Relationship of family functioning, satisfaction of basic psychological needs and depression considering the mediatory role of emotion regulation difficulty

Behzad Shalchi¹ Masoumeh Esmaeili Shahna¹

¹ Department of Psychology, Faculty of Educational Sciences & Psychology, Azarbaijan Shahid Madani University, Tabriz, Iran.

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Abstract

Introduction: Depression is considered as a disorder that students have a susceptible environment for it and is affected by many factors. Therefore, the purpose of this study was to determine the role of satisfaction of basic psychological needs and family functioning by interdisciplinary role of emotion regulation difficulty in the prediction of depression.

Methods: The method used in the study is descriptive approach by structural equation modeling. The sample consisted of 452 (207 boys and 245 girls) students universities Tabriz who were selected using multistage cluster sampling. Then, they filled out depression Questionnaire, satisfaction of basic psychological needs, family Assessment Device and Difficulties in Emotional Regulation Scale. Data were analyzed by using Pearson correlation coefficient, cronbach alpha and structural equation modeling.

Results: The results of the study showed that the goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI), is greater than 0.90 and root mean square error of approximation (RMSEA), and root mean square residual (RMR) index is less than 0.05. Therefore, the proposed model has had a very suitable fitness with data. In this study, the most direct effect is the satisfaction of basic psychological needs on depression with a coefficient of -0.38 and satisfaction of basic psychological needs has the most indirect effect through emotion regulation difficulty on depression with a coefficient of -0.12.

Conclusion: Based on the results of the present study, it can be concluded that Difficulties in Emotional Regulation As a Mediator of the Relationship between satisfaction of basic psychological needs and family function can explain depression in College Students and, thereby, attention to this matter can lead to the proposal of some recommendations for depression in College Students prevention and treatment.

Correspondence: Masoumeh Esmaeili Shahna, MSc Student. Department of Psychology, Faculty of Educational Sciences & Psychology, Azarbaijan Shahid Modani University, Tabriz, Iran Tel: +98 9185785934 Email: m.esmaeili70@chmail.ir

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Introduction:

Nowadays, university study is considered to be a major challenge for most students, which requires adaptation to many issues and problems. Therefore, some students who do not have the ability to adapt to new problems and experiences are at risk of many Psychological disorders such as depression (1). Depression is defined behaviorally by the American Psychiatric Association (2013) and highlights specific symptoms such as depressed mood, suicidal thoughts, feelings of guilt and powerlessness, lack of energy, insomnia and overeating or loss of appetite (2). In fact, students' depression is considered as a very serious problem, which requires identifying the factors and its underlying mechanism.

Satisfaction of basic psychological needs is one of the factors that have been identified as a key and effective mechanism in depression. But understanding how basic psychological needs are effective in depression is less clear. Self-Definition Theory of Dise and Ryan (2000) is one of the theories presented in this field that provides a framework for understanding the factors affecting psychological motivation. and behavioral functioning (3). This theory believes that all people have three basic psychological needs that include the need for autonomy, competence, and relatedness (4). Autonomy is the need to feel free and authentic in one's choices and actions (5), competence is the need to feel efficient and effective (6), and finally relatedness is the need to feel connected and to care for others, as well as being cared for by others (7). This need in students is characterized by having communication with others in university and relatedness to others .By environment support to meet basic psychological needs, people can achieve well-being, but frustration and failure in Satisfaction of psychological needs, in particular by caregivers, causes passivity, lack of integration, and illness (8).

In this regard, researches of Smojver-Azic, Dorcic and Zivcic-Becirevic (1), Kormas, Karamali and Anagnostopoulos (9), Houle and Philippe (6), Chang et al (10) and Neubauer and Vos (11) showed that the satisfaction of basic psychological needs has relationship with depression.

Although for many students the university is the first experience of separation and living away from

home, friends, romantic partners and familiar environment and for the first time students undertake complex obligations and responsibilities without direct help of their families (9), family functioning may have important role in students' depression. Family functioning is understood as a relationship and interaction between the family members (12) and it is considered as an important aspect of family environment that affect children physical, social and emotional health (13).

Disturbance in family function by creating a stressful environment can increase students' depression (14,15). Evidences such as research by Smojver-Azic and et al (1), Souza et al (12), Ghamari (13), Shi et al (16) and Yee and Sulaiman (17) also showed that family function plays an important role in depression.

According to the above, it seems that family function and satisfaction of basic psychological needs are related to depression of students, but this relationship does not always directly lead to depression, but mediating factor, such as emotion regulation difficulty can be involved here. Emotion regulation difficulty refers to emotional regulation processes that eventually disrupt the person's adaptive performance (18). They are known to be a dangerous factor in starting and maintaining depression (19). Students, who use inappropriate emotion regulation strategies, cannot afford to control their own living conditions in stressful situations and academic environments; therefore, they become depressed because of helplessness. Research of Berking, Wirtz, Svaldi and Hofmann (19), Folk, Zeman, Poon and Dallaire (20), Joormann and Vanderlind (21) and Radke et al (22) showed that the emotion regulation difficulty plays an important role in the starting and recurrence of depression disorder.

As mentioned above, students are always faced with many problems at the university that can increase depression. Here, many processes including the satisfaction of basic psychological needs, family function and emotion regulation difficulty can result in depression. But with a quick look at previous studies, one can see that most studies emphasis on one aspect of depression and the role of the mediatory variable has been less relevant. Therefore, it seems that to obtain deeper understanding and to prevent the risk of depression, investigating of factors that are directly or indirectly involved in this process is necessary. Therefore, considering the influential backgrounds and the role of mediators of emotion regulation difficulties, the present study aims to provide a causal and comprehensive model (Figure 1).

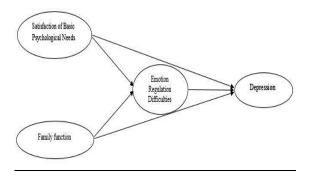


Figure 1. Conceptual Model of the present study

Methods:

The research method in this study was descriptive and structural equation modeling was used. The statistical population in this study was all students in the city of Tabriz during 2016-2017. Multi-stage cluster sampling method and the Tabachnick and Fidell formula (2001) were used. They provided this formula (N > 50 + 8m (m = thenumber of predicted variables)) for calculating the sample size according to the number of predictor variables. In this study, according to the formula, the sample size should be greater than 186; the research was investigated with 452 samples. The method of sampling in the present study was multistage cluster sampling. In this study, from all students of Tabriz three universities, from each of universities one faculty, from each faculty one department, and from each department five classes have been selected as sample. In the first stage, after coordinating and obtaining permission from educational units, subjects or research sample was selected. In the second step, noting that all the information obtained from answering the questionnaire is confidential and participants can be aware of the results of questionnaire by e-mail or telegram ID, the research sample was determined and the justification of the plan and their informed consent to participate in the research was done. Finally, in the third stage, questionnaires were completed by subjects in a calm environment. In the present study, descriptive statistics method was used to analyze the data, structural equations was used to determine the share of each component, and the correlation matrix was used for data analysis using SPSS 21 and LISREL 8.5 software.

Depression Questionnaire: this questionnaire is a short form of Beck's depression questionnaire that is edited by Mansour and Dadsetan (2011). It consists of 13 questions and expresses the specific symptoms of depression. The highest and lowest scores are 39 and zero. For the study of convergent validity of this questionnaire, the main questionnaire (21 questions) was used. The correlation coefficient between the two forms of the questionnaire was 0.67 (23). Using Cronbach's alpha, reliability of this questionnaire was 0.91 that is very satisfactory. The validity of this questionnaire repeatedly has been considered (24). In the present study, the reliability of the test was calculated by calculating the Cronbach's alpha coefficient and was 0.93.

Family Function Questionnaire: This scale has been developed for family functioning based on McMaster's model. This tool was designed in 1983 by Epstein, Baldwin, and Bishop, which has 53 items and it is designed to describe the structural characteristics of the family. This scale evaluates the family function in the frame of seven factors. These factors are: problem solving, communication, role play, companion emotional blend, behavioral control, and overall performance (25). According to Sanai (2001), this questionnaire has been repeatedly surveyed in Iran. With respect to the alpha coefficients of the subscales, the reliability of this test is reported between 0.72 and 0.92. About validity of this questionnaire, it is satisfactory and acceptable (26).

In this study, the reliability of the test was calculated by calculating the Cronbach's alpha coefficient that obtained 0.92.

Emotion Regulation Difficulty Questionnaire: this questionnaire was developed by Graz and Romer (2004). To evaluate emotion regulation difficulties, it is more comprehensive than existing tools in this field. It consists of 36 items and 6 subscales including disapproving emotional responses, difficulty in handling targeted behavior, difficulty in controlling impulse, lack of emotional awareness, limited access to emotional regulation strategies, and lack of emotional transparency. Questions of this scale are scored on the basis of the five-point Likert score, and higher scores on this scale indicate a greater difficulty in emotion regulation. According to Gratis, validity and reliability of this questionnaire is 0.93 and Cronbach's alpha coefficient is 0.80 (27). According to the study of Azizi et al (28) Cronbach's alpha coefficient is 0.90 in the present study, the generally Cronbach's alpha coefficient is 0.90.

Satisfaction of Basic Psychological Needs Questionnaire: this questionnaire consists of 21 questions and includes three scales of autonomy, competence, and relatedness. This questionnaire is about satisfaction of basic psychological needs in life and higher scores indicate more satisfaction of needs (10). The reliability of this scale was calculated on the basis of the results of the two tests, and the correlation coefficient from 0.67 to 0.77was approved for different sub-scales. Convergent and diagnostic validity of this scale was confirmed in Iran and the internal consistency of this scale was calculated in terms of Cronbach's alpha coefficient and correlation coefficient from 0.83 to 0.91 was confirmed (29). In this study, by calculating Cronbach's alpha coefficient, reliability of test was 0.80.

Results:

In the present study, totally 452 subjects completed questionnaires. The subjects' age ranges from 18 to 29 years old with average of 22.65 and standard deviations of 2/68. Table 1 indicates the average and standard deviation of the subjects as well as the correlation matrix between the research variables.

As shown in Table 1, the highest correlation coefficient was found between family function and satisfaction of basic psychological needs that was significant at the level of P < 0.01 (r=0.58) and the lowest positive correlation coefficient was found between family function and depression that was significant at the level of P < 0.01 (r = 0.34).

To estimate the model, the maximum likelihood method and to examine the fit of the model, chi square indices (X^2) , chi square index on degree of free (X^2/df), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI), root mean square error of approximation (RMSEA), and root mean square residual (RMR) are used. If chi square is not statistically significant, it indicates a very good fit, but since this index is often found significant in samples larger than 100, so it is not a suitable index for examining fit of the model. As chi square index on degree of freedom is smaller than 3, it represents a very favorable fit. If CFI, AGFI, GFI index is greater than 0.90 and RMSEA and RMR is smaller than 0.05, it indicates a favorable fit and smaller than 0.08 indicates a proper fit.

As shown in Table 2, CFI, AGFI, GFI index is greater than 0.90 and RMSEA and RMR is smaller than 0.05, it indicates proposed model fit is highly desirable. The model is presented in Figure 1.

In the structural model, the significance of the path coefficient is determined using (t-value) t, if the value of t is from 1.96 to 2.57, the relationship between two structures is significant at P<0.5 level. If the value of t is greater than 2.57, it indicates significance of relationship in P < 0.1.

According to the obtained information (Table 1, Figure 2 & 3), with coefficient of -0.38, the most direct effect is effect of the satisfaction of basic psychological needs on depression.

N=452	1	2	3	4	Average	Standard deviation
1 Satisfaction of	1				100.67	15.27
BasicPsychological Needs	1				100.07	13.27
2 Family function	0.58**	1			184.88	26.66
3 Difficulties in Emotional	0.50**	0.5(**	1		01.10	21.22
Regulation	-0.58**	-0.56**	1		91.19	21.23
4 Depression	-0.42**	-0.34**	0.45**	1	6/95	8.39

Table 1. Correlation matrix and descriptive statistics among research variables

** P< 0.1 * P< 0.5

Table 2. Model fit indices											
Model fit indices	X ²	X²/df	CFI	AGFI	GFI	RMSEA	RMR	Standardized RMR			
Index values	0.66	0.66	1.0	0.99	1.0	0.0	0.26	0.80			

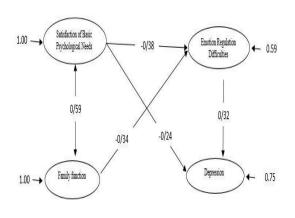


Figure 2. Standardized loads of the path model

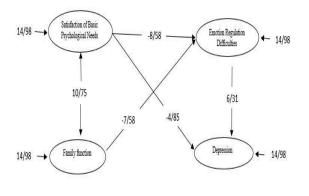


Figure 3. t coefficient of the path model

With coefficient of -0.12, satisfaction of basic psychological needs has the most indirect effect on depression through emotion regulation difficulties. After satisfaction of basic psychological needs, with coefficient of 0.32, emotion regulation difficulty has the most direct effect on depression. The effect of family function on depression through emotion regulation difficulty has the coefficient of 0.10. And with coefficient of 0.59, family function and satisfaction of basic psychological needs are interconnected.

Conclusion:

Depression is a disorder that affects all population of the society, especially students, with

many personal and social consequences. Hence, identifying the factors associated with depression in students can play an important role in preventing and treating it. Therefore, the present research investigates the structural relationship between family function and satisfaction of students' basic psychological needs considering the mediatory role of emotion regulation difficulty in depression.

In this research, it is shown that the hypothesized model is highly fitted with empirical data and is consistent with with researches Neubauer and Voss (11), Yee and Sulaiman (17), Freed, Rubenstein, Daryanani, Olino, and Alloy (30) and Schäfer et al (31). The results of this study showed that there is a significant relationship between family functioning and satisfaction of basic psychological needs through the difficulty of regulating excitement with depression. To explain this result, it can be stated based on Seligman's learned helplessness theory (1975) that gaining reinforcement for the uncontrollability of childhood events leads to a particular person's view of the uncontrollability of the world or its important aspects that results in depression in adulthood (32).

In fact, when the family fails to function properly and fails to meet satisfaction of basic psychological needs, it is most possible that students gain an inappropriate attitude toward themselves, including the inability to control and express emotions, and in dealing with unpleasant events, they do not apply the proper emotion regulation and often internalize problems that finally lead to depression.

In the present study, the path of the relationship between emotion regulation difficulty and depression is significant and positive; that is consistent with researches of Berkking et al (19), Folk et al (20), Joormann (21), Radke et al (22) and Schäfer et al (31). In fact, the results of this study showed that emotion regulation difficulty is known as an important factor for depression. Students who cannot regulate their emotions and are not aware of their emotions adequately, in dealing with stressful daily issues cannot cope with events and usually use non-adaptive strategies such as suppression. The purpose of suppression is often to reduce negative emotions, but this process also reduces the positive emotions (33). Negative excitement increases negative memories (34), and any negative memory, in turn, leads to an increase in negative emotions. In fact, if a person does not have the ability to regulate his emotion timely and properly, this vicious circle will continue and leave the person with unpleasant emotion and eventually can cause depression.

Other findings of the present study is that the path of the relationship between the satisfaction of basic psychological needs through emotion regulation difficulty and depression is directly and indirectly significant and has a reversed manner that is consistent with the researches of Curmas et al (9) Houle and Philippe (6), Chang et al (10), Neubauer and Voss (11) and Nishimura and Suzuki (35).

Based on the theory of self-determination, satisfaction of basic psychological needs is associated with physical and mental health. When basic psychological needs are protected, individuals internalize values and aspirations in personal growth, well-being and internal health (36). With the internalization of values, students see existing problems as a challenge to solve, not a problem against their aspirations; versus when basic needs of students are not satisfied, their activities are always reliant on external rewards and values such as teacher reinforcement and so on in order to achieve goals and feeling of competence, and in the case of teacher rejection or failure in their goals, they see it as threat for their values, therefor it leads to selfinferiority complex that causes depression.

Individuals, who get self-inferiority complex, are not able to use emotion regulation strategies, and this can lead to depression. In other words, students whose basic needs are satisfied are experiencing more positive emotions related to the spreading of the views of individuals about positive assessment of the status quo and reduce depression (37). When a person evaluates the status quo and the support of the others positively, he can regulate his emotions easily and fight against events. In fact, according to the theory of Lazarus (1966) emotions emerge from the individual's continuous cognitive assessment of the environment. A cognitive assessment that includes primary appraisal and secondary appraisal processes. Primary appraisal refers to individual assessment of Incidental events,

whether this is a pleasant and a positive or a negative and stressful event. A secondary assessment refers to an assessment of the resources and options available to deal with the incident pointing out that if we have the necessary and sufficient resources to deal with the threat, then the threat has less importance, but if our resources are not sufficient to cope with the threat, it is a stressful threat (32). When the environment supports the satisfaction of needs, people have a positive assessment of environment, and in the face of problems, they have feelings of competence and ability, they can regulate and manage effectively the created emotions, thus they are less likely to be depressed.

The present study showed that there is a positive and significant relationship between family function and satisfaction of basic psychological needs that is consistent with researches of Morris, Silk, Steinberg, Myers and Robinson (38), Nanda, Kotchick and Grover (39) and Kocayoruk (40). The proper functioning of the family along with increasing emotional responsiveness and creating empathy among family members increase sense of competence and relatedness to others. In other words, the proper functioning of the family can be companion with the satisfaction of basic psychological needs. But if the family has an inappropriate function, the control of the behavior of family members increases and family's supportive role decreases, and thus it can be a threat to the relationship between parents and children, because parent's love can be conditional on meeting their expectations, and in long term, it affects the relationship between children and parents and children can experience alienation and loneliness (41). As a result, basic needs of people do not get satisfied and they get a sense of control and loneliness. In addition, the satisfaction of basic psychological needs can be effective in the performance of students' family. When students experience satisfaction of needs outside of the family (university environment), it can increase proper functioning of family by creating a healthy family relationship between family members.

In the present study, the pathway related to the relationship between family function through emotion regulation difficulty and depression is significant and negative; that is consistent with

researches of Criss et al (42), Smojver-Azic et al (1) and Fosco and Grych (43). Although most students are away from the family, family function always causes depression in students indirectly. In fact, what happens in the family and how a family functions can be considered as a key factor against the present and future risks (13). When the function of family is inappropriate, ineffective schemas are formed due to the inability to regulate emotion. According to Beck's theory, the inefficiencies schemas remain hidden until they are exposed to stress (44). If students are struggling with university stress, an inefficiency scheme developed in childhood is activated during this period, and the person loses the ability to regulate emotion and by an inappropriate emotion regulation, he can develop depression. It should be noted that this study has encountered some limitations. These limitations include the impossibility of sampling from all cultures and communities and using the self-report questionnaire to measure variables. Regarding that there are many cultural differences in different groups of society and each group may prefer specific strategies to deal with their problems, hence it is suggested that comparative studies be carried out in this field and more accurate measurement methods along with questionnaires for the purpose of obtaining more information to be used.

In sum, it can be concluded that there is a meaningful relationship between family functioning and satisfaction of basic psychological needs through emotion regulation difficulty with depression. Considering the difficulty in regulating emotion as a mechanism for students' depression and the role of family function as an important causal role in it, it is possible to reduce the most common causes of students' depression Symptoms by increasing emotion regulation in childhood, and by creating supportive environments that leads to satisfaction of basic psychological needs, one can prevent emotion regulation difficulties, and doing so, it reduces depression and its consequences.

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