

Prediction of Mental Health of Single-Child Students based on Attachment Styles and Integrative Self-Knowledge

Abstract

This study aims to predict the mental health of single-child students based on attachment styles and integrative self-knowledge. The extant study was conducted using the correlational method and structural equation modeling (SEM). The study's statistical population comprised single-child students studying at the Islamic Azad University of Rudehen and Islamic Azad University, Tehran Medical Branch during the spring and summer of 2022. Three hundred subjects were selected using the purposive sampling method. Participants filled out General Health Questionnaire, the Attachment Style Scale, and Integrative Self-Knowledge Scale. The total path coefficient between anxiety attachment style and mental health was positive ($\beta=0.166$, $p<0.01$), and the total path coefficient between close attachment style and mental health was negative ($\beta=0.197$, $p<0.01$), and significant at the level of 0.01. The indirect path coefficient between anxiety attachment style and mental health was positive ($\beta=0.133$, $p<0.01$), while the indirect path coefficient between close attachment style and mental health was negative ($\beta=0.145$, $p<0.01$). The mental health of single-child students is influenced by affective, behavioral, and cognitive factors.

Keywords: *Single-Child Students, Mental Health, Attachment Styles, Integrative Self-Knowledge*

Niloofer Hakim

Niloo.h73@gmail.com

*Department of Educational Psychology,
Faculty of Psychology, Rudehen
branch, Islamic Azad University,
Rudehen, Iran*

Introduction

Mental health points to cognitive, behavioral, and affective well-being and all things about individuals' thinking, feeling, and behavior. Mental health can influence people's daily life, relationships, and physical health (Scott et al., 2022). Depression and anxiety are the most prevalent disorders that threaten mental health (Faisal et al., 2022). A high prevalence rate of depression and anxiety among students increases the probability of suicide and insomnia (Lindsay et al., 2022). The mentioned factors result in a sense of fatigue. Fatigue and energy shortages reduce the quality of life of students. Social inefficiency is another problem that affects the student's life and reduces the individual's ability to do and enjoy daily activities (Marques et al., 2021). Attachment style is another problem that affects mental health (Green, 2022).

The attachment style that is shaped in childhood and the relationship between children and the important people in their lives influences mental health (Green, 2022). For instance, insecure attachment significantly predicts psychological distresses, such as depression and anxiety in adolescents (Fattouh et al., 2022) and increases the probability of self-harm and suicide (Falgares et al. 2017). Attachment style is an important determinant for defense mechanisms used by individuals to keep their mental stabilities. Those people who have secure attachment styles use developed defense mechanisms in their relationships with themselves and others, while individuals with insecure attachment styles use higher levels of immature defense mechanisms (Laczkovics et al., 2020). According to Bowlby (1969), attachment style reflects the person's experiences with the important people in their lives and their expectations from their emotional availability

during stressful conditions. According to attachment theory. Attachment style plays a key role in distress management and appears in affective responses of the person to stressful incidents (Clery, Rowe Munafò & Mahedy, 2021). Individuals who have secure attachment styles have better mental health (Simi et al., 2017), and individuals with avoidant attachment styles had weaker general health (Poorkhosravani 7 Naeemi, 2020). In this case, insecure attachment style is a transdiagnostic personality factor that may put mental health at serious risk (Nottage et al., 2022). Self-knowledge with the soundest forms of religiosity in the US and Iran is positively correlated with the creative thinking of Iranian managers and their emotional intelligence. Self-knowledge also plays a vital role in meeting three underlying psychological needs. Self-knowledge has a negative correlation with drug abuse and personality disorders, and predicts psychological compatibility (Ghorbani et al., 2010), higher self-respect, adopting a better viewpoint, and lower sympathetic confusion (Ghorbani et al., 2010). According to studies conducted on integrative self-knowledge (contemplative and experiential), this self-knowledge positively affects better educational performance (Ghorbani et al., 2003; quoted from Tahmasb et al., 2008), religious commitments of Muslims (Watson et al., 2002; quoted from Tahmasb et al., 2008), interest in philosophy among high school students and teachers (Ghorbani et al., 2005; quoted from Tahmasb et al., 2008). Moreover, integrative self-knowledge helps the board of directors in commercial organizations to achieve positive outcomes (Ghorbnai & Watson, 2004).

The fertility rate has been reduced to lower than the replacement rate over two past decades in Iran (Shojaei &

Erfani, 2019). Erfani and McQuillan (2014) introduce the change in fertility rate as an important reason for the fertility decline in Iran. Shojaei and Erfani (2019) concluded that one-child cases increased from 4.4% in 2006 to 5.1% in 2011 and 7.8% in 2016. National Health and Population Survey and Tehran fertility surveys support the mentioned findings. Accordingly, ascending trend of one-child families in Tehran is in line with its rising trend in Iran, so this rate has reached from 3.6% in 2009 to 11.9% in 2014 (more than three times greater). Some studies have confirmed the higher prevalence of psychological disorders in one-child students compared to their peers who have more children. In a study, 25.7% of one-child students had anxiety symptoms, 22.2% had depression symptoms, and 18.3% suffered from anxiety and depression comorbidity (Cheng, Jia & Wang, 2020). According to the mentioned points, this study aims to predict the mental health of one-child students based on attachment styles and integrative self-knowledge.

Method

This was a fundamental study with descriptive and correlational types. The studied statistical population comprised all one-child students who study at Islamic Azad University, Tehran Medical Branch, and Islamic Azad University of Rudehen during the spring and summer of 2022. To do so, 231 one-child students studying at Islamic Azad University, Tehran Medical Branch, and the Islamic Azad University of Rudehen were selected using purposive sampling. The inclusion criterion was the willingness to participate, and the exclusion criteria included reluctance to participate in the study. The questionnaires related to research variables were distributed among them.

Instruments

General Health Questionnaire

Goldberg and Hillier (1979) designed the 28-item General Health Questionnaire (GHQ-28) to increase variance based on the factor analysis on the main version. GHQ-28 is a screening and self-report questionnaire used in the clinical environment to identify individuals with psychological disorders. The advantage of the 28-item version of this questionnaire is its applicability to all society members. As a screening tool, this questionnaire can determine the probability of a mental disorder being diagnosed in the person (Fathi Ashtiani & Dastani, 2013). The GHQ consists of four 7-item scales: A) somatic symptoms (evaluating somatic symptoms and sense tiredness: items 1-7), B) anxiety (evaluating anxiety and

insomnia: items 8-14), C) social dysfunction (evaluating individuals' capability for professional demands and daily life: items 15-21), and D) depression (evaluating severe depression and suicidal tendency: items 22-28) (Abolghasemi & Narimani, 2006). This questionnaire is scored based on a four-point Likert Scale. Each person obtains 5 scores from this test its 4 scores are related to subscales (from 0 to 21) and one score from the total score of subscales (0-24), which is the total score. The lower the score, the higher the health, and vice versa (Fathi Ashtiani & Dastani, 2013). Concurrent validity of the general health questionnaire and Beck Hopelessness Scale (BHS) was done on 101 respondents, and its coefficients equaled 0.69 (Kalman, Wilson & Kalman, 1983). Researchers implemented GHQ, Affect Balance Scale, and Amsterdam Biographical Questionnaire and reported a correlation coefficient of 0.60 (Hodiamont & Peer, 1988). Validation of this questionnaire equaled 0.90 using the retest method (Robinson & Price, 1982). An Iranian study reported Cronbach's alpha coefficients of this questionnaire for the whole scale (0.91), somatic symptoms subscale (0.84), anxiety (0.82), social dysfunction (0.63), and depression (0.88) (Dadsetan, Ahmadi Azghandi, Hassan Abadi, 2006). The present study obtained a 0.77-0.85 value for Cronbach's alpha coefficient.

Attachment Styles Scale

The attachment styles scale (RAAS¹) was designed based on the attachment theory by Collins and Read (1990). This 18-item self-report is based on a five-point Likert scale ranging from "not at all characteristic of me=1" to "very characteristic of me=5." The attachment scale consists of three subscales, including anxiety (A), close (C), and depend (D) and each subscale includes six items (Pakdaman, 2001). The Anxiety subscale measures fear of relationships, the Close subscale measures the extent of comfortability in affective intimacy and closeness, and Dependence measures the extent to which a person feels he/she can depend on others to be available when needed. The construct validity of the scale was examined, and a significant correlation was found between its subscales and a total score indicating the construct validity of the scale. The convergent validity of the attachment scale was confirmed with internet addiction. Pakdaman (2001) assessed the construct validity of this scale, by using divergent validity in Iran. According to results obtained from two implementations with a one-month interval, the validity of this scale was confirmed at the level of 0.95. The present study obtained Cronbach's alpha coefficient of 0.64-0.69 for this scale.

¹ Revised Adult Attachment Scale

Integrative Self-Knowledge Scale

Ghorbani et al. (2008) designed Integrative Self-Knowledge Scale (ISK). This 12-item scale includes revision in the two-faceted theory of experiential and reflective self-knowledge comprising three subscales of reflective, experiential, and integrative self-knowledge. Respondents must answer the questions based on a 5-point Likert scale (from mainly correct=4 to mainly incorrect=0). Intercultural assessments of Ghorbani et al. (2008) indicated construct, criterion, and predictor validity and reliability of this scale. They measured the internal reliability (0.82) of this scale based on Cronbach's alpha coefficient and reported its correlation with the mindfulness scale in the range of 0.62-0.68. Ghorbani et al. (2008) studied three Iranian samples and three American cases and reported Cronbach's alpha coefficients of 0.12, 0.81, and 0.81 for the first, second, and third Iranian samples, respectively. They reported 0.78, 0.78, and 0.74 values for the first, second, and third American samples, respectively. This study confirmed divergent validity, and differential and incremental criteria of this Scale. Ghorbani et al. (2010) reported Cronbach's alpha of 1.79 for this scale. The higher the score of this questionnaire, the higher the integrative self-knowledge will be, and vice versa. Moreover, questionnaires were distributed among experts to examine content validity, and the results confirmed this rate. The extant study reported Cronbach's alpha coefficient of 0.68-0.72 for this scale. Data analysis was done through SPSS and Amos24 software.

Results

The results indicated that 58 respondents (25.1%) were younger than 21, 95 respondents (41.1%) were 22-24 years old, 47 respondents (20.3%) were 25-27 years old, and 31 respondents (13.5%) were older than 28. In terms of education, 23 respondents (10%) were studying for an associate degree, 145 respondents (62.7%) had a BA degree, 51 respondents (22.1%) had an MA degree, and 12 respondents (5.2%) had a Ph.D. degree. In terms of gender, 75 respondents (32.5%) were women, and 156 respondents (67.5%) were men. In terms of marital status, 152 respondents (65.8%) were single, and 79 respondents (34.2%) were married.

Table 1 reports mean values, standard deviation (SD), and Cronbach's alpha coefficients of variables that include attachment styles (anxiety, depend, and close), defense mechanisms (immature, neurotic, and mature), integrative self-knowledge (reflective self-knowledge, experiential self-knowledge, and integration), and mental health (somatic symptoms, social dysfunction, and depression).

Table 1. Mean, SD, and Cronbach's alpha coefficient of variables

Variable	Mean	SD	Cronbach's alpha
Attachment style-close	13.58	4.43	0.64
Attachment style-depend	11.14	3.37	0.57
Attachment style-anxious	12.29	3.94	0.69
Integrative self-knowledge-reflective self-knowledge	9.38	3.84	0.68
Integrative self-knowledge-experiential self-knowledge	11.54	3.18	0.72
Integrative self-knowledge-integration	14.33	4.12	0.76
Mental health-somatic symptoms	9.30	3.26	0.82
Mental health-anxiety	9.05	4.13	0.79
Mental health-social dysfunction	11.34	2.73	0.77
Mental health-depression	7.10	3.09	0.85

Table 1 reports mean and Sd values in addition to Cronbach's alpha coefficients of variables. Accordingly, Cronbach's alpha coefficient of dependent attachment style was somewhat low; hence, relevant findings must be interpreted cautiously.

The skewness and Kurtosis of variables were examined to evaluate the normal distribution of univariate data. Table 2 reports the obtained results.

Table 2. Skewness and Kurtosis of variables

Variable	Skewness	Kurtosis
Attachment style-close	0.18	-0.93
Attachment style-depend	-0.28	-0.43
Attachment style-anxious	0.14	-0.92
Integrative self-knowledge-reflective self-knowledge	-0.27	-1.39

Integrative self-knowledge-experiential self-knowledge	-0.12	-1.28
Integrative self-knowledge- integration	-0.23	-0.29
Mental health-somatic symptoms	0.46	-0.30
Mental health-anxiety	0.94	0.79
Mental health-social dysfunction	0.95	0.68
Mental health-depression	0.81	-0.26

Attachment style-anxious	0.52	1.94
Integrative self-knowledge-reflective self-knowledge	0.53	1.89
Integrative self-knowledge-experiential self-knowledge	0.53	1.88
Integrative self-knowledge-integration	0.47	2.11

According to Table 2, the Skewness and Kurtosis values of all variables are in the interval of ± 2 , which indicates the single-variable normal distribution of variables without a clear deviation. The collinearity assumption was examined using the variance inflation factor (VIF) and tolerance factor. Table 3 reports the results of this assumption.

Table 3. VIF and tolerance factor of predictor variables

Variable	Tolerance factor	VIF
Attachment style-close	0.60	1.57
Attachment style-depend	0.74	1.36

According to Table 3, collinearity exists between research data due to tolerance factors of variables that were greater than 0.1 and VIF values that were less than 10. According to Meyers et al. (2006), tolerance factor < 0.1 and $VIF > 10$ indicate collinearity between research data.

After ensuring the optimal fit of the measurement model, fit indicators of the structural model (Figure 1) were estimated and evaluated. The structural model assumed that attachment styles directly and mediately predict integrative self-knowledge and mental health of single-child students. Structural model fit was tested using structural equation modeling (SEM), and results indicated an acceptable fit between the structural model and collected data ($RMSEA=0.072$, $AGFI=0.877$, $GFI=0.942$, $CFI=0.963$, $\chi^2/df=2.19$, $\chi^2(N=231, df=43) = 94.36$).

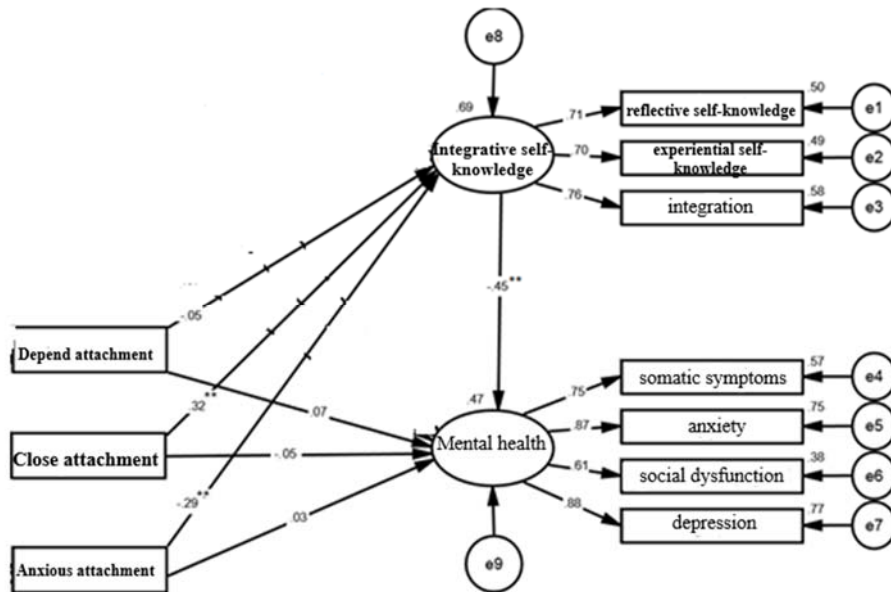


Figure 1. Structural Model

According to the results, the indirect path coefficient between anxious attachment style ($\beta=0.133$, $p<0.01$) and mental health were positive, and the indirect path coefficient between close attachment style ($\beta=-0.145$, $p<0.01$) and mental health was negative. The mentioned coefficients were significant at the level of 0.05. indirect path coefficient between depend on

attachment style and mental health was not significant at the level of 0.05. According to the result of tested hypothesis 5, integrative self-knowledge positively mediates the relationship between anxious attachment style and the mental health of one-child students. Moreover, integrative self-knowledge positively and significantly mediates the relationship between close attachment style and mental health.

discussion

The results indicate a positive indirect path coefficient between anxious attachment style and mental health, while the indirect path coefficient between close attachment style and mental health is negative and significant. The indirect path coefficient between depend on attachment style and mental health was not significant. Therefore, it is concluded that integrative self-knowledge mediates the nexus between anxious attachment style and mental health of single-child students positively, while mediates the nexus between close attachment style and mental health negatively and significantly. Results indicate mediating role of integrative self-knowledge in the relationship between attachment styles and mental health of single-child students, which is consistent with findings obtained by Sedghi, Oskoei, and Mogtabaei (2021). by Sedghi, Oskoei, and Mogtabaei (2021) found the mediating role of integrative self-knowledge in the relationship between parents' attachment style and self-concept and mood of students. According to the results obtained by Robenzadeh et al., a psychodynamic package for identity formation of Iranian teenagers could increase integrative self-knowledge by reducing the score of the Object Relations Inventory's subscales (insecure attachment, social incompetence, alienation, and egocentricity).

The findings of this study can be explained based on the mediating role of integrative self-knowledge in the relationship between attachment styles and the mental health of single-child students. It can be stated that support, intimacy, and secure attachment can create integrative self-knowledge. In this lieu, Asghari and Besharat (2011) indicated that perceived autonomy, participation, support, and intimacy dimensions (especially from the mother) can predict integrative self-knowledge. Therefore, it seems that the formation of an effective secure pattern with coherence and inner self-knowledge can create positive inner reflections on self and attachment sources. Formations of such secure patterns and coherence in persons allow them to consider their attachment concepts psychologically available and responsive. These individuals shape a positive view towards self and others, support others, and receive social support from others, so they experience higher mental health. Although insecure attachment leads to a lack of knowledge about unsatisfied affective and emotional needs by reducing cognitive and affective self-knowledge and integrative self-knowledge. The mentioned unsatisfied needs control interpersonal thoughts and behaviors of a person reducing the adaptive behaviors of emotion regulation and coping with stress that alleviate the person's health.

The results of the present study are about the male and female single-child students of Islamic Azad University of Rudehen and Islamic Azad University, Tehran Medical Branch during the spring and summer of 2022. Therefore, caution must be taken in generalizing research results. Regarding the direct role of attachment styles in the mental health of students, some interventions that target attachment relationships can increase the mental health of students. Therefore, mental health experts and psychologists can use therapies based on attachment style modification to reduce mental issues and improve the mental health of students.

Conclusion

Based on results, The mental health of single-child students is influenced by affective, behavioral, and cognitive factors.

Acknowledgments:

None

Conflict of interest:

None

Financial support :

None

Ethics statement :

None

References

- Abolghasemi, A., Narimani, M. (2006). Psychological tests, Bagh-e-Rezvan Publications.
- Clery, P., Rowe, A., Munafò, M., & Mahedy, L. (2021). Is attachment style in early childhood associated with mental health difficulties in late adolescence? *BJPsych Open*, 7(S1), S15-S15.
- Dadsetan, P., Ahmadi Ozghandi, A., Hassan Abadi, H. (2006). Parental stress and general health: Study in the relationship between parental stress and general health in nurses and housewives who have little children, *Transformational Psychology, Iranian Psychologists*, 2(7): 171-184.
- Erfani, A., & McQuillan, K. (2014). The changing timing of births in Iran: an explanation of the rise and fall in fertility after the 1979 Islamic Revolution. *Biodemography and social biology*, 60(1), 67-86.
- Faisal, R. A., Jobe, M. C., Ahmed, O., & Sharker, T. (2022). Mental health status, anxiety, and depression levels of Bangladeshi university students during the COVID-19 pandemic. *International journal of mental health and addiction*, 20(3), 1500-1515.
- Falgares, G., Marchetti, D., De Santis, S., Carrozzino, D., Kopala-Sibley, D. C., Fulcheri, M., & Verrocchio, M. C. (2017). Attachment styles and suicide-related behaviors in adolescence: the mediating role of self-criticism and dependency. *Frontiers in psychiatry*, 8, 36.

- Fattouh, N., Haddad, C., Salameh, P., Sacre, H., Hallit, R., Soufia, M., ... & Obeid, S. (2022). A national study of the association of attachment styles with depression, social anxiety, and suicidal ideation among Lebanese adolescents. *The Primary Care Companion for CNS Disorders*, 24(3), 41070.
- Ghorbani, N., & Watson, P. J. (2004). Two facets of self-knowledge, the five-factor model, and promotions among Iranian managers. *Social Behavior and Personality*, 32, 769-776.
- Ghorbani, N., & Watson, P. J. (2005). Hardiness scales in Iranian managers: Evidence of incremental validity in relationship with the Five Factor Model and with organizational and psychological adjustment. *Psychological Reports* 96, 775-781.
- Ghorbani, N., Watson, P. J., & Hargis, M. B. (2008). Integrative self-knowledge scale: correlations and incremental validity of a cross-cultural measure developed in Iran and the United States. *Journal of Psychology*, 142, 395-412.
- Ghorbani, N., Watson, P. J., Hamzavy, F., & Weathington, B. L. (2010). Self-Knowledge and Narcissism in Iranians: Relationships with Empathy and Self-Esteem. *Current Psychology*, 29, 135-143.
- Green, E. (2022). Attachment Styles and Their Impact on Children's Mental Health and Resiliency During a Pandemic. <http://hdl.handle.net/20.500.11803/1790>
- Kalman, T. P., Wilson, P. G., & Kalman, C. M. (1983). Psychiatric morbidity in long-term renal transplant recipients and patients undergoing hemodialysis: A comparative study. *Jama*, 250(1), 55-58.
- Laczkovics, C., Fonzo, G., Bendixsen, B., Shpigel, E., Lee, I., Skala, K., ... & Huemer, J. (2020). The defense mechanism is predicted by attachment and mediates the maladaptive influence of insecure attachment on adolescent mental health. *Current Psychology*, 39(4), 1388-1396.
- Lindsay, J. A., McGowan, N. M., King, N., Rivera, D., Li, M., Byun, J., ... & Duffy, A. (2022). Psychological predictors of insomnia, anxiety, and depression in university students: potential prevention targets. *BJPsych open*, 8(3).
- Marques, G., Drissi, N., de la Torre Díez, I., de Abajo, B. S., & Ouhbi, S. (2021). Impact of COVID-19 on the psychological health of university students in Spain and their attitudes toward Mobile mental health solutions. *International Journal of Medical Informatics*, 147, 104369.
- Nottage, M. K., Oei, N. Y., Wolters, N., Klein, A., Van der Heijde, C. M., Vonk, P., ... & Koelen, J. (2022). Loneliness mediates the association between insecure attachment and mental health among university students. *Personality and Individual Differences*, 185, 111233.
- Pakdaman, Sh. (2001). The relationship between attachment and sociability in adolescence, Ph.D. Thesis, Faculty of Psychology and Educational Sciences, University of Tehran.
- Poorkhosravani, M., Naeemi, H. (2020). The relationship between mental health dimensions and attachment styles (secure, anxious, and avoidant) among mothers in Qom Province, *Modern Achievements in Humanities Studies*, 33: 127-135.
- Robinson, R. G., & Price, T. R. (1982). Post-stroke depressive disorders: a follow-up study of 103 patients. *Stroke*, 13(5), 635-641.
- Scott, M., Leppanen, J., Allen, M., Jarrold, C., & Sedgewick, F. (2022). Longitudinal Analysis of Mental Health in Autistic University Students Across an Academic Year. *Journal of Autism and Developmental Disorders*, 1-10.
- Sedghi, P., Oskoei, A., Mogtabaei, M. (2021). Parents' coherent self-knowledge as mediators of the relationship between parental attachment components with students' self-concept, *Family Research*, 17(4), 685-703, DOI: 10.52547/JFR.17.4.685.
- Shojaei, J., Erfani, A. (2019). Trends and patterns of one-child families in Iran, *Journal of Social Sciences*, 26(85): 89-105.
- Simi, Z., Makhloogh, M., Jamali, K., Ghasemi, N. (2017). The correlation between attachment styles and defense mechanisms with mental health in diabetic patients, *Qom Univ Med Sci*, 11(12): 43-51.
- Watson, D. C., & Sinha, B. K. (1998). Gender, age, and cultural differences in the Defense Style Questionnaire-40. *Journal of Clinical Psychology*, 54(1), 67-75.