstable, which seriously affects the quality of their social relationships and their perception of environmental and family security, leading to decreased hope and optimism. In explaining the effect of ambivalent attachment on hope and self-esteem, it can be stated that individuals with ambivalent attachment are negatively influenced in terms of social and family relationships, distancing themselves and having a negative perception of their relationships, showing lower levels of trust, intimacy,

and commitment (Widom et al., 2018). This process causes them to show their deficiencies in establishing constructive relationships with their surroundings as fear of intimacy, typically reducing their psychological calmness, mental health, and psychological well-being, thereby setting the stage for reduced perception of mental ability and self-esteem, ultimately reducing their optimism and hope towards their surroundings and future.

The second finding of this study regarding the significant relationship between time perspective and hope and the direct and significant effect of this variable on self-esteem and hope in students aligns with the results of research by Taghilou and Latifi (2016) on the relationship between dimensions of time perspective with mindfulness and hope for life in students (Taghilo & Latifi, 2016); and with the research of Rahimi, Hajloo, and Basharpour (2019) on the relationship between time perspective with hopefulness and psychological distress (Rahimi et al., 2019). In explaining the present finding, it can be stated that an optimal and balanced time perspective is the most important factor in psychological health and successful social performance (O'Neill et al., 2022). Someone who scores high and balanced in both future and present hedonistic dimensions plans for the future but does not live in it; they can simultaneously consider the consequences of their actions and act prudently while being present in the moment and enjoying safe and harmless pleasures, creating an environment full of enthusiasm and energy. Future-oriented thinking, living in the present, acting wisely, and comprehensively examining situations allow individuals to see different aspects of an issue, revealing ways to overcome problems and challenges using the power of self-esteem. An energetic individual with motivation pursues their desires, leading to increased hopefulness. In another explanation, time perspective gives meaning and concept to the past, present, and future for individuals; in other words, a normative cognitive style makes individuals connect with their past, present, and future in a balanced manner (McKay & Cole, 2020). Based on such a constructive approach and perspective, time perspective allows students to live in the present without excessive engagement with past events and without increasing concern for the future, showing normative hope and optimism towards the future and surrounding events.

Finally, bootstrap results showed that self-esteem has a significant mediating role in the relationship between attachment styles and time perspective with hope in students. The present finding aligns with the results of Basharpour and

Eyni (2021) on the mediating role of self-esteem in the relationship between life satisfaction and loneliness in veterans with post-traumatic stress disorder (Basharpour & Eyni, 2022); with the findings of Zadafshar and Akrami (2019) on the mediating role of self-compassion, forgiveness, and self-esteem in the relationship between parent-child relationship and perceived social support with borderline personality disorder symptoms in women (Zadafshar & Akrami, 2020); with the report by Kajbaf, Adibnia, and Vassal (2021) on the mediating role of self-esteem and perceived social support in the relationship between loneliness and life satisfaction in students; with the research of Heidari and Ghorbani-Dolatabadi (2019) on the mediating role of self-esteem in the relationship between social support with emotional exhaustion and psychological well-being in students; with the results of Park and Gandzler (2023) on the mediating role of self-esteem in the relationship between parenting styles and adolescent emotion regulation (Kajbaf et al., 2021); and with the findings of Barberis et al. (2023) on the mediating role of self-esteem in the relationship between emotional intelligence and psychological distress (Barberis et al., 2023). In explaining the present results, it can be said that self-esteem is a positive general evaluation of oneself or a person's overall self-assessment of their worthiness. Individuals with low self-esteem may be known as socially anxious, shy, lonely, and introverted and are likely to experience less stable and less fulfilling relationships than individuals with high self-esteem (Park & Gantzler, 2023). Therefore, having self-esteem enables students to establish constructive and normative relationships in environmental and social interactions, thus showing more adaptive and secure attachment. In another explanation, self-esteem is a vital component, and humans need self-esteem for survival and well-being. Self-esteem truly affects all levels of life; various studies indicate that if the need for self-esteem is not met, broader needs such as the need to create, achieve, or understand potential remain limited (Hao, 2023). People who feel good about themselves usually also feel good about life. They can confidently face life's problems and responsibilities, ultimately experiencing more hopefulness than those with low self-esteem. Additionally, it can be said that self-esteem allows individuals to pursue their personal interests with self-confidence and not abandon activities and interests due to fear of others' judgment (Golan et al., 2023). Therefore, students with self-esteem can pursue their desired activities based on their personal life perspective and base

their major personal, academic, social, and family performance on this foundation.

5. Limitations & Suggestions

The scope of this study was limited to undergraduate students of non-governmental universities (including Islamic Azad University and non-profit, non-governmental universities) in Tehran. Furthermore, this research faced limitations in not controlling influential social, family, and personality variables such as academic failure, family problems, and developmental history in reducing students' hope and the role of this process on attachment styles, time perspective, and self-esteem. Therefore, to increase the generalizability of the findings, it is suggested that this research be conducted in other provinces and regions with different cultures, considering diverse social attitudes and burdens, with students from public universities, and controlling the mentioned factors. Practically, it is also suggested that considering the mediating role of self-esteem in predicting hope based on attachment styles and time perspective in students, clinical therapists and specialized counselors use psychological educational techniques to enhance students' self-esteem, thereby improving their hope and optimism towards the future and reducing the incidence and severity of psychological and emotional harmful symptoms.

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Declaration

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

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

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