

The Mediating Role of Self-conscious Emotions, Disconnection and Rejection in the Relationship between Maternal Separation and Suicidal Ideation

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Abstract

Introduction: Suicide is one of the major health problems and challenges in the world, which has various social, psychological, economic, and cultural dimensions. This study aims to determine the mediating role of self-conscious emotions and the domain of disconnection and rejection schemas in the relationship between maternal psychological separation and suicidal ideation.

Method: This study was a descriptive cross-sectional study. The sample consisted of 573 students from Tehran who were selected through multi-stage cluster sampling. In this study, the Young Schema Questionnaire (YSQ), Test of Self-Conscious Affect (TOSCA-3), Psychological Separation Inventory (PSI), and the Beck Scale for Suicide Ideation (BSSI) were used. Data were analyzed using structural equation modeling with SPSS 21 and AMOS 24 software.

Results: The results showed a significant and indirect effect of maternal separation variable on suicidal ideation ($\beta = 0.145$, $p < 0.05$), a significant and indirect effect of disconnection schema on suicidal ideation ($\beta = 0.040$, $p < 0.05$), and the indirect and significant effect of maternal separation variable on the self-conscious emotions variable ($\beta = 0.104$, $p < 0.05$). The results also revealed that the path coefficient of separation from the mother to suicidal ideation (0.01) and self-conscious emotions (-0.01) were not significant.

Conclusion: The results of the fitted model data analysis showed that psychological separation from the mother, mediated by the domain of disconnection and rejection schemas, predicts suicidal ideation. Clinical interventions are recommended to be conducted for identifying and targeting schemas, particularly the domain of disconnection and rejection ones, in order to prevent suicidal ideation and thoughts or repair and control them.

Declaration of Interest: None

Keywords: Emotions, Disconnection, Mother, Rejection, Schema, Self-conscious, Separation, Suicidal ideation.

Introduction

Suicide, as one of the important issues and challenges in health problems, has various social, psychological, economic, and cultural dimensions; it is one of the top ten causes of death in the world (1, 2, 3). Further, suicide as a global problem in most countries imposes large costs on communities (4). It also is the second leading cause of death in people aged 15 to 29 in the world (5); according to World Health Organization (WHO) statistics, approximately 800,000 people attempt to commit suicide annually (6). Suicide rates have been rising for the last 50 years and are estimated to reach 1.53 million by 2020 (7).

Suicidal ideation, thoughts, and planning are considered the most important predictors of suicidal behavior (8, 9, 10). Students are the most reported for suicidal ideation, planning, and attempt (11,12). In a study conducted in 2020 in the United States, the prevalence of suicidal ideation among students has been reported as 12% (13). Accordingly, in recent years, many studies have examined variables related to suicidal ideation and suicide planning. Results have indicated that suicide risk factors are complex and multiple, including biological, psychological (especially mood disorders) (14), cultural, and social factors (15,16).

Several studies have shown that early maladaptive schemas are associated with psychopathologies (17,18), such as suicidal thoughts and suicidal behavior repetition (19,20). According to Young, early maladaptive schemas are formed and maintained by failure to meet children's attachment needs in the relationships with parents and caregivers, as well as experiencing stressful life events (21).

Maladaptive schemas can lead to suicidal thoughts. In this regard, Dale et al.(19) report that when social isolation, defectiveness/ shame, emotional inhibition, entitlement, and insufficient self-discipline schemas are dominant, suicidal thoughts and suicidal behavior repetition are more likely to be increased. Langhinrichsen-Rohling et al. (22)show greater vulnerability to suicidal behavior to be more likely in people with higher levels of self-sacrifice and unrelenting standards schemas. Moreover, in the research of Borji et al. (23), the relationship between suicidal ideation, injury vulnerability, and social isolation schemas is shown to be positive and significant. Thus, for some individuals, who are more likely to commit suicide, chronic and maladaptive schemas about the self are the core of their sense of identity. These maladaptive schemas, which are largely based on feelings of shame, will be activated in the presence of stresses related to daily life, thus exposing the individual to risk of acute suicide as a reaction to emotional distress and hopelessness state (24).

Another risk factor for suicide is self-conscious emotions (25). Self-conscious emotions, such as guilt, shame, pride, and embarrassment, are moral emotions that lead people to conform to social norms and personal standards, emerging in early childhood; after the growth of self-awareness (26). Although experimental research on the relationship between cognitive-emotional states and the risk of suicide has not been conducted yet, among those committed suicide due to psychological disorders, shame is more than other emotions (e.g., rejection, paranoia, the desire for self-sacrifice, and unrelenting standards) associated with ideation, planning, and committing suicide

(25). Although shame and guilt are often used interchangeably, they are different (27). Theoretically, shame is an uncontrollable and the enduring psychological state that involves negative public self-evaluation, leading to hopelessness and vulnerability. In contrast, guilt is conceptualized as an uncontrolled psychological state related to a particular task or behavior, usually involving a feeling of regret (28). Shame and guilt are considered the central nucleus and two of the most important risk factors for many of the suicides (29). The results of several studies have shown that shame is positively and significantly associated with suicidal ideation and can predict future suicide attempts. For example, in the study of Jaksic et al., the experience of shame mediates the relationship between pathogenic narcissism and suicidal ideation (30). Furthermore, another study shows that shame plays a mediating role in the relationship between suicidal ideation and post-traumatic stress disorder symptoms (31).

On the other hand, in interpersonal and social theories that have explained suicide, the history of suicidal thoughts or attempts is related to the unavailability of responsive and sensitive parents, besides failure to develop secure attachment (32). One of the most fundamental explanatory models is the idea of separation-individuation rooted in the attachment concept (33).

933. According to this view, one's movement toward healthy adaptation is closely linked to one's ability to psychologically separate from one's parents and achieve a sense of independent identity (33). It seems that to understand the psychological separation properly, one

must distinguish between the concepts of attachment and dependency (33). The concept of dependency is the antithetical point of psychological separation from parents. In contrast the relationship of secure attachment with separation-individuation (psychological separation) from parents is not the same, and it is essential to consider dependency and independency as the opposed poles of the psychological separation process (34). The dependency or interpersonal dependency, largely maladaptive, is a personality disorder characterized by a tendency to over-trust others to obtain care, support, and guidance (35). This maladaptive dependency can ultimately lead to an increased risk of suicide and greater use of mental health services (36); it is mainly associated with psychological instability and neuroticism (37). On the other hand, failure to achieve psychological separation from parents due to some negative family variables, such as low cohesion, conflict with parents, and lack of intimacy, can lead to feelings of withdrawal and maladaptive detachment from parents. This issue has a positive relationship with suicidal ideation, and behaviors, besides the increased risk of suicide (38,39).

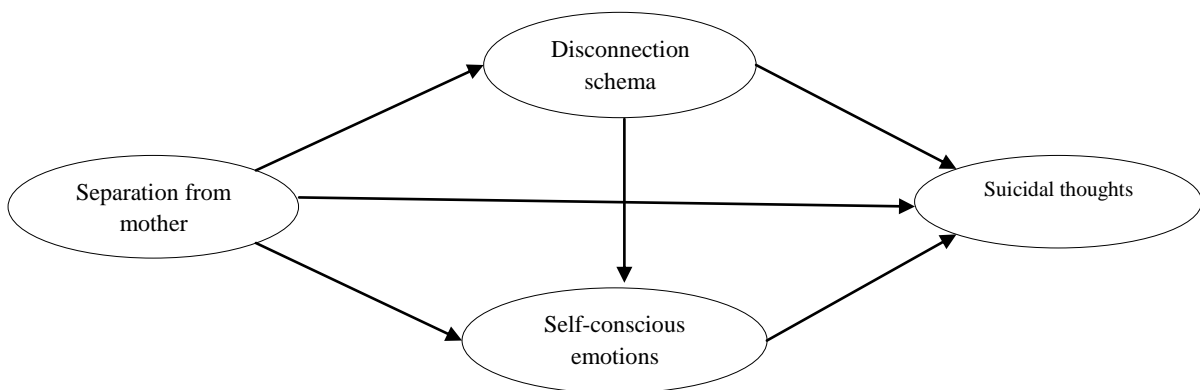
In addition to the direct relationship of communications components in the family (including insecure attachment styles and difficulty in the parental separation process) with the psychological problems and suicidal ideation (40,41), can also be mediated by early maladaptive schemas. Maladaptive schemas arise from unfulfilled basic emotional needs of childhood and insecure attachment styles. According to the results of Dale et al. (19) study, the disconnection and rejection domain's schemas, such as social isolation,

defectiveness, and shame, mediate the relationship between perceived parent-child relationship and suicidal behavior repetition (not the suicidal ideation).

In this regard, the present study investigates the relationship between psychological separation from the mother as the predictor variable, disconnection and rejection domain's schemas and self-conscious affects as mediator variables, and suicidal thoughts as the dependent variable. These variables have been studied separately in previous relevant studies (19,23,25,38). Since the relationship between these variables has not yet been studied in a conceptual model, it is not clear that by the mediating role of one of the variables over the other, how it can significantly affect the dependent variable (suicidal thoughts). Indeed, if suicidal thoughts are predicted directly by psychological separation from the mother, adjusting the level or extent of psychological separation as a key variable to control or reduce suicidal ideation should be considered. Further, if the relationship between these two variables is indirectly mediated by the schemas of disconnection and rejection domain, self-conscious affects, or both, suicidal thoughts can be controlled by

simultaneously modifying three variables of psychological separation from the mother, the schemas of disconnection and rejection domain, and the self-conscious affects. As a result, it is not clear whether psychological separation from the mother predicts suicidal thoughts directly, indirectly (mediated by the schemas of disconnection and rejection domain and self-conscious affects), or in both ways, in a model? As a result, the present study aimed to investigate this issue and to do so, the following hypotheses were considered:

- Psychological separation from mother will directly predict suicidal thoughts.
- Psychological separation from mother mediated by schemas of disconnection and rejection domain can predict suicidal thoughts.
- Psychological separation from the mother, mediated by conscious affects, can predict suicidal thoughts.
- Psychological separation from the mother, with the simultaneous mediating role of schemas of disconnection and rejection domain and conscious affects, can predict suicidal thoughts.



Conceptual Model

Method

The research method in the current study is descriptive-correlational, and its design is structural equation modeling. Psychological separation from the mother as the predictor variable, suicidal thoughts as criterion variable and domain of disconnection and rejection schemas and self-conscious emotions are considered as mediating variables.

The statistical population consisted of all students of the public universities in Tehran in 2018-2019. Multistage cluster sampling was used to select the sample. First, all public universities in Tehran were identified. Then, Tehran, Shahid Beheshti, Amir Kabir, and Allameh Tabataba'i universities were randomly selected. Then, three faculties were selected from each university, and three undergraduate classes, two master classes, and one doctoral class were randomly selected in each faculty. According to Klein, the appropriate sample size for path analysis and SEM is 10 to 20 participants for per parameter (42). There were 32 parameters in this model, and therefore, according to this rule, the present study required a sample size between 320 and 640. With considering the probability of the sample drop, the maximum required sample size was selected. Before submitting the questionnaire to the students, the objectives of the study were clearly stated, and after obtaining informed consent, the questionnaires were distributed. The confidentiality of the research was emphasized, and participants were assured that the information would be used only to investigate the research and without identifying the participants' identities. Participants also had the right to withdraw from the study at any time. After providing

the necessary explanations, 640 questionnaires were distributed among the students according to the inclusion criteria, including the absence of chronic physical illnesses and willingness to participate. Subject's report of substance abuse, psychiatric drug use, history of psychotic disorders (such as hallucinations, delusions, speech disorders, disturbing behaviors, and negative symptoms such as emotional exhaustion, non-speech or intolerance), maternal loss in childhood, and non-cooperative behaviors were the exclusion criteria. A total of 583 questionnaires were collected. After the initial analysis, 10 questionnaires were excluded, due to the high number of missing data, and finally, 573 questionnaires were included in the analysis.

Measures

Young Schema Questionnaire (YSQ): The third version of the Yang Schema Questionnaire was developed to assess cognitive early maladaptive schemas. Each of the 90 items in the questionnaire scoring with a 6-point Likert scale from completely false (score 1) to entirely correct (score 6) and the individual score on each schema will be calculated by summing the scores of the relevant questions. (43). In the present study, a 67-item questionnaire form, which was obtained after factor analysis by Ghiyasi et al. (44), which including 12 subscales on the five domains of disconnection and rejection (social isolation, defectiveness/shame, emotional deprivation, mistrust/abuse, abandonment/instability); impaired autonomy & performance (failure, undeveloped self, vulnerability to harm or

illness, dependence/incompetence); impaired limits (insufficient self-control, entitlement); other-directedness (approval-seeking, self-sacrifice, subjugation); and over-vigilance & inhibition (unrelenting standards, emotional inhibition, negativity, and punitiveness). They also used the dysfunctional attitudes scale to determine the concurrent validity of questionnaire factors. The results show that the correlation coefficient is significant in all factors, and only in the entitlement schema, the sig value is low. The reliability of this questionnaire was calculated 0.94 by Cronbach's alpha coefficient (44). Cronbach's alpha for the disconnection and rejection schemas was 0.81 in the current study.

Test of Self-Conscious Affect (TOSCA-3): This scale, developed by Tangney & Dearing for adults, covers various situations that may occur in daily life. The responses to different scenarios illustrate the emotional, cognitive, and behavioral characteristics associated with being prone to shame and guilt traits. It also includes items that measure externalization, feelings of shame, apathy, pride in self (alpha pride), and pride in behavior (beta pride). The latest release, TOSCA-3, contains 70 items in the form of 16 scenarios, of which 11 are positive, and five are negative. Each item is rated on a 5-point Likert scale from 1 (never) to 5 (most likely). Structural validity of this scale showed a significant and positive correlation between the shame-prone subscale with the nine components of SCL-90 R (correlation coefficients 0.20 to 0.40 and was significant at $p < 0.001$). Significant positive correlation between the subscales of prone to sin with nine components of SCL-90 R (correlation coefficients ranged between -0.13 to -0.17)

(45). In Iran, in the study of Roshan Chesliet al. (46), Cronbach's alpha reliability and test-retest reliability were 0.78 and 0.64 for shame and 0.64 and 0.39 for guilt, respectively. Also, the correlation between the subscale of shame and Beck depression was positive and significant, and the correlation between the subscale of guilt and Beck depression was positive and non-significant. Cronbach's alpha for this scale was 0.88 in the present study.

Psychological Separation Inventory (PSI): In this study, Hoffman psychological separation inventory was used to investigate the psychological separation from mother. This 124-item inventory contains separate subscales that measure the constructs of functional independence, emotional independence, conflictual independence, and attitudinal independence about parents. Half of the 124 scale items, namely 62 measures the dimensions of functional independence, emotional independence, conflict independence, and attitudinal independence from mother. 62 items, measures four dimensions of independence from father. Scores range from 1 to 5. The subscale scores are obtained based on the sum of one individual's scores on each scale. The higher the sum of the scores, the greater the psychological separation in the subscale. Also, all items have direct scoring, IE, "Never Correct" = Score 1 and "Completely True" = Score 5. The alpha coefficient of internal consistency ranged from 84% to 92% (47). The Cronbach's alpha coefficients for the psychological separation subscales in the Dadsetan and colleagues' study (48) ranged from 84% to 93%, indicated the internal consistency of a Persian questionnaire similar to the English questionnaire. Cronbach's alpha for this scale was 0.95 in the present study.

Beck Scale for Suicide Ideation (BSSI): Consists of 19 items designed to detect and measure the severity of attitudes, behaviors, and planning for suicide over the past week. The scale of this scale is based on a 3-point Likert from 0 to 2. The overall score is calculated based on the sum of his scores ranging from 0 to 38. Assessment of suicidal ideation in a person is based on a person's score, lacks suicidal thoughts (score 0 to 3), low suicidal thoughts (score 4 to 11), and high-risk suicidal thoughts (score 12 and over). The scale measures death wish, active and passive suicide, duration and frequency of suicidal ideation, self-control, suicide prevention factors, and readiness to commit suicide. There are five questions in the Beck Scale for Suicide Ideation called screening questions. If the answers indicate an active or inactive suicidal tendency, then the respondent should answer the following fourteen questions. Cronbach's alpha (internal consistency) and concurrent reliability of this scale were between 0.89 and 0.96 and 0.83, respectively. This Scale significantly correlated with Beck Depression and Hopelessness scales (49). This scale in Iran has been validated by Esfahani et al. on the general population of Tehran (50). Cronbach's alpha was 0.89 in the present study.

The collected data were analyzed by descriptive and inferential statistical methods. In the descriptive statistics section, frequency indices, frequency percentages, mean and standard deviation were analyzed. In the inferential section, the hypotheses were analyzed by inferential statistics using structural equation modeling. For data analysis, SPSS software version 21 and AMOS version 24 were used.

Results

In the present study, 573 individuals were studied. Most of the subjects in the sample group were 25-35 years old with mean age and standard deviation of 28.90 and 7.71 years, respectively. In terms of level of education, the majority of subjects, 53.1% (304 persons) were undergraduates and 39.8% (228 persons) were masters and 7.1% (41 persons) were PhD. In terms of gender, 39.3% (225) of the subjects were men and 60.7% (348) of them were women. In terms of marital status 60% (344 persons) were single, 37% (212 persons) were married and 3% (17 persons) were divorced. Table 1 presents the Statistics of central tendency and distribution of research variables disaggregated by gender.

Table 1. Descriptive Statistics of research variables

Variables	M	SD	1	2	3	4
1. Suicide	3.844	4.337	1			
2. Separation from mother	100.247	24.366	0.134**	1		
3. disconnection schema	62.168	18.003	0.524**	0.194**	1	
4. Self-conscious emotions	152.073	22.472	0.276**	0.105*	0.324**	1

**P<0.01, *P<0.05

Before analyzing the data, the assumptions of normality and collinearity were examined, the results of which are presented below. Kolmogorov-Smirnov test to investigate the assumption of normality of the distribution of four variables of suicidal ideation ($z = 1.270$, $p = 0.079$), separation from the mother ($z = 0.442$, $p = 0.990$), domain of disconnection and rejection The schemas ($z = 0.564$, $p = 0.908$), self-conscious affections ($z = 0.559$, $p = 0.914$) were evaluated and with a significance level higher than 0.05 This assumption was assured. Variance Inflation Factor (VIF) and Tolerance Indexes were used to test the collinearity assumption, since none of the values of the tolerance index were less than 0.01 and none of the values of the variance inflation factor were greater than 10, therefore, the

assumption of collinearity can also be assured. As Table 1 shows, the suicidal ideation variable has a significant relationship with the variables of maternal separation, domain of disconnection and rejection schemas, and self-conscious affections, which are 0.13, 0.52, and 28, respectively. At the 0.01 level, these relationships are significant. On the other hand, the maternal separation and severity variable also had a significant relationship with the variable of self-consciousness, which was equal to 0.10 and 0.32, which were significant at the 0.05 and 0.01 levels.

In the following, structural equation modeling was used to investigate direct and indirect effects, the results of which are presented in the form of Fig. 1 and the direct and indirect effects tables.

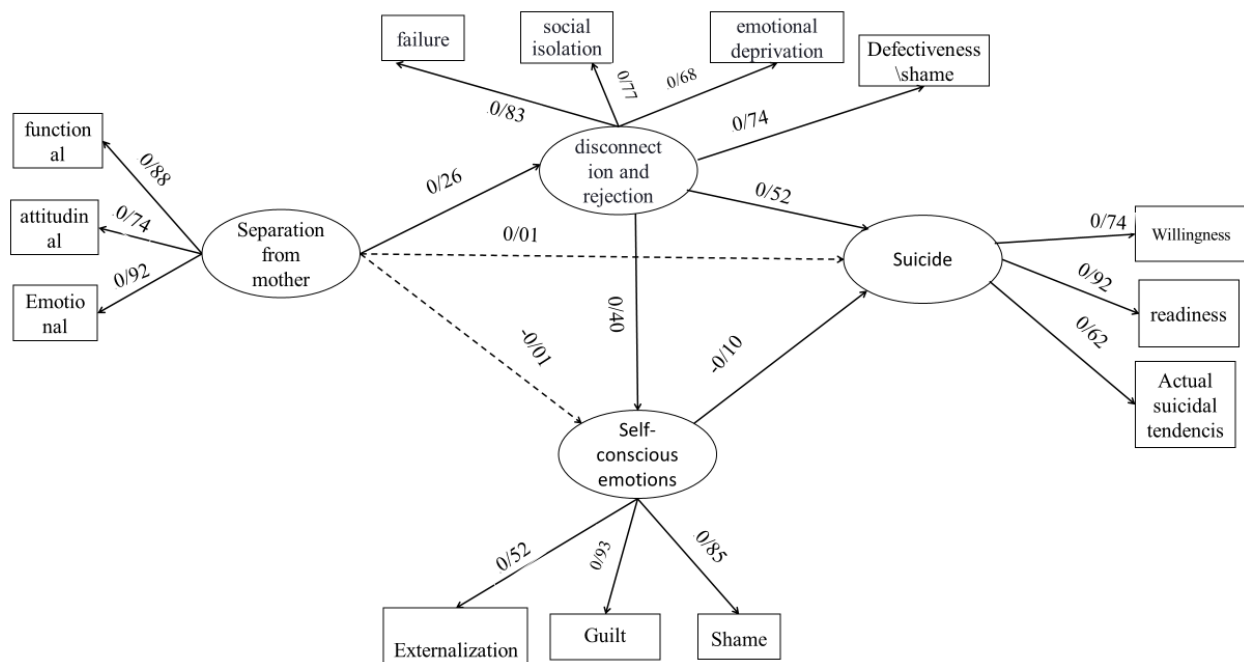


Figure 1. Standard path coefficients of the research variables in the original model

In Figure 2, significant paths are shown as continuous and non-meaningful paths as non-continuous lines. According to the results presented in Figure 2, it can be seen that the coefficients of variable separation from mother to suicide (-0.14) and self-conscious emotions

(-0.05) were not significant also paths related to separation from father to suicide (-0.04) impaired autonomy (0.20) and self-conscious emotions (0.06) were not significant. It can also be seen that the path coefficient of separation from mother to impaired autonomy is 0.27, impaired autonomy path to suicide 0.57, impaired autonomy to Self-conscious

emotions is 0.45 that all of which are significant.

The structural model fitting indices for the whole sample are shown in Table 3 below. As the table shows, all structural model fit indices

except GFI (which is strongly influenced by sample size) show good fit to the model, so the hypothetical model structure of the research is confirmed.

Table 3. Structural Model Fit indices

fit indices	Acceptable domain	Statistics
χ^2		622.418
χ^2/df	Less than 5	3.890
CFI	Greater than 0.90	0.907
IFI	Greater than 0.90	0.908
GFI	Greater than 0.90	0.872
RMSEA	Less than 0.08	0.071
SRMR	Less than 0.08	0.048

The results of Tables 4 and 5 show the direct and mediating effects of research variables and on the basis of which it is possible to confirm or reject the direct and

indirect effects of research variables on suicide.

Table 4. Investigation of direct effects of variables in the research model

Independent variable	Dependent variable	Standardized coefficients	Non-standard coefficients	T	P
separation from mother	suicide	0.001	0.000	0.059	0.953
separation from mother	disconnection	0.260	0.070	5.471	0.001
separation from mother	self-conscious emotions	-0.014	-0.014	-0.305	0.761
Disconnection schema	suicide	0.524	0.122	8.949	0.001
Disconnection schema	self-conscious emotions	0.402	1.504	7.855	0.001
self-conscious emotions	suicide	0.098	0.006	2.147	0.032

According to Table 3, in cases where T-statistic is out of range (+ 1.96 and -1.96) or significance level is less than 0.05, two variables have significant relationship with each other. As can be seen, the direct paths of the separation from mother to the impaired autonomy variable were significant in both women (T = 5.487, β = 0.394) and in men (T = 2.495, β = 0.257). The direct paths of impaired autonomy variable to suicide variable was also

significant in women (T = 5.938, β = 0.464) and in men (T = 5.104, β = 0.557). The direct effect of impaired autonomy to self-conscious emotions was significant in women (β = 0.375, T = 5.138) and men (β = 0.446, T = 4.808). It was also found that the direct paths of the variable of self-conscious emotions to suicide variable was significant only in women (β = 0.139, T = 2.332).

Table 5. Investigation of indirect effects of variables in the research model

Independent variable	Dependent variable	Standardized coefficients	Non-standard coefficients	P
separation from mother	suicide	0.145	0.009	0.001
Disconnection schema	suicide	0.040	0.009	0.028
separation from mother	self-conscious emotions	0.104	0.105	0.001

The Bootstrap method using 5000 times the sampling process was used to determine the indirect effect. According to Table 5, it can be observed that in men, the only indirect effect of the latent variable of separation from mother on the self-conscious emotions was significant ($\beta = 0.013$, $P < 0.05$). In women, however, according to Table 4, it can be seen that the indirect effect of separation from mother on suicide variable ($\beta = 0.103$, $p < 0.05$), separation from mother on self-conscious emotions variable ($\beta = 0.079$, $p < 0.05$), and impaired autonomy on suicide variable was significant ($\beta = 0.013$, $p < 0.05$).

Also, according to Table 4, it can be seen that the indirect effect of domain of disconnection and rejection schemas on suicidal ideation variable was also significant ($\beta = 0.040$, $p < 0.05$). According to Table 4, it can be seen that the indirect effect of separation from mother on self-conscious affect is also significant.

Discussion

The results of the analysis of the fitted model data showed that psychological separation from mother had an indirect effect on suicidal thoughts. Schemas of disconnection and rejection domain had a mediating role in the relationship between psychological separation from mother and suicidal thoughts (the second research hypothesis). Also, psychological separation from mother had a direct effect

on the schemas of disconnection and rejection domain. In addition, schemas of disconnection and rejection domain had a direct effect on suicidal thoughts. These results are consistent with the findings of Dale et al. (19), Mobed and Naderi (20), Borji, et al. (23). Early maladaptive schemas are the underlying laws and assumptions that formed during childhood and adolescence that persisting into adulthood and are usually unconscious. Schemas cause individuals to be susceptible to anxiety and dysfunctional interpersonal relationships and to be at greater risk of psychological disorders, especially depression (51). Research has also shown that anxiety, stress, and depression are strong and important predictors of suicidal thoughts (52). People with early maladaptive schemas may be more likely to report suicidal thoughts because they are more at risk for anxiety and depression. Schemas of disconnection and rejection domain, especially schemas of social isolation and defectiveness/shame, have the most power to predict suicidal thoughts among students. People with social isolation schema, believe that they are somehow different, do not belong to any group, and are different from others. As a result, these individuals experience a greater sense of alienation, loneliness, and isolation. People with defectiveness/shame schema also believe that they are poor and worthless, and others do not like them. They feel

insecure about being with others and therefore avoid social interactions and eventually experience more loneliness (21). Also, it should be noted that studies have shown that one of the predictors of suicide is feelings of loneliness and isolation (53). Thus, people with high levels of social isolation and defectiveness/shame schemas appear to experience more suicidal thoughts because they feel lonely and isolated. On the other hand, failure to achieve psychological separation from parents due to some negative family variables, such as lack of intimacy, cold parenting, rejection, and insecure attachment styles, can lead to a feeling of withdrawal and detachment from the parent. It will provide the context for the formation of intersectional schemas and will put individuals at greater risk of ideation, thinking, or attempting suicide.

According to the results of the present study, the fourth hypothesis was also supported; that is, the schemas of disconnection and rejection domain and self-conscious affects, in addition to directly predicted suicidal thoughts; simultaneously had mediating role between the relationship of the psychological separation from mother and suicidal thoughts. According to the results of studies by Dale et al. (19), and Borji et al. (23), early maladaptive schemas, such as schemas of disconnection and rejection domain, directly predicting suicidal thoughts and mediate the relationship between family contextual variables and suicide. On the other hand, these nuclear schemas, which are largely based on self-conscious affects, especially shame and defectiveness, will be activated in the presence of the stresses of everyday life and will expose one to suicide in response

to emotional distress and hopelessness (24). Besides, in line with the research findings of Jaksic et al. (30) and Cunningham et al. (31), self-conscious affects, especially shame, are associated with suicidal thoughts. In explaining this finding, can be said that dysfunctional and negative family components and variables such as lack of secure and satisfying attachment with parents, unstable and disturbing relationships, lack of basic security needs, acceptance, support, and empathy; there may be unpleasant consequences of failure in separation and individuality. They provide the ground and context that is needed to create the schemas of disconnection and rejection domain. These schemas such as social isolation and defectiveness /shame are usually associated with feelings of inefficient separation, isolation, loneliness, depression, and especially shame and embracement. The sense of shame that comes from these schemas, which include general negative evaluation about self, feelings of vulnerability and hopelessness (the core of the process of ideation, planning, and attempting suicide), can lead to the formation of suicidal thoughts.

Finally, the results showed that psychological separation from mother did not have a direct effect on suicidal thoughts and conscious affects, and therefore the first and third hypotheses of the present study were not supported. These results are inconsistent with the results of the studies of Marcenko et al. (38) and Frank et al. (39). In this regard, we should consider the role of cultural, religious, social, and ethical-cultural components and factors that can sometimes act as protective factors in the process of suicide. The present study was

conducted in Iranian society with a collectivistic culture. Many scholars and theorists (54,55) believe that non-Western and collectivist cultures emphasize the fundamental relationship of human beings to each other and that is, the normative requirement of these cultures which is based on maintaining this interdependence. In fact, in collectivist culture, one sees himself as part of the social relationship around him, especially family relationships; and knows that his behaviors are greatly influenced by these relationships. His perception depends on the thoughts, feelings, and actions of others; and is determined and organized by them. Therefore, others have an active and persistent presence in defining one's identity, and individuality is confirmed only through interpersonal relationships. Also, the importance of being gentle with others and paying attention to others, as well as being gentle in all situations, is mainly emphasized by affects and emotions such as shame (adaptive); and less emphasis is placed on separation from others and on having an independent or autonomous self. Consequently, it seems that in collectivistic cultures, including Iran, the process of psychological separation or separation-individuation is experienced differently from Western and individualistic cultures and conscious affects, especially shame, are regarded as compatible affects and emotions, and therefore psychological separation from the mother may not predict suicidal thoughts. There is no direct relationship between psychological separation with suicidal thoughts and self-conscious affects, and self-conscious affects alone may not mediate the relationship between self-esteem and suicidal thoughts.

The present study has some limitations. This study was conducted among non-clinical student population, and self-assessment questionnaires were used as a research tool, which limits the generalization of results to the general and clinical population. Therefore, it is suggested that in future research, important and influential variables on suicidal thoughts, especially cultural and social constructs, be investigated through other questionnaires and related tools to obtain a clear and relatively comprehensive picture of the suicide. It is also suggested that other research tools and data collection methods, such as interviews, be used to enhance the generalizability of these results. Because of the results of the present study that suggested a significant influence of early maladaptive schemas, as the underlying patterns, mediate the relationship between other variables with suicidal thoughts in addition to the direct impact on suicidal thoughts. Also, to prevent suicidal ideation and suicidal thoughts, as well as modification and control of these thoughts, can be done in clinical interventions with the aim of identifying and targeting the maladaptive schemas, especially the schemas of disconnection and rejection domain. In fact, by evaluating dysfunctional patterns of life, can identify the origins of schemas and coping styles and maladaptive and ineffective responses. In the next step, treat the schemas using cognitive, emotional, or empirical and behavioral techniques and strategies. Cognitive strategies through empirical and rational testing of core beliefs and nonconforming schemas; empirical strategies by shaking schemas and their associated emotions; and behavioral strategies by breaking and modifying

behavioral patterns (especially changing interpersonal and social skills); could help decreasing thoughts and ideation of suicide.

References

1. Rozanov VA, Mid'ko AA. Personality patterns of suicide attempters: gender differences in Ukraine. *Span J Psychol*. 2011;14(2):693–700.
2. Gould MS, Greenberg T, Velting DM, Shaffer D. Youth suicide risk and preventive interventions: a review of the past 10 years. *J Am Acad Child Adolesc Psychiatry*. 2003;42(4):386–405.
3. Swahn MH, Palmier JB, Kasirye R, Yao H. Correlates of Suicide Ideation and Attempt among Youth Living in the Slums of Kampala. *Int J Environ Res Public Health*. 2012;9(2):596–609.
4. Clayton D, Barcel A. The cost of suicide mortality in New Brunswick, 1996. *Chronic Dis Can*. 1999;20(2):89–95.
5. Arensman E, Bennardi M, Larkin C, Wall A, McAuliffe C, McCarthy J, et al. Suicide among Young People and Adults in Ireland: Method Characteristics, Toxicological Analysis and Substance Abuse Histories Compared. *PLOS ONE*. 2016;11(11):e0166881.
6. World Health Organization. Preventing suicide: A global imperative. 2014.
7. Khan MM. Suicide prevention and developing countries. *J R Soc Med*. 2005;98(10):459–63.
8. Kessler RC, Borges G, Walters EE. Prevalence of and risk factors for lifetime suicide attempts in the National Comorbidity Survey. *Arch Gen Psychiatry*. 1999;56(7):617–26.
9. Kessler RC, Berglund P, Borges G, Nock M, Wang PS. Trends in suicide ideation, plans, gestures, and attempts in the United States, 1990-1992 to 2001-2003. *JAMA*. 2005;293(20):2487–95.
10. Zhu X, Tian L, Huebner ES. Trajectories of Suicidal Ideation from Middle Childhood to Early Adolescence: Risk and Protective Factors. *J Youth Adolesc*. 2019;48(9):1818–34.
11. Eskin M, Sun J-M, Abuidhail J, Yoshimasu K, Kujan O, Janghorbani M, et al. Suicidal Behavior and Psychological Distress in University Students: A 12-nation Study. *Arch Suicide Res Off J IntAcad Suicide Res*. 2016;20(3):369–88.
12. Miletic V, Lukovic JA, Ratkovic N, Aleksic D, Grgurevic A. Demographic risk factors for suicide and depression among Serbian medical school students. *Soc Psychiatry PsychiatrEpidemiol*. 2015;50(4):633–8.
13. Wilcox HC, ArriaAM, Caldeira KM, Vincent KB, Pinchevsky GM, O'Grady KE. Prevalence and predictors of persistent suicide ideation, plans, and attempts during college. *J Affect Disord*. 2010;127(1–3):287–94.
14. Baldessarini RJ, Tondo L, Pinna M, Nuñez N, Vázquez GH. Suicidal risk factors in major affective disorders. *Br J Psychiatry J Ment Sci*. 2019;1–6.
15. Shtayermman O, Fayda MG, Knight KL. Risk factors for suicidal ideation among college students: 6-month follow-up. *Int Q Community Health Educ*. 2013;33(1):69–82.
16. Whatley SL, Clopton JR. Social support and suicidal ideation in college students. *Psychol Rep*. 1992;71(3 Pt 2):1123–8.
17. Borjali A, Bahramizadeh H, Eskandari H, Farrokhi N. Psychological flexibility

- mediate the effect of early maladaptive schemas on Psychopathology. *Int J ApplBehav Sci.* 2016;3(4):9–17.
18. GhamkharFard Z, Schneider S, Hudson JL, Habibi M, Pooravari M, Heidari ZH. Early Maladaptive Schemas as Predictors of Child Anxiety: The Role of Child and Mother Schemas. *Int J ApplBehav Sci.* 2014;1(2):9–18.
 19. Dale R, Power K, Kane S, Stewart AM, Murray L. The role of parental bonding and early maladaptive schemas in the risk of suicidal behavior repetition. *Arch Suicide Res Off J IntAcad Suicide Res.* 2010;14(4):311–28.
 20. Mobed F, Naderi F. Relationship between early maladaptive schemas, flexibility of action with suicide ideation among patients with mood disorders of Ahvaz city. *Int J Humanit Cult Stud IJHCS.* 2016;1(1):1223–40.
 21. Young JE. *Cognitive Therapy for Personality Disorders: A Schema-Focused Approach.* 3 edition. Sarasota, Fla: Professional Resource Exchange; 1999. 83 p.
 22. Langhinrichsen-Rohling J, Thompson K, Selwyn C, Finnegan H, Misra T. Maladaptive schemas mediate poor parental attachment and suicidality in college students. *Death Stud.* 2017;41(6):337–44.
 23. Borji M, Farshadnia E, Khorami Z, Ghahari S. Prediction of Suicidal Ideations Based on Meaning in Life and Early Maladaptive Schemas among University Students. *SalamatIjtimai Community Health.* 2019;6(2):196–207.
 24. Bryan CJ, Ray-Sannerud B, Morrow CE, Etienne N. Shame, pride, and suicidal ideation in a military clinical sample. *J Affect Disord.* 2013;147(1–3):212–6.
 25. Bryan CJ, Morrow CE, Etienne N, Ray-Sannerud B. Guilt, shame, and suicidal ideation in a military outpatient clinical sample. *Depress Anxiety.* 2013;30(1):55–60.
 26. Else-Quest NM, Higgins A, Allison C, Morton LC. Gender differences in self-conscious emotional experience: a meta-analysis. *Psychol Bull.* 2012;138(5):947–81.
 27. Tangney JP, Miller RS, Flicker L, Barlow DH. Are shame, guilt, and embarrassment distinct emotions? *J PersSoc Psychol.* 1996;70(6):1256–69.
 28. Johnson RC, Danko GP, Huang Y-H, Park JY, Johnson SB, Nagoshi CT. Guilt, shame, and adjustment in three cultures. *Personal Individ Differ.* 1987;8(3):357–64.
 29. Orbach I. A Taxonomy of Factors Related to Suicidal Behavior. *ClinPsycholSciPract.* 1997;4(3):208–24.
 30. Jaksic N, Marcinko D, Skocic MH, Rebernjak B, Ogrodniczuk JS. Experience of Shame Mediates the Relationship Between Pathological Narcissism and Suicidal Ideation in Psychiatric Outpatients. *J Clin Psychol.* 2017;73(12):1670–81.
 31. Cunningham KC, LoSavio ST, Dennis PA, Farmer C, Clancy CP, Hertzberg MA, et al. Shame as a mediator between posttraumatic stress disorder symptoms and suicidal ideation among veterans. *J Affect Disord.* 2019;243:216–9.
 32. Pace U, Zappulla C. Relations Between Suicidal Ideation, Depression, and Emotional Autonomy from Parents in Adolescence. *J Child Fam Stud.* 2010;19(6):747–56.
 33. Bloom MV. *Adolescent-Parental Separation.* 1ST edition. Gardner Press : distributed by Halsted Press; 1980. 177 p.

34. Hoffman JA, Weiss B. Family dynamics and presenting problems in college students. *J Couns Psychol.* 1987;34(2):157–63.
35. McClintock AS, Anderson T, Cranston S. Mindfulness Therapy for Maladaptive Interpersonal Dependency: A Preliminary Randomized Controlled Trial. *BehavTher.* 2015;46(6):856–68.
36. Bornstein RF. Illuminating a neglected clinical issue: societal costs of interpersonal dependency and dependent personality disorder. *J Clin Psychol.* 2012;68(7):766–81.
37. Furnham A. A Big Five facet analysis of sub-clinical dependent personality disorder (Dutifulness). *Psychiatry Res.* 2018;270:622–6.
38. Marcenko MO, Fishman G, Friedman J. Reexamining Adolescent Suicidal Ideation: A Developmental Perspective Applied to a Diverse Population. *J Youth Adolesc.* 1999;28(1):121–38.
39. Frank SJ, Avery CB, Laman MS. Young adults' perceptions of their relationships with their parents: Individual differences in connectedness, competence, and emotional autonomy. *Dev Psychol.* 1988;24(5):729–37.
40. Enns MW, Cox BJ, Clara I. Parental bonding and adult psychopathology: results from the US National Comorbidity Survey. *Psychol Med.* 2002;32(6):997–1008.
41. Parker G, Kiloh L, Hayward L. Parental representations of neurotic and endogenous depressives. *J Affect Disord.* 1987;13(1):75–82.
42. Kline RB. Principles and Practice of Structural Equation Modeling, Fourth Edition. Guilford Publications; 2015. 553 p.
43. Young JE, Klosko JS, Weishaar ME. *Schema Therapy: A Practitioner's Guide.* 1 edition. New York; London: The Guilford Press; 2006. 436 p.
44. Ghiasi M, Molavi M, Neshatdost H, Salavati M. The Factor Structure of Farsi Version of Young Schema Questionnaire-S3 in Two Groups in Tehran. *J Psychol Achiev.* 2011;18(1):93–118.
45. Tangney JP, Dearing RL. *Shame and guilt.* New York, NY, US: Guilford Press; 2002. xvi, 272 p. (Shame and guilt).
46. Roshan Chesli R, Atrifard M, NooriMoghaddam S. An Investigation of Reliability and Validity of the Third Version of Test of Self-Conscious Affect(TOSCA-3). *ClinPsychol Personal.* 2007;1(25):31–46.
47. Hoffman JA. Psychological separation of late adolescents from their parents. *J Couns Psychol.* 1984;31(2):170–8.
48. Dadsetan P, Haghbin M, Bazaziyan S, H. Tavakoli MR. Psychological Separation from Parents and Academic Achievement: A Survey Based on Sexual and Cultural Differences. *Sci J Manag Syst.* 2004;1(1):1–19.
49. Beck AT, Steer RA. *BSI, Beck scale for suicide ideation: manual.* San Antonio, TX; New York: Psychological Corp. ; Harcourt Brace Jovanovich; 1991.
50. Esfahani M, Hashemi Y, Alavi K. Psychometric assessment of beck scale for suicidal ideation (BSSI) in general population in Tehran. *Med J Islam Repub Iran.* 2015;29:268.
51. Rezaei M, GHolamrezayi S, Sepahvandi MA, Ghazanfari F, Darikvand F. The potency of early maladaptive schemas and personality dimensions in prediction of depression. *Thoughts BehavClin Psychol.* 2013;8(29):77–86.

52. Poursharifi H, Habibi, Zarani F, Ashouri A, Hefazi M, Hajebi A, et al. The Role of Depression, Stress, Happiness and Social Support in identifying Suicidal Thoughts in Students. *Iran J Psychiatry Clin Psychol.* 2012;18(2):99–107.
53. Fakhari A, Rostami M, Hashemi T, Nia BVHA. Relationship of family features, coping styles and stressor life events with suicide attempt. *J Res Behav Sci.* 2014;12(2):155–64.
54. Miller JG. Bridging the content-structure dichotomy: Culture and the self. In: *The cross-cultural challenge to social psychology.* Thousand Oaks, CA, US: Sage Publications, Inc; 1988. p. 266–81. (Cross-cultural research and methodology series, Vol. 11).
55. Marsella AJ, Vos GAD, Hsu FLK. *Culture and Self: Asian and Western Perspectives.* Tavistock Publications; 1985.348 p.