

Effect of anger management education on mental health and aggression of prisoner women

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ABSTRACT

Background and Purpose: “Uncontrolled anger” threatens the compatible and health of people as serious risk. The effects of weaknesses and shortcomings in the management of anger, from personal distress and destruction interpersonal relationships beyond and linked to the public health problems, lack of compromises, and aggressive behavior adverse outcomes. This study investigates the effects of anger management education on mental health and aggression of prisoner women in Isfahan. **Materials and Methods:** The single-group quasi-experimental (pretest, posttest) by prisoner women in the central prison of Isfahan was done. Multi-stage random sampling method was used. Initially, 165 women were selected randomly and completed the Buss and Perry Aggression Questionnaire and the General Health Questionnaire-28, and among these, those with scores >78 (the cut point) in aggression scale was selected and among them 70 were randomly selected. In the next step, interventions in four 90 min training sessions were conducted. Posttest was performed within 1-month after the intervention. Data were analyzed using SPSS-20 software. **Results:** Data analysis showed that anger management training was effective in reducing aggression ($P < 0.001$) and also had a positive effect on mental health ($P < 0.001$). **Conclusion:** According to the importance of aggression in consistency and individual and collective health and according to findings, presented educational programs on anger management is essential for female prisoners.

Key words: Aggression, anger management, anger, mental health, prisoner

INTRODUCTION

Anger is a strong emotional response to stimulus deprivation and arousal which is determined with increased arousal and autonomic nervous system activity.^[1]

When self-confidence and personal integrity are attacked, anger occurs as a natural response. In this case, the range of emotions from mild irritation until intense anger is experiencing.^[2] Anger is described as an emotional state which constitutes of the basis of hatred and aggression.

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Hatred is an attitude that leads to aggressive behavior, while aggressive behavior is an observable behavior that is performed with purpose of damage to others.^[3] From the perspective of evolutionary psychology, anger comes from the evolutionary history of organisms and combined with human nature and helps to survive of the mankind and facilitates adaptive responses, in particular the fight-or-flight response when faced with danger, anger is useful. While in terms of modern civilization, uncontrollable anger, not only does not contribute to human survive but also could threaten his life.^[4] On the other hand, suppressed anger is in conflict with human nature. Research has demonstrated, suppressed anger can make people vulnerable to various diseases.^[5] “Uncontrolled anger,” adversely affects both adaptation and human health. Furthermore, inability to anger manage can

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disturb his/her interpersonal relationships.^[6] If this strong emotion is not properly harnessed, can prevent global success and severely threaten optimal functioning of individuals, groups and communities.^[7] Statistics indicates that in the last few decades, anger and aggression have increased and considerable empirical evidence has demonstrated the negative effects of anger in human relationships.^[8] Anger damaged the economy too, for example, the antisocial behavior and rage are implications and consequences of anger.^[9] Anger related with physical health problems, particularly cardiovascular disorders.^[10] Well as anger is associated with depression, drug dependence, alcohol abuse, suicide, back pain, atherosclerosis, cardiovascular disease, development of atrial fibrillation, hypertension and lipid-lowering ability and readiness, and reduce the feeling of well-being.^[9] According to the World Health Organization, each year 5.1 million people lose their lives due to violence.^[11] Anger and aggression is a major problem in today's world, it was reported that a quarter of the US population, experience some of kind of anger in their lifetime. In most cases of this disorder in the individual, not only reduces the amount of his personal and social adjustment, but also security and family mental health and other social groups suffer from problems. In some cases, anger would be the harassment and intimidation of members of the legal community, thus leads to involvement of the individual with the law references and criminal.^[12]

In the 20th century, crimes have taken serious forms, according to the United Nations during the 1980–1986 annual average increase of 5% on the crime rate in the world.^[13]

More than 10.2 million people are held in penal institutions throughout the world, frequently as pretrial detainees/remand prisoners or as sentenced prisoners. Almost half of these are in the United States (2.24 m), Russia (0.68 m) or China (1.64 m sentenced prisoners).^[14] In our country, according to the latest statistics, there are far more than 217,000 prisoners, evaluate the mental health of them as individuals at high risk is very important.^[14]

Issues of criminals and prisoners, especially its association with psychiatric problems are one of the most challenging and the most active areas of research. Mazaheri *et al.* study among female prisoners of Zahedan prison indicated that prevalence of personality disorders was 95%. Antisocial personality disorder with about 86.2% prevalence was the most common disorder. Drug dependence and sadistic aggressive personality with 60% and 56.2% prevalence, respectively, were in next places.^[15]

Fotiadou *et al.* study among Greek male prisoners revealed that mental disorder was diagnosed in 78.7% prisoners. The main diagnoses were: Anxiety disorder, (37.5%); major depression, (27.5%); antisocial personality disorder, (37.5%); alcohol dependence, (26.3%) and opiate dependence (27.5%) and schizophrenic or bipolar disorder (11.2%).^[16]

O'Connor *et al.* study among 541 teenagers 13–18 years in the United States offenders indicated that rates of internalizing

problems in offender teenagers is twice that of other teenagers. Prisoners suffering from mental health problems not only are more committed violation in prison and as result is added to the length of their sentence, but also they are more likely to be victims of violence, abuse and harassment of other prisoners.^[17] The results of a systematic review of psychiatric surveys of people in general prison population in Western countries indicate that the risks of having serious psychiatric disorders are considerably higher in prisoners than in the general population.^[18]

Likewise, studies, for instance, have shown that prisoner's women compared to prisoner's men more suffer from personality disorders and mental disorders.^[19] Because of the negative impacts of anger, numerous researchers wanted to find solutions and ways to control and management of anger.^[20]

Reviewing the educational programs for anger management, demonstrates the effectiveness of intervention programs for different groups.^[21,22] Furthermore, anger management interventions with offenders and prisoners, particularly violent offenders, have been performed. However, the evidence for the effectiveness of intervention with serious offenders is sparse. For instance, a brief anger management intervention with experimental and control groups of young male offenders was down, significant improvements observed in the experimental group and no change observed in the control group.^[23]

Howells study is revealed that in which offenders receiving anger management were compared with waiting list controls on a range of dependent measures. In general, the degree of pretreatment/posttreatment change was small and experimental versus control differences were not statistically significant.^[24]

As mentioned earlier crimes statistics and as result the number of women prisoners is increasing, however, few studies performed in this regard. According to crucial role of anger management training on physical and mental health, this study investigated the effects of anger management training on mental health and violence among women prisoners in Isfahan.

MATERIALS AND METHODS

This research was a quasi-experimental (pretest-posttest) study. Target population consisted of women prisoners in the central prison of Isfahan. Participants were selected by multi-stage random sampling. Initially randomized 165 women with regard to the inclusion and exclusion criteria were chosen and completed Buss and Perry Aggression and Mental Health questionnaire. Then, those who were achieved score higher than 78 (cut-off) in the Buss and Perry Aggression scale were selected ($n = 70$). In the next phase, intervention in four sessions (75–90 min) was conducted. Education teaching methods were lectures, questions and

answers and discussion group. 1 month after the last training session,^[25] posttest was performed (Buss and Perry Aggression Questionnaire the General Health Questionnaire [GHQ-28] were completed) five women did not posttest. Data analysis by IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp. software and paired *t*-test, Pearson correlation, ANOVA analysis was used.

Educational intervention

- Session I: Familiarity with participants, communication with them, trust them, explain the objectives of the program, definition of anger and aggression, anger expression and characteristics of mistakes anger expression and its consequences
- Session II: Introduction to causes of anger Introduction to the rage symptoms (physical, behavioral, emotional and cognitive symptoms) and describe the overall changes to the arousal of anger, thinking about identify similarities and differences between their own and others' experiences of anger, identify and specifying the actions or words of others that may make them angry to detect events which creates rage and discuss the outcomes
- Session III: Introduction to anger management programs, introduction the effect of negative thoughts on the experience of anger, identify negative thoughts and replace them with positive thoughts, introduction the effect of relaxation, exercises, deep breathing, and problem-solving strategies to anger management
- Session IV: The effects of anger on family relationships and mental health, anger impacts on the quality of interaction with family, reviewing and summarizing the previous contents and relaxation exercise.

Instruments

Buss and Perry Aggression Questionnaire

This 29-item questionnaire measures of a general aggression and four factors (subscales), hostility (8 items), physical aggression (9 questions), verbal aggression (5 items), and anger (7 items) was formed.

Subjects in response to each item choose one of the options: (1) Very high (2) high (3) low (4) very low (5) Never. Items 24 and 29 will be reverse scored. Range of general aggression scores and four factors are: General aggression 29–145 (minimum score of 29 and a maximum score of 145), hostility 8–40, physical aggression 9–45, verbal aggression 5–25, and anger 7–35.

Psychometric analysis has shown that the internal consistency was desirable. Furthermore, several studies have confirmed its validity.^[26,27] This questionnaire was standardized in Iran, and its validity and reliability have been confirmed.^[28]

General Health Questionnaire

The questionnaire consisted of 28 items and has four sub-scales including: Somatization, anxiety, insomnia, social dysfunction, and depression, each sub-scales have seven questions. The total score is obtained by the sum of the four sub-scales scores.

Subjects responded to each question as one of the options: (0) Not at all, (1) As usual, (2) Almost more than usual, (3) More than usual. The items 1, 15, 17, 18, 19, 20, 21 will be reverse scored.

Psychometric properties of GHQ-28 in Iranian population were accessed. Factor analysis revealed that the four factors which are the basics in this questionnaire have a high internal consistency. The calculated optimal clinical cut-off point for screening general health in Iranian population was 24 which ensure optimal psychometric indices. Coefficients of criterion validity, structural validity, and reliability showed that GHQ-28 is one of the most valid instruments for screening general health.^[29]

Furthermore, the demographic characteristics of women (age, education, marital status, number of children) were considered

Ethical considerations

All procedures were performed with the permission of the Isfahan University of Medical Sciences. Before performing the test, aims of the study were explained to the participants, and they were ensured about confidentiality of the information and were emphasized that the questionnaires will be anonymously.

RESULTS

The mean age of participants was 27 years (standard deviation [SD] =8.03). And the mean number of children was 2 children (SD = 0.93).

In terms of education, 18.5% were finished elementary school, 29.2% were finished guidance school and 33.8% were finished high school and 18.5% had a college education. In terms of marital status 35.4% were single 38.5% were married, and 21.5% were divorced and 4.6% were widowed.

The results of the comparison of scores in term of aggression before and after intervention are shown in Table 1, and in term of mental health before and after intervention are reported in Table 2.

Table 1: Comparison of mean scores of aggression before and 1-month after intervention

Variable	Stage	Mean±SD	Paired <i>t</i> -test result
Hostility	Before	58.5±15.65	<i>P</i> <0.001
	After	40.4±20.02	
Physical aggression	Before	48.9±16.87	<i>P</i> <0.001
	After	27.5±18.30	
Verbal aggression	Before	52.2±17.09	<i>P</i> <0.001
	After	37.4±19.14	
Anger	Before	65.1±15.33	<i>P</i> <0.001
	After	43.7±21.21	
General aggression	Before	56.0±11.54	<i>P</i> <0.001
	After	36.7±16.19	

SD=Standard deviation

Table 2: Comparison of mean scores of mental health before and 1-month after intervention

Variable	Stage	Mean±SD	Paired t-test result
Somatization	Before	12±5.59	<i>P</i> <0.004
	After	10.1±5.13	
Anxiety, insomnia	Before	12.9±5.29	<i>P</i> <0.001
	After	9.3±5.17	
Social dysfunction	Before	12.3±3.63	<i>P</i> <0.04
	After	11.3±3.15	
Depression	Before	11.6±6.25	<i>P</i> <0.001
	After	7.7±6.17	
General mental health	Before	48.9±16.58	<i>P</i> <0.001
	After	38.6±15.12	

SD=Standard deviation

According to Pearson correlation test, there was a weak inverse correlation between age and aggression ($r = -0.23$, $P < 0.05$). Furthermore, Pearson correlation test revealed that there were no significant relationship between number of children and aggression, as well as mental health and between age and mental health. Spearman correlation test results showed that there was no significant relationship between education and aggressiveness as well as mental health.

According to ANOVA test, there were no significant differences between marital status and aggression, as well as mental health.

DISCUSSION

This study examined the effect of anger management education on mental health and aggression among prisoner women in Isfahan.

The data revealed that anger management training was effective to reduce self-report aggression. The mean scores of general aggression and its factors (hostility, physical aggression, verbal aggression, and anger) significantly were decreased one month after intervention.

As well, after anger management training women's mental health was promoted. The mean scores of GHQ-28 in all dimensions significantly were decreased.

The findings were consistent with some previous studies.^[9,30,31]

One of the reasons of intervention effectiveness could be considering prisoners and fostering their sense of human dignity.

According to researcher searching, there was no study which be evaluated the effect of anger management training on the both mental health and aggression. The effect of anger management training on mental health and aggression was evaluated separately in numerous studies.^[30,32]

In some studies, the effects of anger management training compared with other methods of controlling aggression for instance Rostae compared the effectiveness of anger

management training and drug therapy on the aggression prisoners. Both methods were effective in reducing aggression, but the effect of anger management training was greater.^[12] Similarly, in Karimi *et al.* study, effectiveness of anger management training and communication skills on the aggression among those who are dependent on cannabis was compared, finding indicated that communication skills training was more effective than anger management.^[33]

Because of specific environment of prisons and precise characteristics prisoners, one of the aggressive management objectives is to reduce the recurrence of crime which certain studies have dealt with it. For example, in study by Hunter and Hughes, after anger management programs in prison, recidivism, and crime recurrences significantly reduced.^[34]

In a study by Kennedy after anger management training for adult male inmates with aggressive behavior following changes was observed: Self-report reduce anger expression to normal conditions of prison, the frequency, intensity, and duration of anger, a more appropriate expression, the better reactions and consequences of anger reactions.^[35]

The findings of this study were inconsistent with Lakeh and Khalatbari among mothers of an elementary school boy in Rasht.^[36] One reason for this inconsistency could be the small size of their sample ($n = 15$). Consistent with Motlagh *et al.* study among adolescents,^[37] in the present study, there was no significant relationship between ages of the respondents and general aggression. This finding also inconsistent with the study of Lakeh and Khalatbari this inconsistency may be due to differences between subjects in two studies.

Furthermore, the findings of this study were inconsistent with some previous studies, for instance, would be pointed out to Watt's *et al.* study among violent offenders.^[32]

One of the reasons for inconsistency results with the present study could be due to gender inmates. Women prisoners are more likely than men prisoners to embrace training program and more influence by training. Another reason could be the mismatch specific cultural issues.

This study had limitations one of the most notably of them was a lack of a control group. Likewise, lack of classification of the audience according to the education, crime type, age, and history of incarceration can be mentioned as another limitation.

As conclusion, anger management intervention can have a positive effect on mental health and reduce aggression among prisoners. Anger management education can prevent the occurrence of negative and damaging consequences of aggression. Anger management training, enabling prisoners to effectively solve problems in their lives and do not use aggressive behavior in their interactions with others.

It is suggested that in future studies, the effects of anger management intervention compared with the control group.

It is recommended that the impact of trained educators about communication skills special for prisoners compare with other educators. In general, it is recommended further studies at prisons of the country perform anger management training in order to improve the mental health of women prisoners.

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Conflicts of interest

There are no conflicts of interest.

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