Journal of Fundamentals of Mental Health

Mashhad University of Medical Sciences

Psychiatry and Behavioral Sciences Research Center

Original Article

Prediction of pregnancy distress based on emotional self-disclosure and self-regulation

Khadige Abediny[1]; *Kazem Barzegar Bafrooei[2]

[1]*M.A. student of educational psychology, Yazd University, Yazd, Iran.*
[2]*Assistant professor of Department of Psychology and Educational Sciences, Faculty of Humanities and Social Sciences, Yazd University, Yazd, Iran.*

Abstract

Introduction: Pregnancy distress is a particular type of stress which refers to maternal fears and distress about pregnancy including distress about fetus health, physical symptoms, parenting, relationships with others and childbirth. The present study aimed to predict pregnancy distress based on the emotional self-disclosure and self-regulation.

Materials and Methods: The statistical population of this descriptive study included all pregnant women referred to a pregnancy care centers in June 2016, among whom 240 were selected based on convenient sampling. The questionnaires of pregnancy distress, emotional self-disclosure, and self-regulation were used for collecting data. The collected data were analyzed by using Pearson correlation coefficient and multiple regression analysis.

Results: The results indicated a significant relationship between pregnancy distress and emotional self-disclosure subscales such as depression (r= -0.793), happiness (r= -0.121), jealousy (r= -0.13), anxiety (r= 0.317), relaxation (r= -0.224), fear (r= -0.518), and emotional self-regulation sub-scales such as prior-focused regulation strategies (r= -0.214) and response-focused regulation strategies (r= -0.317). Based on the results of multiple regression among emotional self-disclosure dimensions of depression, fear at the negative level of 0.01 and jealousy at the positive level of 0.05 could predict pregnancy distress. Further, prior-focused self-regulation strategies played a significant role in predicting pregnancy distress at the level of 0.05.

Conclusion: According to the results, emotional self-discourse and self-regulation can predict pregnancy distress. The results can have a considerable effect to inform pregnant women about the effects of emotional self-disclosure and self-regulation skills on the pregnancy distress.

Keywords: Distress, Emotion, Pregnancy, Self-disclosure, Self-regulation

Please cite this paper as:
Abediny K, Barzegar Bafrooei K. Prediction of pregnancy distress based on emotional self-disclosure and self-regulation. Journal of Fundamentals of Mental Health 2018 Jul-Aug; 20(4):201-209.

***Corresponding Author:**
Department of Psychology and Educational Sciences, Faculty of Humanities and Social Sciences, Yazd University, Yazd, Iran.
k.barzegar@yazd.ac.ir
Received: Apr. 09, 2017
Accepted: Apr. 22, 2018

Introduction

Pregnancy is a sweet experience and a path to reaching perfection for every woman, which changes many aspects of the life of a woman and contributes significantly to her health, happiness, and social role (1). This attractive experience is associated with issues and distress which are placed in a particular category of anxiety, called pregnancy anxiety. Atkinson and Hilgard defined the anxiety as an unpleasant and obscure emotional state which is associated with distress, panic, fear and inquietude (2). Loble described the pregnancy anxiety caused by physical, social and emotional changes, as well as parenting issues and financial distress, all of which are a potential source of stress (3). Loble et al. concluded that pregnancy-related stress may be stronger than the general stress. New approaches on stress in pregnant women suggest that pregnancy-related stress is a particular type of stress referring to the maternal fears and distress related to the pregnancy and includes distress about fetus health, physical symptoms, parenting, relationships with others, and childbirth (3). In another study, the results indicated that women who experience excessive anxiety during pregnancy are exposed to many complications such as premature childbirth, low infant weight at birth, which is regarded as one of the main causes of infant mortality (4). In addition, other common complications related to this period, which are exacerbated by pregnancy distress including pregnancy toxicity, impairment in maternal and child relationship (5), emotional impairments (6), impairment in growth and cognitive and hyperactivity evolution (7), dyssomnia in infant (8) and behavioral problems in early childhood (9), long-term cognitive problems lasting until adolescence (10), and the probability of unplanned cesarean (11). Therefore, it is necessary to identify the factors associated with this anxiety in order to prevent the problems caused by high anxiety in pregnancy and take appropriate measures to control these problems. Since the mental status of pregnant mothers has been neglected by health care providers despite the significance and high prevalence of anxiety in pregnancy and its complications on mother and child (7) it seemed that the self-disclosure is one of the factors affecting anxiety. Self-disclosure involves the process of revealing thoughts, inner feelings of the person and his previous experiences for another person. The exchange of internal information is accounted for the original process itself through which the relationship among individuals expands. In fact, self-disclosure forms an important part of the interpersonal relationships (12). Due to the profound physical and mental changes in the mother, self-disclosure is recognized as a crisis in the life of a woman during pregnancy (13) and can pass this crisis by using self-disclosure.

There are several theories regarding how emotional disclosure leads to positive psychological processes. Based on cognitive inhibition theory, not talking about the facts, minds, and important experiences keeps the mind active to prevent the appearance of emotions and thoughts. This process leads to the chronic stressfulness and causes disorders such as anxiety, while the disclosure of inhibition reduces anxiety and other psychological problems (14). In the cognitive change theory, the person rebuilds life events, better understands them, and finds a new meaning of life in events by exposing emotions in facing harmful events. This process makes emotional experiences absorbed in the cognitive system with a new structure, and the person adopts it as one of the ordinary experiences of life (15).

Emotional self-regulation is another variable, which can contribute to the reduction of the anxiety during pregnancy. Although the excitements have a biological basis, individuals are able to influence the ways in which these emotions are expressed. Theorists believe that those who are not able to manage their emotions properly against everyday events, mostly show diagnostic symptoms and internal disorders such as depression and anxiety (16). Thomson expressed that self-regulation is one of the skills which can enable a person to resist stressful factors (17). A person benefits from high emotional health by more self-regulation skills (18).

In fact, the emotional regulation is a determining factor for mental health (19) and individuals can use this ability to determine when, where, and how to experience each experience (20). An individual may experience mental disorders in the absence of this skill (21). Aldao et al. (21) reported that people who cannot effectively manage their emotional responses to life events experience more

severe and prolonged periods of unpleasantness leading to depression and anxiety. In another study, Ghorbani revealed that the deep emotional disclosure through the "unconscious reopening" technique on the physical and immunology level led to a significant increase in the level of helping cells, while reducing the anxiety, depression, interpersonal support, and obsessive-compulsive disorder in the psychological stress level (22). In addition, according to Gratz and Gunderson, teaching emotional regulation skill has a positive effect on reducing self-harm, decreasing the symptoms of depression, anxiety and stress, and increasing the self-esteem and positive social interactions (23).

In another study by Stirling et al., the results indicated that both verbal/written experimental groups showed better immunity performance at the end of the disclosure sessions, compared to the control group, although the verbal disclosure group had relatively better results (24). In a review by Akbari Nakhjavani and Badri, the results indicated that emotional disclosure can improve the quality of life among women suffering from the breast cancer (25). Further, Pourmohseni and Shirzad suggested that self-disclosure and intimacy in married women with social phobias are significantly lower, compared to the healthy women, while the emotional processing of the married women with social phobia is more than that of healthy controls (26). Monazzami Tabar et al. emphasized the effectiveness of written emotional disclosure on reducing the symptoms of anxiety, depression and stress in veterans with post-traumatic stress disorder. The results indicated the effectiveness of this type of therapy to reduce the symptoms of depression, anxiety and stress in the experimental group, compared to the control group (27). Martin and Dahlen found that anxiety symptoms are predictable by emotional self-regulation (28). On the other hand, Ahmadian Verghan et al. concluded that emotional regulation strategies can be considered as predictor variables for the severity of anxiety symptoms (29).

Generally, it is concluded that research on pregnancy distress in pregnant women is one of the future fields in pregnancy research. Thus, the present study aimed to evaluate the predict pregnancy anxiety based on self-disclosure and self-regulation variables.

Materials and Methods

The present research is a descriptive and correlational study. The emotional self-disclosure and self-regulation and prenatal distress are considered as predictor and criterion variables in this study, respectively.

The statistical population of this study included 263 pregnant women referred to one of the pregnancy care centers during a month in Yazd city. The sampling was based on convenient sampling, among whom 236 were selected by using Krejcie and Morgan table. Questionnaires were distributed to 240 people and after filling the questionnaire and removing the incomplete questionnaires, this number was reduced to 227 people. The condition for entering the study was pregnant and having a pregnancy case at the pregnancy care center and the consent of the person to collaborate on the research. In the process of data collection, before distributing the questionnaires, the information about the research subjects was given to the participants as far as the information was not affected by the results of the research. After ensuring the presence of the volunteers and necessary justification, three questionnaires were presented to the participant. During the response, the researcher was asked to answer the questions.

Research instrument

A) Prenatal Distress Questionnaire (PDQ): PDQ was prepared by Alderdice and Lynn (2011) including 12 items and three subscales for distress about birth and infant, weight and body image, and excitement and relationships, which are used to measure pregnancy-specific distress. The items of the questionnaire were scored based on a five-point Likert scale (1-5 points). Loble et al. obtained the Cronbach's alpha of this questionnaire between 0.80 to 0.81. The reliability of the retest for this questionnaire was equal to 0.75 in the study of Pluess et al. The convergent validity of this questionnaire was assessed by comparing with the questionnaires of general stress assessment, perceived stress and meaningful status-attribute anxiety. Yousefi investigated the reliability of the whole questionnaire through Cronbach's alpha (r=0.78). In addition, the reliability for distress factors about the birth and infant, weight and body image, and excitements and relationships were 0.72, 0.65, and 0.66, respectively (3). The

factor analysis confirmed the existence of the three above-mentioned scales. In the present study, the reliability of the total pregnancy-anxiety questionnaire was obtained as 0.75.

B) Emotional Self-disclosure Scale: It was developed by Snell in 1997 and was normalized in Iran by Saadati Shamir and Gholami. The questionnaire is related to the extent to which one person expresses his feelings and excitement with others. In each question, the person answers the questions with a five-graded scale from “I do not share at all with my friends" to "I will share thoroughly and with details". This scale consisted of 40 items and 8 sub-scales. The subscales of this questionnaire included depression, happiness, jealousy, anxiety, anger, calmness, disinterest, and fear. The psychometric properties of this tool included validity and reliability, which were reported 0.71 and 0.89 by Snell (1997), respectively. Saadati Shamir and Gholami evaluated the reliability of the instrument in Iran. The results of the internal consistency survey of these eight subscales indicated that these coefficients ranged from 0.65 to 0.83, indicating the optimal reliability of these factors. In addition, the results obtained from evaluating the composite reliability for 8 subscales factors represented that these coefficients ranged from 0.70 to 0.94, indicating the optimum reliability for these factors (30). In the present study, the reliability coefficient was ranged from 0.67 to 0.89 for eight subscales factors.

C) Emotion Regulation Strategy Questionnaire: The questionnaire had 28 components which Schutte, Manes and Malouff developed in 2009 to review and measure the emotional regulation strategies proposed in the process pattern (Gross and John 2003, John and Gross, 2007). The questionnaire had seven subscales for position selection and modification, expansion of attention, cognitive change, empirical adjustment, behavioral modification and biological adjustment. In this questionnaire, four subscales of position selection, position modification, expansion of attention and cognitive change were placed on the category of emotional prior-focused regulation strategies, while the three subscales of empirical adjustment, behavioral modification and biological adjustment belonged to the category of response-focused strategies. There are four components for each of the strategies related to emotion regulation process strategies questionnaire. Two components in each set focused on reducing negative excitements, while two articles focused on increasing positive emotions. Structural validity of this scale was investigated through factor analysis and seven main factors and two second-order factors were extracted. In addition, the concurrent validity of the scale was estimated with the positive and negative mood schedules of Watson et al., emotional Intelligence scale of Shutte, and the quality of life scale by Diener et al. The subscales of the questionnaire had acceptable validation with a range of 0.65 to 0.88. By validating the questionnaire, which was performed by Hasani and Kadivar, the Cronbach's alpha range (57.0 to 94.0%) indicated an appropriate internal consistency of the Persian version of the questionnaire and its subscales. Furthermore, scores of component and the total scores of correlational subscales had a significant correlation (0.44-0.72) with each other and the value of the coefficients of retest (0.56-0.74) indicated the reliability of the scale. The exploratory and confirmatory factor analysis supported the 7-factors pattern of emotion regulation process strategy questionnaire. The degree of internal relations between the subscales was relatively high (0.31 to 0.87). Finally, the existence of specific patterns of correlation coefficients between the subscales of the Persian version of the emotion regulation process strategy questionnaire with positive emotion, negative emotion, and depressive symptoms indicated the good standard scale validity (31). The reliability achieved in this study ranged between 0.58 to 0.78 for seven factors.

After collecting the data, the data were analyzed in the program of SPSS-23. For statistical analysis, Pearson correlation coefficient and regression analysis were used in a simultaneous manner.

Results

Based on the descriptive findings, the mean age of the participants and the standard deviation were 27.8 years and 5.3 years in the present study. The oldest and youngest participants were 42 and 16 years old, respectively. Among the 227 participants, 59 were employed, 131 were housewives and 20 were students, and 17 participants did not

provide information about their jobs. Regarding the level of education, 59 cases had diplomas, 26 cases had associate degrees, 97 cases had bachelor degrees, 28 cases had master's degrees and 17 participants did not answer this question. In terms of the number of pregnancies, 87 respondents were in their first pregnancy, 76 participants were in the second pregnancy, 30 cases were in the third pregnancy, 10 cases were in the fourth pregnancy and 6 cases were in the fifth pregnancy while 18 respondents did not answer this question.

Table 1 presents descriptive statistics including the mean and the standard deviations of the subjects based on the research variables.

Table 1. Mean and standard deviation of research variables (n=226)

Variables	M	SD
Depression	11.9	3.93
Jealousy	16.4	3.84
Anxiety	13.56	4.24
Happiness	11.52	4.32
Anger	14.02	4.29
Calmness	13.59	3.71
Disinterest	17.02	4.21
Fear	12.59	4.03
Response-focused regulation strategies	31.01	9.86
Prior-focused regulation strategies	36.44	9.78
Pregnancy distress	36.56	9.33

As presented in Table 1, the mean and standard deviations of the values related to the self-disclosure scales in eight subscales of depression, jealousy, anxiety, happiness, anger, calmness, disinterest, and fear. Considering the emotional regulation in two subscales of response-focused regulation strategies and prior-focused regulation strategies, the mean and standard deviation were 13.01 (9.86), and 36.44 (9.78), respectively. Eventually, the mean and standard deviation on the scale of pregnancy distress were 36.56 and 9.33, respectively.

Table 2. Correlation coefficients among research variables

	1	2	3	4	5	6	7	8	9	10	11
1. Depression	1										
2. Happiness	0.246**	1									
3. Jealousy	-0.069	0.230**	1								
4. Anxiety	0.295**	0.207**	0.049	1							
5. Anger	0.233**	-0.054	0.166*	0.106	1						
6. Calmness	0.211**	0.403**	0.328**	0.340**	0.135*	1					
7. Fear	0.433**	0.362**	0.107	0.327**	0.000	0.314**	1				
8. Disinterest	-0.087	0.124	0.351**	0.096	0.297**	0.384**	0.082	1			
9. Prior-focused regulation strategies	0.161*	0.182**	-0.005	0.263**	0.033	0.234**	-0.031	-0.001	1		
10. Response-focused regulation strategies	0.314**	0.197*	-0.057	0.289**	-0.178*	0.208**	0.197**	-0.041	0.321**	1	
11. Pregnancy distress	-0.793**	-0.217**	0.137*	-0.317**	-0.088	-0.244**	-0.518**	0.118	-0.214**	-0.317**	1

The results of the Pearson correlation coefficient indicated that the subscales of depression have the highest correlation coefficient with negative pregnancy distress (-0.793), which indicates that an increase in the self-disclosure reduces the pregnancy distress in this area. The lowest correlation coefficient is related to the subscale of calmness in the negative direction with the number of (-0.888). In the case of emotional regulation, the prior-focused regulation with the number of (-0.317) has the highest correlation on this scale with pregnancy distress, which suggests that more prior-focused regulation strategies results in reducing the pregnancy distress.The statistical method of multiple regression analysis was used to investigate whether each of the predictors assumed variables (self-disclosure and self-regulation) are a significant predictor of pregnancy distress. Table 3 represents the results of this statistical method.

Table 3. A summary of the results of multiple regression models for predicting the pregnancy distress

Model	F	Sig.	Determination coefficient	Correlation coefficient
1	50.82	0.0001	0.70	0.83

As shown in Table 3, about 70% of the variance of pregnancy distress is explained by two emotional self-disclosure and self-regulation variables.

Table 4. A summary of the results of multiple regression models for prediction

Predictor variable	Standard coefficients		Non-standard coefficients		
	B	Standard error	Beta	T	Sig.
1. Depression	-1.578	0.113	-0.668	22.760	0.000
2. Happiness	0.136	0.094	0.063	1.443	0.151
3. Jealousy	0.251	0.102	0.103	2.451	0.015
4. Anxiety	-0.034	0.094	-0.015	-0.357	0.772
5. Anger	0.120	0.095	0.055	1.270	0.205
6. Calmness	-0.217	0.120	-0.086	-1.809	0.72
7. Fear	-0.551	0.107	-0.238	-5.519	0.000
8. Disinterest	0.119	0.098	0.054	1.216	0.225
9. Prior-focused regulation strategies	0.098	0.040	-0.103	-2.469	0.014
10. Response-focused regulation strategies	0.001	0.041	0.001	0.030	0.976

Based on the results of Table 4, self-disclosure in the field of depression, jealousy, and fear, as well as prior-focused regulation strategies are the best predictor of pregnancy anxiety.

Discussion

The present study aimed to investigate the relationship between emotional self-disclosure and self-regulation with pregnancy anxiety, predict the pregnancy anxiety and its rate through these variables. The results indicated that emotional self-disclosure components (depression, happiness, jealousy, anxiety, calmness, and fear) and self-regulation (prior-focused regulation strategies and response-focused regulation strategies) are related to pregnancy anxiety. Among the predictor self-disclosure variable, the components of depression and fear predicted the pregnancy anxiety in the negative direction, while jealousy predicted the pregnancy anxiety in the positive direction. Regarding the predictor variable of self-disclosure, the prior-focused regulation strategies can predict the pregnancy anxiety. These findings indicate the role and the importance of self-disclosure and self-regulation in regulating pregnancy distress.

Regarding the relationship between pregnancy anxiety and emotional self-disclosure, the results indicated that the five subscales of depression, happiness, anxiety, calmness and fear from the self-disclosure are negatively relate to the pregnancy distress. In other words, more self-disclosure in all these areas leads to less pregnancy distress. As

previously mentioned, self-disclosure has attracted social support in people. Thus, pregnant women who avoid self-disclosure can receive less social support from around people. Many studies have shown that social support, especially from the spouse, reduces the risk of pregnancy anxiety (32). In other words, the lack of support deprives the women from the vast resources of feedback. The lack of these resources will set the perspective of future trends in life for the individual in ambiguity and replace the despair, disappointment and pessimism in the person's perceptual and psychological system (33), thereby increasing the level of anxiety. The result of the research by Monazzami Tabar et al. emphasized that emotional disclosure is effective in reducing the symptoms of anxiety (27). Ghorbani indicated that deep emotional disclosure through an "unconscious reopening" technique reduces the anxiety (22). In the study of Pourmohseni and Shirzad, the results reported that self-disclosure in married women with social phobia is significantly lower than that of the healthy women (26), which indicates a positive effect of self-disclosure on mental health. To the best of our knowledge, no studies have been conducted to investigate the relationship between self-disclosure and pregnancy anxiety. On the other hand, a positive relationship was obtained in the self-disclosure in the dimension of jealousy, which suggests that self-disclosure in the field of jealousy can increase the pregnancy distress. Considering how jealousy disclosure increases pregnancy anxiety, it is worth noting that the jealousy is the result of comparison with others from the psychology point of view. Jealousy is a negative emotion by which the person finds deficiencies by comparison herself with others (34). The experience of most people from jealousy includes things such as humiliation, regret, suffering from the current condition, feeling guilty of this feeling and wishing for having attractive features of the competitor (35). Jealousy is caused by the social comparison with a person who is generally similar to him, with the exception of a prominent feature which being jealous and the superiority nature of the jealous person suffering from a strong stimulation of emotions due to its dependence on the condition (36). Therefore, it is concluded that jealousy is rooted in the theory of social comparison. In this theory, the person evaluates their abilities by comparing itself with others. If the result of the comparison is positive, the person can acquire the identity and the person is jealous if it is negative (37). Thus, self-disclosure in the emotional dimension of jealousy can cause a person to unintentionally confess to his own disability and subsequently, increase his sense of humility, as well as the fear of losing social support of others, which can affect the pregnancy distress. In the conducted reviews, there was no consistent or inconsistent research with the present study.

Concerning the relationship between pregnancy anxiety and emotional self-regulation, the results indicated that there is a negative and significant relationship between the subscales of emotional self-regulation and pregnancy anxiety. These results suggested that the higher the emotional self-regulation, the lower the level of pregnancy anxiety. This result is consistent with Gross’s finding that emotional regulation is in line with the improvement of the physical symptoms of anxiety (38). Ahmadian and Verghan expressed that emotion regulation strategies explain 30% of the changes in the severity of anxiety symptoms (29).

In examining the prediction of pregnancy anxiety based on the emotional self-discourse and self-regulation, the results of multiple regression analysis indicated that among the dimensions of self-discourse of depression, jealousy and fear can predict pregnancy anxiety. However, depression and fear are negatively anticipated the pregnancy anxiety, while the jealousy can predict the pregnancy anxiety positively. Based on the results, the disclosure of depression and fear and talking about important events and thoughts and important experiences of life reveal these thoughts and feelings, reduce the distress caused by these thoughts and subsequently, decrease the pregnancy anxiety. Individuals gain sincere and supportive social contacts through self-disclosure. Self-discourse acts as an anxiety reducer due to the acquisition of social support for the individual, as well as benefitting from the kindness, companionship and attention of family members, friends and others. The psychological utility of the self-discourse may be due to the effect on evaluating stress factors, adopting effective methods of adaptation, self-esteem and individual skills (30). In addition, expressing

the emotions due to pregnancy and its consequences in the form of words makes a review in these experiences and based on the theory of cognitive change makes better understanding and finds the new meaning about the event, and causes pregnant women to accept life as a usual experience. Further, from the subscales of emotional self-regulation, the prior-focused regulation strategies including the subscales related to position selection, position modification, expansion of attention and cognitive change are the best predictors of pregnancy anxiety. It seems that focusing and attention to emotions in stressful situations enable individuals to increase their domination and emotions by increasing self-attention, which is related to the mental health, as Gratze and Gunderson reported a positive relationship between the emotional adjustment and quality of life and the mental health of individuals (40).

Martin and Dalen demonstrated that emotional self-regulation components can predict anxiety symptoms (28). Ahmadian and Verghan concluded in their research that emotion regulation strategies could be considered as predictors of anxiety severity (29). According to the above results, an increase in the emotional self-discourse and self-regulation can play an influential role in reducing the pregnancy anxiety. Since these factors can be effective in reducing anxiety, care providers of pregnant women are recommended by providing the necessary conditions while effective communication can provide the conditions to raise the level of self-discourse in pregnant women. During pregnancy cares delivery, according to Rodgers's theory, the pregnant women can be placed in groups for self-disclosure of emotional state associated with pregnancy because the participation in these groups and mutual disclosure in such communities can be accompanied by adjusting excitement and reducing distress for gaining social support, as well as the normalization of experiences. Furthermore, conditions are provided to present training for increasing the emotional self-regulation skills in the society. The use of convenient sampling method , limited access to one of the areas of care for pregnant women in Yazd, as well as the lack of research in this area were regarded as the main limitations of the study. Finally, similar studies are recommended to the selected sample groups randomly to evaluate the findings of the research in terms of the validity and reliability. On the other hand, similar studies are required to investigate the relationship between pregnancy anxiety and other psychological variables.

Conclusion

According to the results, emotional self-discourse and self-regulation can predict pregnancy distress. The results can have a considerable effect to inform pregnant women about the effects of emotional self-disclosure and self-regulation skills on the pregnancy distress.

Acknowledgement

The present study was approved by the Yazd University Research Committee without financial support from a specific institution and was not related to the authors' interests. We thank the cooperation of the pregnant women participating in the research and all staff of the Yazd Health Center.

References

1. Huizink AC, Mulder EJ, Medina PG, Buitclaar GH.Is pregnancy anxiety a distinctive syndrome? Early Hum Dev 2004; 9: 112-17.
2. Atkinson R, Hilgard E. [Introduction to psychology]. Borhani MT. (translator). Tehran. Roshd; 1992. (Persian)
3. Yousefi R. [Psychometric properties of the Persian version concerns during pregnancy (PDQ)]. Journal of Urmia Nursing and Midwifery Faculty 2016; 13(3): 215-25. (Persian)
4. Mancuso RA, Schetter CD, Rini CM, Roesch SC, Hobel C. Maternal prenatal anxiety and corticotropin-releasing hormone associated with the timing of delivery. Psychosom Med 2004; 762: 49-66.
5. Andersson L, Sundström-Poromaa I, Wulff M, Astrom M, Bixo MD. Depression and anxiety during pregnancy and six months postpartum: A follow-up study. Acta Obstet Gynecol Scand 2006; 85(8): 937-44 .
6. Graignic-Philippe R, Dayan J, Chokron S, Jacquet A, Tordj M. The effects of prenatal stress on fetal and child development: A critical literature review. Neurosci Biobehav Rev 2014; 137: 43-162.
7. O'Connor TG, Caprariello P, Blackmore ER, Gregory AM, Glover V, Fleming P. Prenatal mood disturbance predicts sleep problems in infancy and toddlerhood. Early Hum Dev 2007; 83(7): 451-8.
8. O'Connor TG, Ben-Shlomo Y, Heron J, Golding J, Adams D, Glover V. Prenatal anxiety predicts individual differences in cortisol in preadolescent children. Biol Psychiatry 2005; 58(3): 211-17.

9. Pazande F, Toomians J, Afshar F, Valaei N. [Prevalence of depression in parturient referring university hospitals in Tehran]. Journal of Kashan University of Medical Sciences 2009; 6(1): 66-7. (Persian)
10. Alderdice F, Lynn F. Stress in pregnancy identifying and supporting women. Br J Midwifery 2009; 17: 552-78.
11. Saunders TA, Lobel M, Veloso C, Meyer B. Aanalgesia and unplanned cesareans. J Psychosom Obstet Gynecol 2006; 27: 141-56.
12. Mansouri M, Seraj Khorami N, Hidary H. [Study of relationship intimacy, forgiveness and self-disclosure with marital satisfaction among married teachers]. Journal of family and research 2014; 20: 95-116. (Persian)
13. Jannati Y, Khaky N. [Psychiatry in midwifery]. Tehran: Jamnagar; 2013. (Persian)
14. Pennebaker J, Zench E, Rime B. Disclosing and sharing emotion: psychological, social and health consequences.Washington DC: American Psychological Association; 2001: 517-39.
15. Pennebaker J, Seagal J. Forming a story: the health benefits of narrative. J Clin Psychol 1999; 55: 1243-55.
16. Mennin DS, Farach FJ. Emotion and evolving treatments for adult psychopathology. Clin Psychol Sci Pract 2007; 14: 329-52.
17. Karami J, Heidary Sharaf P, Shafiey B. [The relationship between emotion regulation strategies and emotional intelligence with social phobia in impaired vision and hearing impaired students]. Journal of exceptional education 2015; 1: 5-14. (Persian)
18. Bodrova E, Leon D. Learning to control impulsive behavior is the most critical requirement for young children. [cited 2005]. Available from: http://www.NAESP.org
19. Garnefski N, Kraaij V. Relationships between cognitive emotion regulation strategies and depressive symptoms: A comparative study of five specific samples. Pers Individ Dif 2006; 40(8): 59-69.
20. Gross JJ. The emerging field of emotion regulation: An integrative review. Rev Gen Psychol 1998; 2(3): 271-99.
21. Aldao A, Nolen-Hoeksema S, Schweizer S. Emotion-regulation strategies across psychopathology: A meta-analytic review. Clin Psychol Rev 2010; 30: 217-37.
22. Gorbani N. [Cognitive, emotional, mental, physiological consequences of failure to disclose resistance and therapy]. Dissertation. Tehran: Tarbiat Modarres University, 2008. (Persian)
23. Gratz KL, Gunderson J. Preliminary data on an acceptance-based emotion regulation group intervention for deliberate self-Harm among women with borderline personality disorder. Behav Ther 2006; 37: 25-35.
24. Esterling BA, Antoni MH, Fletcher MA, Margulies S. Schneiderman emotional disclosure through writing or speaking modulates latent Epstein-Barr virus antibody titers. J Consult Clin Psychol 1994; 62(1):130–140.
25. Akbari Nakhjavani H, Badri R. [Study the effects of emotional disclosure in a manner of speech / writing on improving the quality of life of women with breast cancer in Tabriz city]. Urmia medical journal 2015; 20(6): 519-30. (Persian)
26. Pormohseni F, Shirzad SH. [Compared self-disclosure, intimacy and emotional processing in married women with social phobia and healthy women]. Quarterly of culture of counseling and psychotherapy 2015; 6: 144-66. (Persian)
27. Monazamitabar F, Ahmadi Tahoor Soltani M, Bagherian Sararoodi R, Behboodi M. [The effectiveness of writing emotional disclosure on the reduction of depression, anxiety, and stress among veterans with post-traumatic stress disorder]. Ebn-e-Sina IRIAF Health Administration 2015; 17(3): 54-59. (Persian)
28. Martin RC, Dahlen ER. Cognitive emotion regulation in the prediction of depression, anxiety, stress and anger. Pers Individ Dif 2005; 39(7): 60-124.
29. Ahmadian VF, Gharraee B, Atef Vahid MK, Habibi M. [The role of perfectionism dimensions and emotion regulation strategies in predicting the severity of depressive and anxiety symptoms of university students]. Iranian journal of psychiatry and clinical psychology 2014; 20(2): 153-61. (Persian)
30. Saadati Shamir A, Gholami F. [Factor structure of Emotional Self-esteem Scale (ESDS) in married students]. Journal of educational research 2015; 10: 76-89. (Persian)
31. Hasany J, Kadivar P. [Validity and reliability of the Persian version questionnaire process strategies emotion regulation]. Quarterly of educational measurement 2014; 4: 111-44. (Persian)
32. Salari P, Firouzi M, Sahebi A. [Study of stress factors during pregnancy]. Journal of Sabzevar University Medical Sciences and Health Services 2005; 3: 10-34. (Persian)
33. Davidsen AS, Fosgeru CF. General practitioners' and psychiatrists' responses to emotional disclosures in patients with depression. Patient Educ Couns 2014; 95(1): 61-9.
34. Smith RH, Parrot WG, Ozer D, Moniz A. Subjective injustice and inferiority as predictors of hostile and depressive feelings in envy. Pers Soc Psychol Bull 1994; 20: 705-11.
35. Illig WA. Making peace with jealousy in polyamorous relationships. Atlanta Polyamory Weekend Conference. Atlanta. Canada; 2012.
36. Tesser A. Emotion in social comparison and reflection processes. In: Suls JM, Wills TA. (editors). Social comparison: Contemporary theory and research; Hillsdale, NJ: Erlbaum; 1991: 115-45.
37. Festinger L. A theory of social comparison processes. Hum Relat 1954; 7:117-40.
38. Gross JJ. Emotion regulation: Conceptual foundations. Handbook of emotion regulation. New York: Guilford; 2008: 3-24.
39. Bateni1 P, Abolghasemi A, Aliakbari Dehkordi M, Hormozi M. [The efficacy of emotion-regulation skills training on the anxiety components among female school students]. Journal of school psychology 2013; 2(3): 182-90. (Persian)
40. Gratz KL, Gunderson JG. Preliminary data on an acceptance-based emotion regulation group intervention for deliberate self-harm among women with a borderline personality disorder. Behav Ther 2006; 37(1): 25-35.