KMANPUB | Health Nexus Vol. 4 No. 2 (2026): 1-10

Article history:
Received 10 January 2026
Revised 03 March 2026
Accepted 10 March 2026
Published 01 April 2026

Prediction of Self-Harming Thoughts Based on Early Maladaptive Schemas and Mindfulness

Shohrehalsadat Filsouf[1], Tayebe Ardi[2*], Elham Mahmodiyan[3], Sevin Esmaelzadeh[4], Hanieh Forghani Heris[5]

[1] Department of Nursing, Isf.C., Islamic Azad University, Isfahan, Iran
[2] Department of Educational Psychology, ToJ.C., Islamic Azad University, Torbat-e Jam Branch, Iran
[3] Department of General Psychology, Ga.C., Islamic Azad University, Garmsar, Iran
[4] Department of Educational Psychology, Khoy.C., Islamic Azad University, Khoy, Iran
[5] Department of Personality Psychology, Central Tehran Branch, Islamic Azad University, Tehran, Iran

*** Corresponding author email address**: m-abbaszadeh@tabrizu.ac.ir

A r t i c l e I n f o

Article type:
Original Research

How to cite this article:
Filsouf, S., Ardi, T., Mahmodiyan, E., Esmaelzadeh, S., & Forghani Heris, H. (2026). Prediction of Self-Harming Thoughts Based on Early Maladaptive Schemas and Mindfulness. *Health Nexus, 4*(2), 1-10.
https://doi.org/10.61838/kman.hn.5405

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A B S T R A C T

Self-harming thoughts are among the most important psychological warning signs associated with emotional dysregulation, maladaptive coping, and vulnerability to self-injurious behaviors. The present study aimed to examine the predictive role of mindfulness and early maladaptive schemas in self-harming thoughts among adults referring to psychological clinics in Tehran. This applied study used a descriptive-correlational cross-sectional design. The statistical population consisted of individuals over 18 years of age who referred to private or public psychological clinics in Tehran during the third quarter of 2025 due to anxiety, depression, or other psychological difficulties. Using simple random sampling and based on the Krejcie and Morgan table, 300 participants were selected. Data were collected using the Kentucky Inventory of Mindfulness Skills, Young Schema Questionnaire–Short Form, and Beck Scale for Suicide Ideation. Data were analyzed using Pearson correlation coefficients and simultaneous multiple regression analysis in SPSS version 22. The results showed that total mindfulness was negatively and significantly associated with self-harming thoughts ($r = -0.556$, $p = 0.001$), whereas the total maladaptive schema score was positively and significantly associated with self-harming thoughts ($r = 0.455$, $p = 0.002$). In the regression analyses, the mindfulness model and schema model significantly predicted self-harming thoughts. Among mindfulness components, only describing without labeling remained a significant predictor ($\beta = 0.244$, $p = 0.004$). Among schema domains, only impaired autonomy and performance significantly predicted self-harming thoughts ($\beta = 0.307$, $p = 0.002$). In the simultaneous model, mindfulness and early maladaptive schemas together explained approximately 40% of the variance in self-harming thoughts ($R^2 = 0.402$). These findings suggest that self-harming thoughts are shaped by the combined effects of reduced mindfulness skills and dysfunctional cognitive-emotional schemas. Interventions that strengthen nonjudgmental description of internal experiences and modify autonomy-related maladaptive schemas may help reduce self-harming thoughts.

Keywords: *self-harming thoughts; early maladaptive schemas; mindfulness.*

1. Introduction

In recent decades, self-harm has been recognized as one of the most challenging and concerning psychological phenomena worldwide; it not only endangers an individual's physical health, but also seriously threatens quality of life, social functioning, and future occupational prospects. Although several definitions of self-harm exist, the general consensus is that this behavior includes intentional physical injury to the body without suicidal intent, performed by the individual to regulate intense emotions, escape from reality, or reduce psychological tension (1, 2). Studies show that self-harming thoughts, as an early and warning stage before practical action, play a key role in identifying at-risk individuals (3, 4). These thoughts form when the individual feels that they do not have the psychological capacity required to manage emotional pain or environmental pressures, and the mind searches for a way to temporarily relieve this suffering (5, 6). Therefore, a precise understanding of the factors that lead to the emergence and persistence of these thoughts is not only a scientific necessity, but also a human priority for preventing their catastrophic consequences.

One of the most important variables that has attracted researchers' attention in this field in recent years is the concept of mindfulness. Mindfulness, as a multidimensional construct, describes the ability to pay conscious and nonjudgmental attention to moment-by-moment experiences, including thoughts, emotions, and the five senses. This skill includes components such as "observing" (the ability to notice experiences), "describing without labeling" (the ability to express experiences without positive or negative value labels), "acting with awareness" (full presence in daily activities), and "accepting without judgment" (accepting experience as it is) (7). Extensive research has shown that individuals with high levels of mindfulness are able to view their negative thoughts and feelings as transient events, rather than as absolute realities that must be immediately confronted (6, 8).

In contrast to mindfulness-based approaches, the theory of early maladaptive schemas, which is rooted in cognitive-behavioral psychology, emphasizes the role of deep, stable, and dysfunctional beliefs in the formation of psychological disorders. Schemas are pervasive and enduring patterns that develop from childhood and continue throughout the individual's life, causing the individual to perceive the world, others, and the self in a distorted manner (9). These schemas are classified into five main domains: (1) disconnection/rejection (feelings of helplessness and rejection), (2) impaired autonomy and performance (feelings of inability in independence and tolerating pressure), (3) impaired limits (lack of impulse control and lack of respect for the rights of others), (4) other-directedness (excessive focus on the needs of others at the expense of oneself), and (5) overvigilance and inhibition (fear of dangers and emotional inhibition) (10). When an individual suffers from maladaptive schemas, activation of these beliefs in stressful situations leads to feelings of helplessness, suppressed anger, or intense fear; if the individual lacks appropriate coping skills, this can lead to destructive behaviors (3, 4).

The relationship between these two constructs, namely mindfulness and maladaptive schemas, is the focus of the present study. It appears that mindfulness can act as a moderating factor or even a therapeutic mechanism that reduces the intensity of the effect of maladaptive schemas on harmful behaviors. The assumption is that individuals with strong maladaptive schemas are often trapped in patterns of thinking, and mindfulness, by creating a safe space for observing these thoughts without judgment, prevents these thoughts from turning into actual behaviors (8, 9). Most studies to date have examined each of these variables separately, and fewer studies have simultaneously investigated the combined role of these two factors in explaining self-harming thoughts in the Iranian population. Considering the gap in domestic research and the vital importance of identifying predictors of self-harming thoughts, this study was designed with the main aim of examining the predictive role of mindfulness and early maladaptive schemas in self-harming thoughts. Early maladaptive schemas are deep and pervasive patterns or themes composed of memories, emotions, cognitions, and bodily sensations. They are formed in childhood or adolescence, continue throughout life, concern the self and relationships with others, are highly dysfunctional, and include five domains of basic emotional needs with 18 schemas (11).

In the domain of disconnection and rejection, individuals who experience schemas related to this domain usually have difficulty establishing secure attachments and satisfactory

Health Nexus
E-ISSN: 2981-2569

emotional relationships with others. They believe that their needs for stability, safety, affection, love, and a sense of belonging will never be fully met. Their family of origin has often been an unstable environment (abandonment/instability), accompanied by harmful behaviors (mistrust/abuse), lacking warmth and emotional support (emotional deprivation), accompanied by rejection and blame (defectiveness/shame), or a restrictive and isolating atmosphere (social isolation/alienation). Individuals whose main schemas fall within the domain of disconnection and rejection, especially those who have the first four schemas of this domain, usually experience the greatest injuries. Many of them have had a difficult and chaotic childhood and, in adulthood, tend either to move without sufficient reflection from one unhealthy relationship to a similar one, or to avoid intimacy and close relationships altogether. For this group, the therapeutic relationship usually forms the core of the treatment process (12).

In the domain of impaired autonomy and performance, autonomy means the individual's ability to separate healthily from the family and function independently; this ability is usually evaluated in comparison with same-age peers. Individuals who have schemas related to this domain develop expectations of themselves and their environment that weaken their ability to psychologically separate from parents and achieve independence. The parents of these patients usually either attend to and support them excessively, or, conversely, do not provide even the minimum necessary care. These two extreme approaches, whether excessive support or neglect, provide the basis for autonomy problems in the future. Such parenting styles often damage the child's self-confidence and prevent the strengthening of the skills required for independent functioning in environments outside the home. As a result, these individuals find it difficult in adulthood to form an independent identity and usually cannot manage their lives without significant reliance on others (11).

In the domain of impaired limits, individuals in whom schemas of this domain are active usually face difficulty in developing the internal limits necessary for mutual respect and self-control. These individuals may face challenges in respecting the rights of others, collective cooperation, commitment to obligations, or pursuing long-term goals. In addition, these patients often show behaviors that are interpreted as egocentrism, selfishness, irresponsibility, or narcissism. Their family background usually includes excessive permissiveness or excessive kindness from parents. During childhood, these individuals did not have the opportunity or necessity to follow rules that others were required to follow. As a result, during development they considered others less and showed limited ability in self-restraint (10).

In the domain of other-directedness, individuals in whom schemas of this domain are active move toward satisfying the needs of others rather than prioritizing their own personal needs. This behavior is usually performed with the aim of gaining approval, maintaining emotional relationships, or avoiding possible negative consequences. In social interactions, these patients tend to value others' reactions more than their own wishes, and they are often unaware of their anger and inner tendencies. In childhood, they did not have the opportunity to follow their natural desires; in adulthood, instead of inner guidance, they are influenced by the external environment and submit to others' wishes. The main root of the formation of these schemas during development goes back to "conditional acceptance"; that is, children had to suppress important parts of their personality in order to obtain love or approval from others. In most of these families, parents prioritized their own emotional needs or social status rather than attending to the child's unique needs (11).

In the domain of overvigilance and inhibition, individuals in whom schemas of this domain are active tend to suppress their feelings and sudden impulses. They often try to act according to a set of internal and inflexible rules that they have set for themselves, even if this leads to losing pleasure, self-expression, calmness, close relationships, or health. The childhood of these patients has often been accompanied by violent experiences, suppression, and strict discipline, so that self-control and self-sacrifice were prioritized over spontaneity and pleasure seeking. In childhood, instead of being encouraged toward fun and happiness, these individuals learned always to be alert to unpleasant life events and to imagine the world as an exhausting place. As a result, these patients are often pessimistic, anxious, and fearful, and they believe that if they cannot be completely alert and watchful at every moment of life, their life may fall apart (10).

Health Nexus
E-ISSN: 2981-2569

Mindfulness, as a style of living, uses meditative practices integrated into daily life to help individuals become familiar with the dual modes of the mind and consciously use them as an integrated mind. Through this method, individuals realize that they do not only think, but can also observe their thinking (Zhang et al., 2021). Mindfulness is usually defined as a state of awareness and attention to what is happening in the present moment. In mindfulness, the individual becomes aware of their mental mode at every moment, and after becoming aware of the two modes of mind, one "doing" and the other "being," learns to move the mind from one mode to another. This requires training in specific behavioral, cognitive, and metacognitive strategies for focusing the attentional process (13). Mindfulness can help free individuals from automatic thoughts, habits, and unhealthy behavioral patterns and therefore plays an important role in behavioral regulation. In addition, by adding clarity and vitality to experiences, it can bring health and happiness (14).

Self-harming thoughts is a term that refers to the occurrence of any self-destructive thought. These thoughts include a spectrum ranging from vague thoughts about the possibility of ending life to completed suicide. Self-harming thoughts can arise from a combination of factors, including emotional dysregulation, feelings of hopelessness, and low self-esteem. Emotional difficulties such as anger, sadness, and despair are often inadequately expressed because of cultural norms that prohibit vulnerability, leading to maladaptive coping mechanisms (2, 15).

Zhang et al. (2022) conducted a systematic review and meta-analysis of mindfulness-based cognitive therapy for suicidal ideation in patients with depression (6). Their findings indicated that mindfulness-based cognitive therapy may reduce suicidal ideation and can be considered a clinically relevant intervention when used alongside usual care.

Pilkington et al. (2021) presented a meta-analytic review of early maladaptive schemas, suicidal ideation, and self-harm (3). Their findings showed that suicidal ideation and suicidal or non-suicidal self-harm were associated with several early maladaptive schemas, especially schemas related to disconnection/rejection, emotional deprivation, defectiveness/shame, social isolation, emotional inhibition, and impaired autonomy. Therefore, early maladaptive schemas can be considered important cognitive vulnerability factors for self-harming thoughts and behaviors. Saarijärvi et al. (2023) examined the association between early maladaptive schemas and self-injury thoughts and behaviors among adolescents (4). Their findings showed that early maladaptive schemas were significantly associated with self-harm thoughts and behavior, supporting the role of schema-based cognitive vulnerability in self-injurious outcomes. Fernández-González et al. (2022) presented a study titled "Child-to-parent aggression and dating violence: longitudinal associations and the predictive role of early maladaptive schemas (16)." According to this study, adolescents' perpetration of violence against parents and dating partners usually occurs and affects each other during adolescence. Early maladaptive schemas play a relevant role in explaining these two forms of family and intimate violence, although intervention and prevention programs should consider the schemas that have shown greater effects on each type of violence. Shi et al. (2023) investigated early maladaptive schemas and the risk of non-suicidal self-injury among college students (17). Their findings suggested that maladaptive schemas were associated with the risk of non-suicidal self-injury, confirming the importance of schema assessment in identifying individuals at risk for self-injurious behaviors.

2. Methods and Materials

2.1. Participants

The present study was applied in aim and descriptive-cross-sectional and correlational in design. The statistical population included all individuals over 18 years of age who, during the research period (the third three-month period of 1404), had referred to private or public clinics in Tehran for problems such as anxiety, depression, or other psychological challenges.

2.2. Sampling Method

Using simple random sampling and considering the correlational design of the study, 300 participants were selected based on the sample-size table proposed by Krejcie and Morgan (1970) (18). The inclusion criteria were being over 18 years of age, referral during the specified research period to one of the private or public clinics in Tehran

Health Nexus
E-ISSN: 2981-2569

because of anxiety, depression, or other psychological challenges, ability to read and write Persian and correctly understand the questionnaire items, and provision of written informed consent. The exclusion criteria included withdrawal during questionnaire completion, incomplete responses (more than 20% unanswered items), illogical response patterns (such as selecting the same option for all items), or inability to correctly understand the items because of strong psychiatric medication use, brain trauma, or severe cognitive disorders.

2.3. Research Instruments

Kentucky Inventory of Mindfulness Skills (KIMS). This questionnaire was developed by Baer et al. (2004), contains 39 items, and includes four mindfulness components (19): observing, describing without labeling, acting with awareness, and accepting without judgment. Its internal consistency coefficients were reported by Baer et al. (2004) to be between 0.76 and 0.91 for the four components. Baer (2003) also reviewed mindfulness training as a clinical intervention and provided conceptual and empirical support for the construct of mindfulness (20). Therefore, in the present study, the KIMS was used as a validated self-report instrument for assessing mindfulness skills.

Young Schema Questionnaire-Short Form (YSQ-SF). To measure early maladaptive schemas, the questionnaire prepared by Young (2005) (21), consisting of 75 items, with a six-point Likert response scale (completely false = 1 to completely true = 6) and 15 subscales, was used. The subscales include emotional deprivation, abandonment/instability, mistrust/abuse, social isolation/alienation, defectiveness/shame, failure, dependence/incompetence, vulnerability to illness, undeveloped self/enmeshment, subjugation, self-sacrifice, emotional inhibition, unrelenting standards/hypercriticalness, entitlement/grandiosity, and insufficient self-control. Every five items of this questionnaire relate to one schema, and to obtain schema scores, the mean score of each five items is calculated. In each schema, the higher the score the individual obtains, the more that schema is considered the individual's preferred schema. If the mean of each subscale is higher than 2.5, that schema is dysfunctional. The reliability and validity of the Young Schema Questionnaire–Short Form have been examined in several psychometric studies and reviews (22-24).

Beck Scale for Suicide Ideation (BSSI). The Beck Scale for Suicide Ideation is a 19-item self-report instrument designed to detect and measure the intensity of attitudes, behaviors, and planning for committing suicide. This questionnaire was designed in 1979 by Beck, Kovacs, and Weissman. The scale is arranged on a three-point scale from 0 to 2. The total score is calculated based on the sum of scores and ranges from 0 to 38. The scale items assess issues such as wish to die, active and passive desire for suicide, duration and frequency of suicidal thoughts, sense of control over oneself, deterrents to suicide, and the individual's degree of readiness to attempt suicide. In the Beck Scale for Suicide Ideation, there are five screening items. If responses indicate active or passive suicidal desire, the respondent should then continue with the remaining 14 items. In other words, if the respondent gives a positive response, namely 1 or 2, especially to item 5 ("I have no wish to kill myself" = 0; "I have a weak wish to kill myself" = 1; "I have a strong wish to kill myself" = 2), and the responses indicate active or passive suicidal desire, it is necessary to answer the remaining 14 items; otherwise, there is no need to continue. A score of 0 means none, 1 means somewhat, and 2 means much. The average completion time is 10 minutes. In the Beck scale, no specific form has been prepared for identifying the level of suicidal thoughts; however, in terms of item content, suicide risk can be determined as follows: 0–5, suicidal thoughts (low risk); 6–19, readiness for suicide (high risk); 20–38, intention to attempt suicide (very high risk) (25, 26). Based on factor analysis with psychiatric patients, it was revealed that the Beck Scale for Suicide Ideation consists of three factors: wish to die (5 items), readiness for suicide (7 items), and actual suicidal desire (4 items). Two items relate to deterrents to suicide or concealment of suicide and are not calculated in any of the three factors. Cronbach's alpha values of 0.90 and 0.85 have been reported for inpatient and outpatient patients, respectively, indicating the high internal consistency of this scale. The test-retest reliability of this scale has also been reported as 0.74. The reliability of this questionnaire was examined in 2015 by Esfahani et al.; the reliability of the scale using Cronbach's alpha and split-half methods was 0.83 and 0.85, respectively.

Health Nexus
E-ISSN: 2981-2569

2.4. Research Procedure

The research implementation process began after obtaining the necessary permissions and identifying eligible clients from clinics in Tehran. First, written informed consent was obtained from participants. The questionnaires were then provided to participants and completed in a quiet environment while confidentiality was observed. After data collection, incomplete cases and cases with illogical response patterns were removed according to the exclusion criteria.

2.5. Online Procedure

No separate online data-collection procedure was reported for this study. The questionnaires were completed in the clinical setting under conditions designed to preserve privacy and reduce response bias.

2.6. Statistical Analysis

The obtained data were analyzed using SPSS version 22. Descriptive statistics (mean and standard deviation), Pearson correlation coefficients, and multivariate regression with the simultaneous entry method were used at a significance level of 0.05.

3. Findings and Results

The descriptive findings are summarized in Table 1. To reduce unnecessary repetition, the separate descriptive tables for the five schema domains were consolidated into one table, while the original numerical information was retained in a more compact form. Table 1 presents the descriptive statistics for mindfulness and a compact summary of the early maladaptive schema domains.

Table 1

Descriptive statistics and compact summary of the study variables

Construct/domain	Indicator	N	Mean / range	SD / note
Mindfulness	Observing	300	15.12	2.07
Mindfulness	Describing without labeling	300	20.27	3.01
Mindfulness	Acting with awareness	300	18.03	2.55
Mindfulness	Accepting without judgment	300	19.66	3.08
Mindfulness	Total mindfulness	300	131.58	10.44
Disconnection/rejection	Component means	300	7.04–8.20	Highest: instability; lowest: emotional deprivation
Impaired autonomy/performance	Component means	300	7.08–8.05	Highest: failure; lowest: vulnerability
Impaired limits	Component means	300	7.02–8.43	Highest: entitlement; lowest: insufficient self-control
Other-directedness	Component means	300	6.03–7.60	Highest: subjugation; lowest: self-sacrifice
Overvigilance and inhibition	Component means	300	7.45–7.58	Highest: standards; lowest: emotional inhibition

As shown in Table 2, mindfulness and all of its dimensions were negatively and significantly associated with self-harming thoughts, whereas early maladaptive schema domains and the total schema score were positively and significantly associated with self-harming thoughts.

Table 2

Pearson correlations between predictor variables and self-harming thoughts

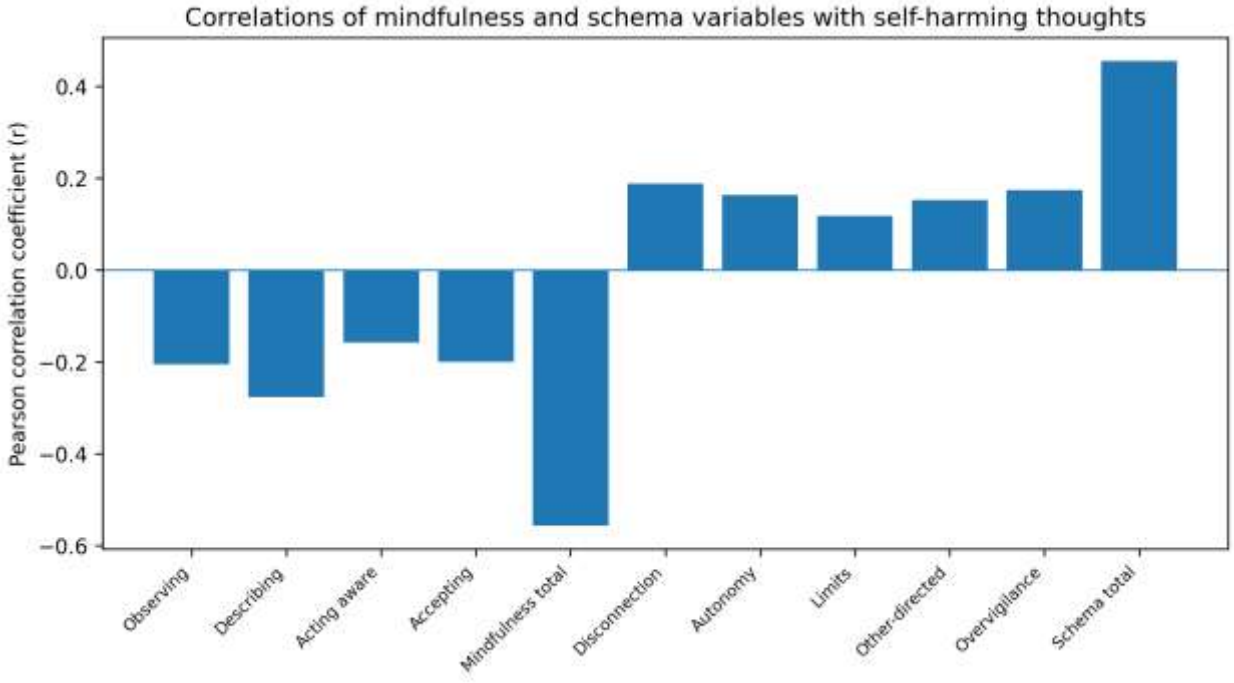
Predictor variable	r with self-harming thoughts	P-value	Direction
Observing	-0.205**	0.001	Negative
Describing without labeling	-0.277**	0.002	Negative
Acting with awareness	-0.158**	0.007	Negative
Accepting without judgment	-0.200**	0.003	Negative
Total mindfulness	-0.556**	0.001	Negative
Disconnection/rejection	0.188**	0.006	Positive
Impaired autonomy and performance	0.163**	0.003	Positive
Impaired limits	0.118**	0.001	Positive
Other-directedness	0.152**	0.001	Positive
Overvigilance and inhibition	0.174**	0.005	Positive
Total maladaptive schema score	0.455**	0.002	Positive

Health Nexus
E-ISSN: 2981-2569

Figure 1 visually presents the correlation coefficients reported in Table 2 and clarifies the opposite directions of the associations: mindfulness variables showed negative correlations, whereas maladaptive schema variables showed positive correlations with self-harming thoughts.

Figure 1

Pearson correlation coefficients of mindfulness and early maladaptive schema variables with self-harming thoughts.



The regression results are summarized in Table 3. To avoid presenting multiple small and repetitive regression tables, the model summaries and significant predictors from the original analyses were integrated into a single table.

Table 3

Consolidated regression results for predicting self-harming thoughts

Model	Significant predictor(s)	B	SE	β	t	F / R^2	P-value
Mindfulness model	Describing without labeling	0.877	0.023	0.244	6.202	F = 203.247; reported adjusted R = 0.320	0.004
Schema model	Impaired autonomy and performance	0.635	0.019	0.307	4.819	F = 122.653; reported adjusted R = 0.175	0.002
Simultaneous model	Mindfulness	-	-	0.35	2.12	R^2 = 0.402	0.002
Simultaneous model	Early maladaptive schema	-	-	0.43	4.21	R^2 = 0.402	0.001

Overall, the simultaneous-entry regression model indicated that mindfulness and early maladaptive schemas together explained approximately 40% of the variance in self-harming thoughts. Among mindfulness components, only describing without labeling remained a significant predictor. Among the five schema domains, only impaired autonomy and performance remained a significant predictor in the multivariate model.

4. Discussion and Conclusion

The present study was conducted with the aim of predicting self-harming thoughts based on early maladaptive schemas and mindfulness. The findings of the study are presented as follows.

First research hypothesis: mindfulness (observing, describing without labeling, acting with awareness, and accepting without judgment) predicts self-harming thoughts.

Health Nexus
E-ISSN: 2981-2569

The results showed that although the total mindfulness score had a negative and significant relationship with self-harming thoughts, in the multivariate regression model only the component of "describing without labeling" played a significant predictive role. This means that the individual's ability to observe internal experiences, such as thoughts or feelings, without covering them with judgmental labels such as "bad," "wrong," or "hopeless," is the main factor in reducing harmful thoughts. Other dimensions of mindfulness, such as observing or acceptance, although correlated, lose their independent explanatory power when other variables are controlled. The share of this component in explaining the variance of self-harming thoughts is approximately 32 percent, indicating the vital importance of the "nonjudgmental" approach in psychological interventions for this group. Second research hypothesis: the five domains of maladaptive schemas (disconnection/rejection, impaired autonomy and performance, impaired limits, other-directedness, and overvigilance and inhibition) predict self-harming thoughts. In examining the five domains of maladaptive schemas, the findings indicated that only the domain of "impaired autonomy and performance" was able to significantly predict self-harming thoughts. Among the components of this domain, higher scores in "failure" and lower scores in "vulnerability" were observed, but the entire autonomy domain as a single structure was influential. This indicates that when individuals feel that they lack sufficient independence or have failed in performing life tasks, the probability of self-harming thoughts increases. Other domains, such as rejection, limits, other-directedness, and inhibition, although present in the statistical population, were not direct and significant predictors when considered together and with shared effects. The share of this domain in explaining the variance of thoughts was approximately 17 percent.

Accordingly, mindfulness and early maladaptive schemas were simultaneously able to explain approximately 40 percent of the changes in self-harming thoughts. The final analysis indicates that the mechanism of formation of these thoughts arises from the interaction of two opposing factors: on the one hand, low levels of mindfulness skills, especially inability to describe without labeling, prevent the individual from distancing themselves from their thoughts; on the other hand, high levels of maladaptive schemas, especially the domain of impaired autonomy and performance, strengthen feelings of hopelessness and failure. Therefore, effective therapeutic interventions should simultaneously focus on two inverse axes: first, strengthening the ability to describe without labeling in order to reduce reactivity to thoughts; and second, reducing the intensity and effect of maladaptive schemas related to autonomy in order to increase the individual's sense of competence and personal independence. This integrated approach, which simultaneously seeks to increase psychological resources (mindfulness) and reduce harmful factors (schemas), can significantly increase the effectiveness of therapeutic approaches compared with focusing only on one of these factors. The findings of this study are consistent with the general results of the literature but provide a more precise and distinctive extension. While studies such as Zhang et al. (2022) and de Aguiar et al. (2022) generally support the protective role of mindfulness-based approaches in suicidal ideation and suicidal behavior (6, 8), and studies such as Pilkington et al. (2021), Saarijärvi et al. (2023), and Shi et al. (2023) emphasize the role of early maladaptive schemas in self-harm and self-injury (3, 4, 17), the present findings show that in the multivariate regression model, only the component of "describing without labeling" from mindfulness and the domain of "impaired autonomy and performance" from among the five schema domains acted as independent and significant predictors. These findings are consistent with the study by Fernández-González et al. (2022) (16), which confirmed the role of schemas in violence and harmful behaviors, but they show more precisely that the mere presence of a schema is not sufficient and that focusing on a sense of lack of independence and failure (the autonomy domain) is a more determining factor than other domains such as rejection or limits, which have also been observed in some other studies. The proposed model, by combining mindfulness and schema variables, depicts a mechanism in which the interaction between inability to describe experiences without judgment and a deep sense of failure and dependence simultaneously explains approximately 40 percent of the variance in self-harming thoughts.

Considering the cross-sectional and correlational nature of this study, which does not allow causal inference, it is recommended that future studies be conducted with

Health Nexus
E-ISSN: 2981-2569

longitudinal or experimental (quasi-experimental) designs so that the causal direction among mindfulness, schemas, and self-harming thoughts can be explained more precisely. Also, because the statistical population of this study was limited to clients of clinics in Tehran during a specific time period, it is recommended that future studies extend sampling to other cities, different age groups such as adolescents, and also use mixed methods (qualitative-quantitative) to validate the findings in more diverse cultural and demographic contexts and examine the depth of interactions between variables.

Authors' Contributions

All authors equally contributed to this study.

Declaration

Artificial intelligence tools were used only for language editing and translation support in preparing the English version of the manuscript. The scientific content, data, interpretation of findings, and final responsibility for the manuscript remain with the authors.

Transparency Statement

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

Acknowledgments

The authors appreciate the cooperation of all participants and the staff of the clinics that facilitated the data-collection process.

Declaration of Interest

The authors report no conflict of interest.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Ethics Considerations

This study was conducted after obtaining the necessary permissions. Participation was voluntary, and written informed consent was obtained from all participants before completing the questionnaires. Participants were assured that their information would remain confidential and would be used only for research purposes. They were also informed that they could withdraw from the study at any stage without any negative consequence. Because the study addressed self-harming and suicidal thoughts, responses requiring clinical attention were expected to be handled according to the ethical and clinical protocols of the relevant clinics.

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