

## **Self-control, Coping Strategies and Suicide Ideation in Adults Prisoners of Hamadan, Iran**

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**ABSTRACT** — Introduction: Prisoners are faced with many psychological problems. One of the problems that they are experiencing is suicidal thought. This study was conducted to determine the prevalence of suicidal ideation in prisons and the role of self-control and coping strategies in predicting it.

Method: 98 prisoners of Hamadan, Iran prison participated in this cross-sectional descriptive-analytical study. The Beck Scale for Suicidal Ideation, Brief Self-Control Scale, and coping responses scale were used for gathering and Pierson correlation and regression for analyzing the data.

Results: Results showed that 33.7% of prisoners had a higher risk and 26.5% low risk of suicidal ideation; Pearson correlation results showed that there is a negative relationship between self-control ( $r=-.428$ ) and the problem-focused coping strategies ( $r=-.243$ ) with suicidal ideation in prisoners. Self-control and problem-focused coping strategies have been able to predict the suicidal ideation in prisoners.

Conclusion: According to results, educating self-control and problem-focused coping strategies can be effective in reducing the suicidal ideation in prisoners.

**KEYWORDS:** Self-control, Coping Strategies, Suicide Ideation, Prisoners

### **Introduction**

More than 10.2 million people in the world are imprisoned and USA with 2.24 million has the highest number of prisoners in the world. In Iran, according to a 2008 report, the number of prisoners has been reported up to 217000 people (1). Therefore, given to the increasing of the prison population, assessing their health problems has particular importance. The suicide rate among prisoners has fluctuated between 5 and 25% (2). Another study showed that within 2 years, 172 deaths by suicide by hanging up and strangling among prisoners has been reported in England and Wales (3). Also, between 1978 to 2003 years suicide among prisoners in England and Wales has been almost 5 times more than other people (4). One-third of offenders of a city in England, had a history of suicide attempts and 5% a history of self-harm during one month before the survey (5). One of the predictive variables of prisoner's suicide attempts is Suicidal Ideation (SI). SI is the thoughts and fantasies about killing themselves, which can arouse a range of unstable thoughts about the death to death rumination (6). Helplessness, depression and SI among prisoners who have experienced self-harm is significantly more than others (7). The rate of SI in juvenile offenders and prisoners was 26.6% (8) and the rate of SI and self-harm thoughts among young prisoners were 19.2% and 18.2%, respectively (9). In another study, the SI was 8.6% among offenders with probation (10). They also showed that having a health insurance among offenders with probation decrease almost 50 percent chance of SI and receive a prescription treatment for mood disorders in prisoners is also associated with the reduction of their SI. In a cross-sectional study, one-third of New South Wales prisoners from Australia had a SI and among them one-fifth was reported suicide attempt (11). The rate of SI and self-poisoning among the prisoners of war who suffer from symptoms of Post-Traumatic Stress Disorder (PTSD), was more than peers without symptoms of PTSD (12). Suicide among offenders had a significant relationship with the SI and self-poisoning in the previous month (5). In addition among the prisoners, previous self-harm and re-imprisonment have a key role in predicting SI (13). Self-control theory states that the lack of self-control is the most important factor for criminal behavior. Self-control theory of crime suggests that individuals, who have not been trained effectively before the age of 10 compared with those who are better educated, have better self-control. They also showed that a low level of self-control is associated with criminal and impulsive behaviors (14). Researches also show that those who have a higher degree of self-control than their peers are less susceptible to the influence of peers with delinquent behavior (15). Also, emotional control was correlated to SI in prisoners of war (12). Coping strategies are direct and active trends or tendencies, which are applied to remove or relieve stress (16). There is a significant relationship between the coping strategies with adjustment and well-being among the prisoners (17). Prisoners are suffering from high level of psychological distress (depression and anxiety), and there is a significant relationship between the logical coping strategies with reducing psychological distress among young prisoners. Also among juvenile prisoners, negative correlation was found between the withdrawal strategy and psychological distress, and between the logical coping strategies and depression (18). Also, a study showed that emotion-focused coping strategies are related to suicide risk in non-prisoners people (19). Suicide and SI are the problems that can have a

high prevalence among prisoners because of the process of imprisonment and the period of condemnation. Hence, assessing the prevalence of these variables among prisoners has a special importance, because it makes the prison authorities to take important psychological programs to reduce SI in prisoners and thereby help to reduce the suicide attempts. The study of relationship between self-control and styles of coping with SI of prisoners could help to identify variables predictive SI in them and the results can be strengthening other researches in this field because of the novelty of the subject. So the main question in this research is as follows: Is there a relationship between self-control and coping strategies with SI in prisoners?

**Methods**

We used cross-sectional descriptive-analytical study. In this study, all of adult male prisoners in Hamadan city were selected as sample. At the time of the study and presence of researchers at the prison, about 113 questionnaires were distributed among the prisoners. Fifteen questionnaires had not been completed and were excluded from the study. Finally the sample size was reduced to 98 people. After explaining the purpose of research and ensuring prisoners from the confidentiality of information, written informed consent form was obtained from participants, then they completed questionnaires about 30 minutes. In this study, the following instruments were used for data collection:

**Beck Scale for SI (BSSI):** BSSI was developed by Beck and Steer (1991) and is one of the most widely used instruments in the study of SI (20). *BSSI* measures the intensity of SI with 19 items; each item ranged from 0 to 2. Total scores on the BSSI can be ranged from 0 to 38 points, in which the higher scores indicating greater levels of SI. In Iran researchers performed semantic, technical, and criterion equivalence by translating and back translating the instrument into Persian (21). Concurrent validity of the scale with the General Health Questionnaire has been reported 0.76 and reliability using Cronbach's alpha was calculated 0.95 (21).

**The Brief Self-Control Scale:** This scale included 13 items and answers to each ranged from 1 “never” to 5 “very often” (22). The high scores indicate high self-control and low scores indicate low self-control. Internal consistency of the scale items was 0.85 based on Cronbach's alpha as well as the test-retest reliability was 0.87. In addition, relationship of this scale with its long form is equal to 0.93 (22). In the present study the Cronbach's alpha coefficient for this scale was equal to 0.74 and split-half reliability of the scale was 0.71 which indicates that this scale has good reliability.

**Coping responses Scale:** This scale has been developed by Billings and moos (1981) to measure coping skills (23). This questionnaire has 19 items on the Likert scale rated from never (0) to always (3) in which the range of scores for participants will vary from 0 to 57. Items were grouped into two main group included problem focused and emotion focused. Poorshahbaz (1993) reported that the test-retest reliability coefficient of the Persian version of this questionnaire was 0.73 (24). Dehghani (1991) also reported the Cronbach's alpha coefficient of the questionnaire more than 0.90 (25).

**Results**

Based on the Beck Scale for Suicidal Ideation, the range of scores 0-3 indicate the absence of suicidal ideation, 4-11 low-risk of suicidal ideation and 12 to 38 the high-risk of suicidal ideation. Hence, the results showed that 33.7% of prisoners had a higher risk of SI, 26.5% low risk of suicidal ideation. 39.8% of them had no SI (Table 1).

**Table 1:** Distribution of subjects based on scores of Beck Scale for Suicidal Ideation

status	frequency	percent
Without SI	39	39.8
low risk of SI	26	26.5
high risk of SI	33	33.7

Pearson correlation results showed that there is a negative relationship between self-control ( $r=-.428$ ) and the problem-focused coping strategies ( $r=-.243$ ) with SI in prisoners. This means that with the increasing the scores of self-control and problem-focused coping strategies, the rate of SI has decreased and vice versa in prisoners (table 2).

**Table 2:** Mean (M) and Standard Deviation (SD) and the summary of Pierson correlation for relationship between predictive variables and SI

Predictors variables	M	SD	Correlation with SI	
			Correlation (r)	p-value
<b>Self-control</b>	48.37	4.87	-0.428	<0.001
<b>Problem-focused coping strategies</b>	30.82	6.53	-0.347	<0.001
<b>Emotion-focused coping strategies</b>	19.17	3.74	-0.09	0.38
<b>Suicidal ideation</b>	8.5	2.06	1	-

According to Table 3, the results of multiple regression with the hierarchical method showed that self-control (VIF=1.02) and problem-focused coping strategies (VIF=1.06), have been able to predict the SI in prisoners, negatively, but the emotion-focused coping strategies (VIF=1.057) was not significant in the regression model. It should be noted that amount of Variance Inflation

Factors (VIF) in the regression studies if less than 3, and a Tolerance Value (TV) if be close to 1 (less than one), then the co-linearity of the variables will be at appropriate level. In other words, if the values of the VIF and TV be appropriate indicates that predictor variables have a linear correlation with the criterion variable. VIF value for all variables in this study was less than 3, and TV for all three predictive variables including self-control (TV= .97), problem-focused coping strategies (TV=.94) and emotion-focused coping strategies (TV=.95) were close to 1.

**Table 3:** The summary of Regression results for predicting SI in prisoners

Predictors variables	R <sup>2</sup>	Adj.R <sup>2</sup>	Unstandardized coefficient		Beta	t	p-value
			B	S.E			
Self-control	0.428	0.174	0.668	0.146	-0.403	-4.562	<0.001
Problem-focused coping strategies	0.526	0.277	0.341	0.104	-0.295	-3.269	<0.005
Emotion-focused coping strategies	0.530	0.280	0.132	0.194	-0.061	-0.681	0.497

### Conclusion

This study was conducted to determine the prevalence of SI in prisoners and the role of self-control and coping strategies in prediction of it. Descriptive results showed that based on the BSSI, 33.7% of prisoners had a high-risk level of SI and 26.5% low risk level of SI, and 39.8 percent without suicidal ideation. Based on this result we can say that the SI in prisoners is impressive. This result is consistent with the previous findings (8) which reported that the rate of SI in 26.6% of imprisoned offenders. The finding is also consistent with previous, which showed that one-third of New South Wales prisoners in Australia had a degree of SI (11). Moreover, this result confirms the previous findings which reported the SI and self-harm thoughts among young prisoners 19.2% and 18.2%, respectively (9). To explain these findings it can be said that male prisoners have many problems that can increase the risk of SI in them. Some of these problems include long-term condemnation, condemnation leading to execution, being away from spouse and children, economic difficulties because of the conviction, prison uniform environment, lack of psychological and professional help from prison psychologists, and lack of recreational facilities in the prison environment. Previous studies shown that duration of stay in prison is the strongest predictors of suicide among inmates (26). Towl (2003) believes that the prison term for prisoners is a high-risk period and makes 10% of prisoners attempted suicide after 24 hours of arrival to the prison (26). In other words, it can be said when a person enters the prison environment, on the one hand is faced with a new environment which comes with a lot of stress and mental health concerns and lead to his/her separation of social and emotional family environment. On the other hand, factors such as concern for the family's economic problems, the loss of jobs, educational status of children, being away from family, existence of unsolved problems in outside prison and etc., creates a lot of problems in terms of psychological and intellectual for prisoners. This problems could lead to negative thoughts about themselves and others, self-blame and feelings such as frustration and despair. This issue will likely increase SI in them. Pearson correlation results showed that self-control has a negative relationship with the SI in prisoners and this variable explained approximately 40% of the variance in SI. In the case of self-control relationship with prisoner's SI until the time of this study have not found a similar study, but we can say that this result is consistent with previous studies findings that have pointed out to the negative relationship between self-control with SI in college graduates (27). To explain these findings it can be said that low self-control in prisoners increases the possibility of dangerous ideas including SI in them, because according to the theory of self-control, offenders tend to be impulsive, sensitive and high-risk taking (28). So these may increase probability of SI in prisoners, because previous research has shown that offenders have less control over their own behaviors than those who do not make the crime (29). In addition, it can be noted that in criminal individuals, the most important benefit of criminal behavior is not enjoying from the crime but rather momentary irritability is cause of crime. In addition, this irritation can increase the risk of SI in them. It can also be noted that people with low self-control usually have low tolerance against failures (28). If prisoners have lower self-control, the rate of SI may be increases due to intolerance of failures in unfavorable prison environment in them. Pearson correlation results showed that there is a negative relationship between problem-focused coping strategies in prisoners with SI, and this variable explained almost 29% of variance in SI in prisoners. This result is consistent with previous findings, which showed that there is a significant relationship between the coping strategies with adaptation and well-being among the prisoners (17). In addition, there is a significant correlation between the logical coping strategies with reduce the psychological distress in prisoners (18). The results of our study can be in line with the previous studies which reported a significant relationship in a sample of non-prisoner between emotion-focused coping strategies with the risk of suicide (19). To explain these findings, it can be said that problem focused coping strategies causes repositioning, and review of comments and individual needs to build skills and new responses (30). Thus because the problem focused coping strategies causes direct involvement of individuals in problem and is associated with changing environment and new strategies to deal with stress ,it is likely to cause a reasonable approach to the issue and stresses of the prison environment by prisoners and this will likely reduce their

psychological problems, such as SI. In a second explanation we can refer to strain theory of suicide according to which four pressure sources can create the risk of suicide in people. These four sources are: 1) values pressure and conflicting values, 2) increasing pressure between reality and ideals, and 3) deprivation pressure, including poverty and 4) the pressure of coping strategies or failure in coping against a crisis (31). Thus fourth option expressly referred to failure of coping strategies, which will lead to weakness against crisis and could cause SI in mind of the individual, and in research of Zhang *et al.*, (2011) has been noted as one the most important sources of suicidal behavior (32). In other words, we can say that based on the strain theory, the economic pressure and lack of appropriate coping strategies can cause SI in prisoners. But if the prisoners have positive coping strategies (problem-focused), may be able to have a positive deal with the pressures of the prison environment, which can cause a reduction in SI in them. The limitations of the present study are the lack of comparison group, not assessing role of the type of crime as well as duration and type of conviction, excluding female prisoners from the study, collecting data as cross-sectional, and using self-report questionnaire. Considering to these limitations, we suggest that these limits should be considered in future research. In view of the above limitations, the results of this study indicate the high levels of SI and support the relationship between self-control and problem-focused coping strategies with SI in prisoners. Therefore, we suggest paying attention to training the self-control and positive coping strategies by prison psychologists, to reduce the rate of SI in prisoners.

## References

- Walmsley, R. World prison population list. 10th edition. Available online:
- Dixon-Gordon K, Harrison N, Roesch R. review. International Journal of Forensic Mental Health.2012; 11(1): 33-50.
- Shaw J, Baker D, Hunt IM, Moloney A, Appleby L. Suicide by prisoners. National clinical survey. British Journal of Psychiatry.2004; 184, 263-7.
- Fazel S, Benning R, Danesh J. Suicides in Male Prisoners in England and Wales, 1978-2003. The Lancet. 2005; 366(9493):1301-2.
- Pluck G1, Brooker C. Epidemiological survey of suicide ideation and acts and other deliberate self-harm among offenders in the community under supervision of the Probation Service in England and Wales.Criminal Behaviors and Mental Health. 2014; 24 (5): 358-64.
- Wimmer CL. Assessing Item and Scale Sensitivity to Therapeutic Change on the College Adjustment Scales: Working toward a Counseling Center Specific Outcome Questionnaire. PhD thesis, Brigham Young University, Provo, Utah, United States. 2007.
- Palmer EJ1, Connelly R. Depression, hopelessness and suicide ideation among vulnerable prisoners. Criminal Behaviour and Mental Health. 2005; 15 (3): 164-70.
- Morgan J, Hawton K. Self-Reported Suicidal Behavior in Juvenile Offenders in Custody: Prevalence and Associated Factors. The Journal of Crisis Intervention and Suicide Prevention.2004; 25 (1): 8-11.
- Kenny DT, Lennings CJ, Munn OA. Risk Factors for Self-Harm and Suicide in Incarcerated Young Offenders: Implications for Policy and Practice. Journal of Forensic Psychology Practice. 2008; 8 (4): 358-382
- Yu SS, Sung HE, Mellow J, Shlosberg A. Prevalence and correlates of suicidal ideation among parolees. Psychiatry Services. 2014; 65 (3): 381-86.
- Lamey S, Topp L, Indig D, O'Driscoll C, Greenberg D. A cross-sectional survey of prevalence and correlates of suicidal ideation and suicide attempts among prisoners in New South Wales, Australia. BMC Public Health. 2012; 12 (14): 1-7.
- Levi-Belz Y, Zerach G, Solomon Z. Suicide Ideation and Deliberate Self-Harm among Ex-Prisoners of War. Archive of Suicide Research. 2015; 19 (2): 231-248
- Slade K, Edelman R. Can theory predict the process of suicide on entry to prison? Predicting dynamic risk factors for suicide ideation in a high-risk prison population.The Journal of Crisis Intervention and Suicide Prevention.2014; 35 (2): 82-9.
- Muraven M, Pogarsky G, Shmueli D. Self-control Depletion and the General Theory of Crime. Journal of Quantitative Criminology. 2006; 22(3): 263-77.
- Meldrum RC, Miller HV, Flexon JL. Susceptibility to Peer Influence, Self-Control, and Delinquency. Sociological Inquiry. 2013; 83 (1): 106-129.
- Lazarus RS. Emotion & Adaptation. New York: Oxford University Press. 1991.
- Picken, J.The coping strategies, adjustment and well-being of male inmates in the prison environment. Internet Journal of Criminology. 2012; 1-29
- Ireland GL, Boustead R, Ireland CA. Adolescent prisoners: a study of young and juvenile offenders.Journal of Adolescence. 2005; 28 (3): 411-23.
- Cukrowicz KC, Ekblad AG, Cheavens JS, Rosenthal MZ, Lynch TR. Coping and thought suppression as predictors of suicidal ideation in depressed older adults with personality disorders. Aging and Mental Health.2009; 12 (1): 149-57.
- Beck AT, Steer RA. Manual for the Beck Scale for Suicidal Ideation. San Antonio: The Psychological Corporation, 1991.
- Anisi J, FathieAshtiani A, SalimiSh, AhmadinodehKh. Assessment of Validity and Reliability of Beck Suicide Ideation Scale (BSIS) in soldiers. Journal of Military Medicine. 2005; 7 (1) 33-37. [In Persian]
- Tangney JP, Baumeister RF, Boone AL. High Self-Control Predicts Good Adjustment, Less Pathology, Better Grades, and Interpersonal Success. Journal of Personality. 2004; 72 (2): 271-324.
- Billings AG, & Moos RH. The role of coping responses and social resources in attenuating the stress of life events. Journal of Behavioral Medicine.1981; 4(2): 139-57.
- Poorshahbaz, A .Surveying the relationship between stress, life events, and personality type of patients suffering from blood cancer.MSc thesis, Clinical psychology, Iran University of Medical Sciences, Tehran, Iran. 1993; (In Persian)
- Dehghani N. (1991).The relationship between stress and social support and mental health. MSc thesis, Islamic Azad University, Roodehen Branch, 1991.
- Towl GJ. Suicide in Prisons: Reflections on Research and Practice. The British Journal of Forensic Practice. 2003; 5 (3): 28-32
- Im SB, Heo ML, Kim SY, Ahn, HY, Kang SB, Kim MS, et al. Influences of Psychological Resilience and Self-control on Suicidal Ideation of Undergraduate Students. Journal of Korean Academy of Psychiatric and Mental Health Nursing. 2014; 23 (4): 278-87.
- Gottfredson, MR., Hirschi T. A General Theory of Crime.Stanford: Stanford University Press. 1990.
- Wood P, Pfefferbaum B, and Arneklev B. Risk-taking and self-control: Social psychological correlates of delinquency. Journal of Crime and Justice.1993; 16 (1): 111-30
- Folkman S, Lazarus RS.An analysis of coping in a middle-aged community sample. Journal of Health and Social Behavior. 1980; 21 (3): 219-39
- Zhang J, Lester d. Psychological Tensions Found in Suicide Notes: A Test for the Strain Theory of Suicide. Archives of Suicide Research. 2008; 12 (1) 67-73.
- Zhang J, Wiczorek WF, Conwell Y, Tu XM. Psychological stains and youth suicide in rural China. Social Science and Medicine.2011; 72(12): 2003-10.