

A Comparison of Emotion Regulation Difficulties, Distress Tolerance and Affect Balance among Imprisoned Women Accused of Fraud and Ordinary Women

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Abstract

Background: Differences among ordinary and imprisoned people are in terms of both physiologic and biologic properties and mental and social characteristics.

Objectives: This study aims to compare the emotion regulation difficulties, distress tolerance and affect balance between ordinary and imprisoned women accused of fraud to clarify the importance of emotion regulation and the recognition of people's excitement in improving the quality of healthy life.

Methods: This research is an applied work conducted by the causal-comparative method. The statistical universe of this study consists of 120 individuals including 50 imprisoned women accused of fraud in Rey Prison as well as 70 ordinary women without any criminal records that were randomized from Tehran. The research tools are as follows: Difficulties in Emotion Regulation Scale (DERS), Distress Tolerance Scale (DTS) and Affect Balance Scale (ABS).

Results: The results show a difference between the difficulties of emotion regulation, distress tolerance and affect balance of women accused of fraud and ordinary people. Our results show that women accused of fraud compared to ordinary women according to the value ($t = 37.11$) at a significance level of 0.01 are at a lower level in their emotional settings. Also due to the amount ($t = -11.68$), a higher level of distress and stress tolerance of ordinary women compared to the defendants was shown and according to the value ($t = -4.83$), there is a significant difference in the affect where female fraudsters are at a lower level versus ordinary ones.

Conclusion: The imprisoned women should be paid specially into attention in terms of emotion regulation, distress tolerance and affect balance.

Keywords: Affect balance, Distress tolerance, Emotion regulation, Imprisoned women accused of fraud

1. Background

Criminologists often believe that men and women are different in terms of both physiologic and biologic properties as well as mental and social characteristics. Such as different results in different types and extent of crimes. Therefore, for scientific recognition of women's crime, it makes sense to exclusively investigate the corresponding causes and effective factors (1). The issues associated with convicts and prisoners-particularly in terms of psychiatric problems and disorders- are of the most challenging and interesting research areas (2). The former studies show that most of female prisoners have mental and psychological problems and their guilt is often violation of social health rather than a legal crime, neglecting the needs associated with their mental level which might be different according to their crime type (3). In this regard, emotion regulation plays a fundamental role in organizing the individual behaviors (4). Lack of affect balance and distress tolerance to deal with conditions and stressful events is a base for lots of human maladies and is seen throughout the mental disorders (5).

Accordingly, in addition to metacognitive beliefs, emotion regulation is another effective variable on

individual behaviors. The studies show those who continually suppress their excitement are subject to depression, anxiety and anger (6). Furthermore, emotion regulation training can be effective on reduction of anger and impulsivity symptoms among drug-dependent individuals (7). Also, the people with high-risk sexual behaviors differ those with normal behaviors (8). Additionally, in a study on the relationship between distress tolerance, emotion regulation and dependency of academic students on smoking, their results indicate a correlation between students' distress tolerance and nicotine dependence as well as a correlation between their emotion regulation and nicotine dependence (9).

Nevertheless, the sensation seeking is a personality trait which is closely associated with juvenile delinquency. It is defined as willingness to select and prefer new and exciting experience and is an internal risk factor for delinquency behavior (10). Also, a relation between cognitive emotion regulation with depression, anxiety, stress and anger is suggested while false emotion regulation may result in aggressive behaviors by increased negative emotion and physiological excitement (11).

In an investigation on 206 drug addicts, a significant relationship is indicated between

impulsive behavior and emotion regulation. The results show that addicts use the impulsive behavior strategy (e.g. high-risk sexual behavior, anti-social behavior and raising the dosage) to regulate their emotions (12).

However, in a study on the relationship the behavioral index distress tolerance and self-immolation, the results indicate that distress tolerance shows a complicated relationship with the risk factors and behaviors resulting in suicide (5).

Also, authors investigated prisoners' suicide and a case study of self-immolation among female prisoners. Recent accidents in the life and previous trauma are of different deficits in adverse childhood education and are significantly associated with self-harm and suicide attempt. Their study emphasizes the role of negative factors in the prison and necessity of suicide prevention programs in women prisons (13).

For assessment of the committed crime and criminals' mental health, in addition to cognitive, economic, cultural and family factors, such aspects as emotions and affections control should be evaluated, as well. In other words, criminals' weakness in achieving these components of emotional intelligence makes a difference in the type of their crime and mental health (14). The studies show that female criminals have lower mental health compared to men. The lower number of female prisoners has caused the prisoning systems in most of the world to organize prisons from a masculine point of view (14).

Therefore, present study aims to compare difficulties in emotion regulation, affect balance and distress tolerance among imprisoned women accused of fraud and ordinary women to find the cause of difference and extent to which knowledge of emotions are effective on crime commitment.

As it can be seen, the role of crime and abnormal behaviors is so effective on personal and social life of people so that impacts and consequences of a crime play a determinant psychological role in people's behaviors. This impact is important not only due to women's mental health but also for their determinant role as a mother and effective factor to educate children. The researchers in this area are in charge of evaluating differences and causes of such issues and also looking for suitable solutions. The findings of present study not only can change the attitudes towards factors of negative and delinquent behavior in such entities as prisons and psychiatric hospitals but also helps to develop suicide preventive policies for prisoners and other communities subject to such risks.

2. Objectives

This study aims to compare the emotion regulation difficulties, distress tolerance and affect balance between ordinary and imprisoned women accused of fraud to clarify the importance of emotion regulation and the recognition of people's excitement in improving the quality of healthy life.

3. Methods

Present work is an applied and casual-comparative study. The ethical considerations were incorporated in present study. The questionnaires were filled with perfect consent of the subjects and the participants were assured that the information would be kept quite confidential. Also, the results were analyzed using SPSS package version 23.

Subjects

The statistical universe consists of imprisoned women accused by fraud located in women prison of Shahr-e-Ray and conventional and ordinary women from different classes in the metropolis of Tehran. The sampling was done by non-random, targeted and voluntary approached among ordinary women and the imprisoned women accused by fraud. Classification of the two groups was done based on age and literacy of volunteers. In order to determine sample size for the desired comparative hypothesis, one subject was considered for each variable incorporated into the research so that 120 persons were specified totally for 3 variables.

Inclusion criteria

Inclusion criteria include single/married women, educational level of primary school to PhD, age of 20-65 years, the women imprisoned in fraudulent section, the ordinary women with no criminal record.

Data collection instruments

The following three questionnaires were used as follows:

Difficulties in Emotion Regulation Scale (DERS)

This questionnaire is a self-reporting index generated for evaluation of difficulties in emotion regulation containing 36 statements and 6 sub-scales. The sub-scales are as follows:

1. Non-acceptance of emotional responses (NONACCEPT)
2. Difficulty engaging in Goal-directed behavior (GOALS)
3. Impulse control difficulties (IMPULSE)
4. Lack of emotional awareness (AWARENESS)
5. Limited access to emotion regulation strategies (STRATEGIES)
6. Lack of emotional clarity (CLARITY).

The results of reliability assessment shows a high internal consistency for entire the scale (93%), the sub-scale NONACCEPT (80%), the subscale GOALS (89%), the subscale IMPULSE (86%), the subscale AWARENESS (80%), the subscale STRATEGIES (88%) and the subscale CLARITY (84%) (15). Also, the validity assessment indicates validity of the construct and sufficient predictive

index of this scale (15).

Distress Tolerance Scale (DTS)

Distress Tolerance Scale (DTS) is a self-report emotional distress tolerance questionnaire with 15 items and 4 subscales. The alpha coefficients for the sub-scales were obtained as 72%, 82%, 78% and 70%, respectively, while it was obtained 82% for entire the scale. Also, this scale is proven to have a reasonable criterion-related validity and initial convergence (16).

Assessment of psychological well-being based on Affect Balance Scale (ABS)

Affect Balance Scale (ABS) was generated by Bradburn in 1969 to assess psychological well-being. This scale has been designed with 10 statements to measure psychological well-being particularly mood states or happiness (17). The present version derives some scores in two separate conceptual aspects: positive affect and negative affect. ABS is recommended as a short, convenient and useful scale to measure mental health among different people. Reliability assessment test results indicate a suitable internal consistency, reporting a Cronbach Alpha of above 80% at all studies. Also, wide information is available on concurrent validity, prediction validity and constructs validity of this scale. Affect Balance Scale has shown a significant correlation with several indices including Trait Depression Inventory (DTI), the reports associated with activity levels and response to the disease among elderlies, life satisfaction and social equilibrium (17).

Statistical methods

The following statistical methods were used for data analysis:

- Descriptive statistical method including frequency, percentage, mean, standard deviation, skewness and kurtosis
- Inferential statistics using t-test for the two independent groups of this study.

4. Results

42% of the samples were composed of the women imprisoned accused of fraud and the rest were ordinary women. The education level among the former group was distributed as follows: 22% lower than high-school degree, 34% high-school degree, 6% associate degree, 14% bachelor of science and 2% master of science while in the latter group, 7% of women had high-school degree, 3% had associate degree, 46% had bachelor of science and 33% and 1% had master of science and PhD, respectively. The mean age among the women imprisoned accused of fraud and ordinary women was 32.59 and 34.88, respectively. Table 1 presents descriptive statistics indicators for the studied sample (n=120) including mean, standard deviation, skewness and kurtosis of the variable.

As it can be seen from Table 1, according to the values obtained for skewness and kurtosis between -2 and +2, distribution of all variables is normal. Next, t- test was used to compare two independent groups including imprisoned women accused of fraud and ordinary women.

Table 2 presents t-test results of the distress tolerance for imprisoned women accused of fraud and ordinary women.

From Table 2, the mean distress tolerance among imprisoned women accused of fraud and ordinary women was gained 41.22 and 51.83, respectively, which is significant according to the value ($t=-11.68$) at the level 0.01. Therefore, a significant statistical difference can be concluded between the two groups in terms of distress tolerance. In other words, distress tolerance among the imprisoned women accused of fraud is lower than that of ordinary women.

Table 3 presents t-test results of the emotion regulation for imprisoned women accused of fraud and ordinary women.

As it can be seen from Table 3, the mean difficulties in emotion regulation among imprisoned women accused of fraud and ordinary women was gained 104.20 and 68.41, respectively, which is significant

Table 1. Descriptive statistics indicators

Variable	Mean	Standard Deviation	Minimum score	Maximum score	Skewness	Kurtosis
Distress tolerance	47.41	7.17	35	61	-0.06	-1.00
Difficulties in emotion regulation	83.32	13.73	48	144	0.59	-0.62
Affect balance	15.02	1.81	12	19	0.20	-0.61

Table 2. T-test results comparing the groups based on the distress tolerance

Variable	Group	Quantity	Mean	Standard Deviation	t	p
Distress tolerance	Accused women	50	41.22	4.49	-11.68	0.001
	Ordinary women	70	51.83	5.18		

Table 3. T-test results comparing the groups based on the emotion regulation

Variable	Group	Quantity	Mean	Standard Deviation	t	P
Difficulties in emotion regulation	Accused women	50	104.20	19.52	11.37	0.001
	Ordinary women	70	68.41	5.18		

Table 4. T-test results comparing the groups based on the affect balance

Variable	Group	Quantity	Mean	Standard Deviation	t	P
Affect balance	Accused women	50	14.16	1.66	-4.83	0.001
	Ordinary women	70	15.64	1.66		

according to the value ($t=11.37$) at the level 0.01. Therefore, a significant statistical difference can be concluded between the two groups in terms of difficulties in emotion regulation. In other words, the difficulties in emotion regulation among the imprisoned women accused of fraud is higher than that of ordinary women.

Table 4 presents t-test results of the affect balance for imprisoned women accused of fraud and ordinary women.

From Table 4, the mean affect balance among imprisoned women accused of fraud and ordinary women was gained 14.16 and 15.64, respectively, which is significant according to the value ($t=-4.83$) at the level 0.01. Therefore, a significant statistical difference can be concluded between the two groups in terms of affect balance. In other words, affect balance among the imprisoned women accused of fraud is lower than that of ordinary women.

5. Discussion

Present study was conducted to compare and find the difference between emotion regulation, distress tolerance and affect balance among woman prisoners accused of fraud and ordinary women.

The results indicated that difficulties in emotion regulation among the female prisoners accused of fraud is higher than ordinary women. Many studies have been conducted in this regard, which suggest such disorders as borderline personality disorder, major depression, bipolar disorder, generalized anxiety, social anxiety, eating disorders and disorders related to alcohol and drug abuse, anti-social behavior are those subjects where difficulties in emotion regulation are studied and confirmed (13). Also, in a study to confirm role of emotion regulation in suitable behavioral patterns, a considerable internal correlation is seen for difficulties in emotion regulation, body image and eating disorders (18). In a study on why individuals are not successful to regulate their negative emotions and to what extent they can manage it, a trial was implemented where individuals were subject to the sound as a stressful factor; their results indicated those with lower emotion regulation show more reports of generated stress (19). In a study conducted among prisoner women with specific guilt (including fraud), such individuals indicated to have diffuse-avoidant style and low attention to future or long-term consequences of their choices and thus their behavioral outcomes are due to insufficient knowledge of mood and affection (20).

In order to explain the results about the difficulty

level of emotional regulation among female prisoners accused of fraud and ordinary women, the issue of the need for recognition of emotions is one that can be addressed using effective or inefficient methods with different emotions. Emotion is recognized as objective, social, mental, biological and emotional phenomena; they are mental feelings that make us specifically feel like an angry or joyful person. In emotional settings, attention to emotions and their proper application in human relationships, their perceptions of their own selves and others, their restraint and mastery of their intentions, empathy with others, and the positive use of emotions in thinking and knowing of the characteristics of adjusting the excitement of life should be taken into consideration; statistics show that such rate of recognition can vary in individuals and determine their behavioral outcomes.

Additional findings indicate a significant statistical difference between the women imprisoned accused of fraud and ordinary women in terms of distress tolerance, namely, the former women have lower distress tolerance compared to the latter. In other words, the individuals with peace of mind investigate their perceptions and evaluations of the events to gain a more precise and clear information. However, while having distress, they typically distort input data by permanent negative orientations towards their thoughts. Therefore, information will be extremely flexible and generalized (21). Accordingly, in a study on findings of 231 American white and black Teenagers indicated that low distress tolerance increases risk of alcohol consumption among whites, delinquent behaviors among blacks and also internalizing disorders among women (22). In another study where impact of distress tolerance on depression treatment was assessed, the authors pointed the role of distress tolerance in mood disorders (23).

Given the other results of present study, a significant statistical difference was seen between the woman prisoners accused of fraud and ordinary women in terms of affect balance, namely, affect balance among the female prisoners accused of fraud was lower than what seen among the ordinary women. Lots of female prisoners have mental and psychological problems (6). Given the importance of this issue, in a similar study on police officers to investigate social support levels, negative attitudes toward emotional expression and the beliefs in a just world after facing mental agitation levels, the authors found that the police officers perform better in high- stress conditions with a high scale of social/ emotional support –i.e. a balancing variable-

compared to beliefs in a just world scale which is often appeared as a help inhibitor (2). In addition, in a study on impact and role of negative factors and inattention to affection and emotional level of female prisoners regarding suicide attempt, the social- psychological impact of this phenomenon was investigated. In mentioned study, the personal information was collected in terms of social, demographic and criminal variables, placing in suicide attempt position, social supports and mental specifications. Unlike personal-social factors which were only moderately effective on the suicide attempt, detention in solitary confinement and reporting negative experiences in prison showed a very strong relation with the suicide attempt. The highest rate of suicide and self-harm measures were observed among the individuals with depression, aggression, hostility, low self-esteem and social support levels. In fact, the results emphasized the role of negative factors (13).

Women who do not know their mood behave more unhealthily with an event or behavior, and also are more self-destructive because they do not know how to manage emotions and endure distress while some women will experience an extreme anger when getting into trouble due to lack of knowledge. The reflection of such behaviors can be seen in anti-social works one of which can be fraud. Knowing the feelings of people such as happiness, sadness, anger, disgust, and acceptance that people in all these situations can be effective can advance the positive, constructive and positive lives of women because some women experience feelings like anger or feelings of sadness (making them feel inadequate and ineffective,) and seek to make up for the mistake they make. Female prisoners had a lower rejection to emotional responses compared to the ordinary women without a criminal record. Also, they chose lower positive measures as strategies to control their impulses under negative conditions. When emotional regulation and balance of emotion are raised in humans, one can explain who is he/she and will be capable of explain their desires and achieve what they want to make themselves happier. When external functions are aligned with internal function, less internal conflict will be experienced and thus better decisions will be made, a clearer insight to events will be found, higher resistance against social pressures will be achieved and as consequently more happiness will be experienced by them. According to the above mentioned description, all the evidence suggest that the role of awareness and transparency in regulating emotions in a healthy way should be a priority in individual education and learning. Besides, this is the first work implemented in this area in Iran.

Limitations

This study was conducted only on women, and the results cannot be generalizable to men. The study

also focused on female prisoners accused of fraud in Shahr-e-Ray Prison of Tehran and ordinary women in Tehran and cannot be generalized to other communities.

Suggestions

It is suggested to conduct pilot studies in order to examine the effect of emotional training on the performance of female prisoners. Also, there are plans to design and implement mental health strategies for reducing the number of crimes committed by individuals, through schools, families and government agencies.

6. Conclusion

Given the results of present study, it is recommended to take into account the role of awareness and transparency in regulating emotions in a healthy way for individual education and learning.

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8. Conflicts of interest

The authors declare no conflict of interest.

References

1. Auolad Abdolhadi B, Foroghan M, Dadkhah A, Delavar A. The frequency of personality disorders in the women prisoners of Tehran and Karadje 2003. *Soc Welfare*. 2004;3(12):301-8. [Persian]
2. Goschke T, Bolte A. Emotional modulation of control dilemmas: the role of positive affect, reward, and dopamine in cognitive stability and flexibility. *Neuropsychologia*. 2014;62:403-23. doi: [10.1016/j.neuropsychologia.2014.07.015](https://doi.org/10.1016/j.neuropsychologia.2014.07.015). [PubMed: 25068705].
3. van den Bergh B, Gatherer A, Møllera LF. Women's health in prison: urgent need for improvement in gender equity and social justice. *Bull World Health Organ*. 2009;87(6):406. doi: [10.2471/BLT.09.066928](https://doi.org/10.2471/BLT.09.066928). [PubMed: 19565112].
4. Ansari M. Research on women's delinquency. [Master Thesis]. Tehran: Faculty of Psychology, Allameh Tabatabaie University; 2004. [Persian]
5. Anestis MD, Joiner TE. Behaviorally-indexed distress tolerance and suicidality. *J Psychiatr Res*. 2012;46(6):703-7. doi: [10.1016/j.jpsychires.2012.02.015](https://doi.org/10.1016/j.jpsychires.2012.02.015). [PubMed: 22475320].
6. Saxena P, Dubey A, Pandey R. Role of emotion regulation difficulties in predicting mental health and wellbeing. *SIS J Project Psychol Ment Health*. 2011;18(2):147-55.
7. Azami S, Makvand Hosseini S, Dokani M, Zamirinejad S. Brain cortical activity change patterns under positive and negative affective induction with consideration of extraversion and neuroticism. *J North Khorasan Univ Med Sci*. 2013;5(4):687-96. [Persian]
8. Honarparvaran N, Qudery Z, Taghva M, Zandighashghae Z. A study on irrational beliefs and emotions associated with the sexual desire of infertile women. *Armaghane Danesh*. 2013;17(6):514-21. [Persian]
9. Shams J, Azizi A, Mirzaei A. Correlation between distress tolerance and emotion regulation with students smoking dependence. *Hakim Res J*. 2010;13(1):11-8. [Persian]
10. Lagattuta KH, Elrod NM, Kramer HJ. How do thoughts, emotions, and decisions align? A new way to examine theory of mind during middle childhood and beyond. *J Exp Child Psychol*. 2016;149:116-33. doi: [10.1016/j.jecp.2016.01.013](https://doi.org/10.1016/j.jecp.2016.01.013). [PubMed: 27017060].
11. Martin R, Dahlen E. Cognitive emotion regulation in the

- prediction of depression, anxiety, stress and anger. *Personal Individ Differ*. 2005;**39**(7):1249-60. doi: [10.1016/j.paid.2005.06.004](https://doi.org/10.1016/j.paid.2005.06.004).
12. Tull MT, Barrett HM, McMillan ES, Roemer L. A preliminary investigation of the relationship between emotion regulation difficulties and posttraumatic stress symptoms. *Behav Ther*. 2007;**38**(3):303-13. doi: [10.1016/j.beth.2006.10.001](https://doi.org/10.1016/j.beth.2006.10.001). [PubMed: 17697854].
 13. Marzano L, Fazel S, Rivlin A, Hawton K. Psychiatric disorders in women prisoners who have engaged in near-lethal self-harm: case-control study. *Br J Psychiatry*. 2010;**197**(3):219-26. doi: [10.1192/bjp.bp.109.075424](https://doi.org/10.1192/bjp.bp.109.075424). [PubMed: 20807968].
 14. Razavi A, Naziri G, Ghanbari R. A study on emotional intelligence of criminals based on the kind of crime and its relation to the mental health. *J Cult Eng*. 2012;**6**(57-58):59-73.
 15. Gratz KL, Roemer L. Multidimensional assessment of emotion regulation and dysregulation: development, factor structure, and initial validation of the difficulties in emotion regulation scale. *J Psychopathol Behav Assess*. 2004;**26**(1):41-54. doi: [10.1007/s10862-008-9102-4](https://doi.org/10.1007/s10862-008-9102-4).
 16. Simons JS, Gaher RM. The distress tolerance scale: development and validation of a self-report measure. *Motivat Emotion*. 2005;**29**(2):83-102. doi: [10.1007/s11031-005-7955-3](https://doi.org/10.1007/s11031-005-7955-3).
 17. McDowell I, Praught E. On the measurement of happiness: an examination of the Bradburn Scale in the Canada Health Survey. *Am J Epidemiol*. 1982;**116**(6):949-58. doi: [10.1093/oxfordjournals.aje.a113497](https://doi.org/10.1093/oxfordjournals.aje.a113497). [PubMed: 7148819].
 18. Khodabakhsh MR, Borjali A, Sohrabi F, Farrokhi NA. The role of emotion regulation difficulties as a mediator of the relationship between body image disturbance and disordered eating behavior. *Int J of Pediatr*. 2015;**3**(2.1):23-32. doi: [10.22038/ijp.2015.3995](https://doi.org/10.22038/ijp.2015.3995).
 19. Lincoln TM, Hartmann M, Köther U, Moritz S. Dealing with feeling: specific emotion regulation skills predict responses to stress in psychosis. *Psychiatry Res*. 2015;**228**(2):216-22. doi: [10.1016/j.psychres.2015.04.003](https://doi.org/10.1016/j.psychres.2015.04.003). [PubMed: 26001960].
 20. Rusting CL, Nolen-Hoeksema SJ. Regulating responses to anger: effects of rumination and distraction on angry mood. *J Pers Soc Psychol*. 1998;**74**(3):790-803. doi: [10.1037//0022-3514.74.3.790](https://doi.org/10.1037//0022-3514.74.3.790). [PubMed: 9523420].
 21. Werner-Seidler A, Banks R, Dunn BD, Moulds ML. An investigation of the relationship between positive affect regulation and depression. *Behav Res Ther*. 2013;**51**(1):46-56. doi: [10.1016/j.brat.2012.11.001](https://doi.org/10.1016/j.brat.2012.11.001). [PubMed: 23178678].
 22. Daughters SB, Reynolds EK, MacPherson L, Kahler CW, Danielson CK, Zvolensky M, et al. Distress tolerance and early adolescent externalizing and internalizing symptoms: the moderating role of gender and ethnicity. *Behav Res Ther*. 2009;**47**(3):198-205. doi: [10.1016/j.brat.2008.12.001](https://doi.org/10.1016/j.brat.2008.12.001). [PubMed: 19135649].
 23. Williams AD, Thompson J, Andrews G. The impact of psychological distress tolerance in the treatment of depression. *Behav Res Ther*. 2013;**51**(8):469-75. doi: [10.1016/j.brat.2013.05.005](https://doi.org/10.1016/j.brat.2013.05.005). [PubMed: 23787227].