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*Original Article*

# The effect of anger management by nursing staff on violence rate against them in the emergency unit

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## Abstract

**BACKGROUND:** Violence at work is considered as part of the occupational hazards which can affect medical staff and have undesirable effects on quality of patients care. Anger management training causes increases the ability of individuals to change behavior and also can increase the ability of the individual in controlling the excitation in the undesirable conditions. This study aimed to determine the effect of anger management training program by nursing staff on violence rate against them.

**METHODS:** This was a two-group, two-phase, semi-experimental study. Sixty six qualified nurses employed in emergency unit of Al-Zahra Hospital were divided into test and control groups. In this study, the modified questionnaire of World Health Organization was used with adequate validity and reliability to measure the violence rate and anger control. Thereafter, the test group received anger management training for four 60-minute sessions.

**RESULTS:** The results of the study showed that there was no significant difference between the two groups in terms of demographic characteristics except marital status. In addition, there was a significant difference between the two groups in frequency distribution of psychological violence against nurses after the intervention, but there was no significant difference between the two groups in frequency distribution of physical violence against nurses.

**CONCLUSIONS:** The results of this study corroborated the findings of the previous studies. Therefore, increase in self-control and communication skills and problem solving skills at the time of dealing with the patients and their relatives is a step in reducing one of the factors of violence at workplace.

**KEY WORDS:** Anger management, violence, nurses, emergency unit.

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Increase in violence and conflict in the workplace is considered as one of the great concerns of the nurses in the workplace which is increasing in the hospitals and clinics.[1] Some researchers believed that increasing rate of violence in the hospitals is the consequence of increasing violence in the communities.[2] Violence in the workplace for the nurses and others in the health care systems is an important issue which is defined as violent attacks against people at work or at the time of working.[3] According to the British Crime Research Center, nurses and other health professionals have the second rank in experiencing violence at workplace after the police and security forces.[4] The risk of violence from the patients and visitors is 16 times more than risk of health care workers toward other staff.[5] Some employees in certain occupations like nursing are at the very high risk of nonfatal violence in the workplace.[6]

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According to National Institute for Occupation Safety and Health (2002), workplace violence is an assault, threatening behavior (scaring) or swearword which happens at workplace and includes hitting, wounding, killing others, throwing things, raping or committing suicide, psychological trauma such as threats, obscene phone calls, intimidating and abusing like screaming, lurk and lancing.[7]

Ayranci in a study defined violence as: any event that endangers health care staff and includes obscene, threatening behaviors, aggression by the patient, family members, friends or community members.[8] French defined workplace violence with intimidation, bullying, threats, physical attacks, property damage and indigenous violence which occurs by the employees, clients, customers, relatives, acquaintances or strangers against staff at the work place.[9] It was estimated that annual costs resulted from violence against nurses have been more than 69 million U.S. dollars; however, these calculations did not include staff replacement costs, medical expenses and compensations claims.[10] It was announced that 93% of the nurses are frequently affected by stressful environmental factors in the workplace.[11] However, in the United States annual stress-related diseases' costs are estimated as 13000 dollars per employee in each occupation and high job stress is associated with reduction in job performance, the increase in absenteeism due to disease, poor emotional and physical health, high displacement rates and the high possibility of quitting the job in the nurses.[12] Observing a violent incident can cause injury and violence in the future. Observing violence by someone increases the possibility of aggression and anxiety disorders (such as acute and post traumatic stress) and disrupts the ability of the individual to adopt with events.[13]

Anger is one of the complex human emotions. Anger is a common reaction to ill-trick and frustration.[14] When someone is threatened (whether physical or verbal threat) most likely, he would be angry and would attempt to counterattack because he could not achieve his demands or motives.[14] The quality of someone's thought in provoking situations is the reducing or intensifying factor for individual's reaction. The individual, in regulating the emotions, by acquiring ability to revise and reconstructing the intensity and direction of an emotion in himself and others, modifies and inhibit negative emotions internally and shifts it towards reconciliation, and with increasing this understanding, individual can go ahead management and controlling the emotions and improving inter-personal relations and in general takes a step toward success in different aspects of his life.[15] In most of the studies, violence has been considered as emphasis on patient rights. But this right should be for both the staff and patients with their relatives to interact with each other in the workplace without exposure to violence. And considering that in the studied researches, no one addressed the preventive methods, therefore, this study was done in response to this need. The present study aimed to determine the effect of anger management training program by the nursing staff on the violence rate against them in the emergency unit of Al-Zahra Hospital in Isfahan.

## Methods

This was a two-group two-phase semi-experimental study. The test group participated in the educational sessions related to anger management but the control group did not receive any program. The study population in this study included all the employed nurses in the emergency unit of Al-Zahra Hospital who were divided into two groups of test and control. Those who had not lost any of their first grade relatives in the past two months, had no history of using psychotropic drugs or psychological problems were included in this study.

Collecting the data was done using a researcher-made questionnaire based on Workplace Violence of the World Health Organization (2003) which was translated to Persian and the parts which were not compatible with our culture were removed and Anger Control Questionnaire was added to it. This instrument consisted of 46 questions that were divided into four parts. Part (A): including twelve

social-individual questions, part (B): including eleven questions which assessed physical violence such as (the quality of occurrence, type, time, how to deal with that person and how people react in stressful situations), part (C): including nine questions about psychological violence (verbal violence, bullying, and threat) and part (D): the questions about anger management. The questions of this part of the questionnaire were designed in order to review how to manage anger in the study subjects. The answers were four-choice items as never (3), sometimes (2), often (1) and always (0). The total score of the questions ranged from 0 to 42. The higher score indicated the higher control and anger management.

For validity and usability of this instrument for the emergency nurses, content validity method was used i.e. the researcher, using the translated version and based on studying resources, publications, books and articles designed the data collection tool and then gave it to 10 faculty members of the university including faculty members of Psychiatric Nursing Department of School of Nursing and Midwifery and psychologists of School of Medicine and professors of Educational Sciences who had research experience in the field of violence and after collecting their comments, the questionnaire was revised. Reliability of the instrument also was done using internal consistency method. It was completed by 10 employed nurses in the emergency unit and its Cronbach's alpha was calculated by SPSS Software (Cronbach's alpha = 0.75).

After random dividing, the test group participated in the designed training program consisting of four 60 minute weekly sessions. The researcher divided them into two groups according to their working shifts and regulated the educational sessions. In all the sessions, in addition to the researcher, someone with MSc in psychology presented who was professional at the related subject to practical implementation of the anger management techniques. During the educational sessions, group discussion, question and answer and practical techniques of anger management were used. Immediately after the end of the intervention, the study subjects completed the questionnaire again.

Analyzing the data was done using Software $SPSS_{15}$ and descriptive and inferential statistical tests. Paired t-test was used to compare each group before and after the study and independent t-test were done for comparing two groups.

## Results

Age range of the participants was 20 to 50 years. Mean age of the test group and control group was 33.7 (± 6.9) and 33 (± 5.65) years, respectively. The majority of the study subjects in the control and test group consisted of nurses with 5 to 10 years of experience. There was no significant difference between the two groups in terms of age and work experience. However, in terms of marital status, 42.5% and 69.7% of the test and control groups were married respectively. The obtained results by chi-square showed that distribution of the study subjects in the test and control groups were different in terms of marital status ($p < 0.05$). Therefore, entering the marital status variable as the covariance in the variance equation test, this variable was controlled with the probability of a confounding variable and it was indicated that by removing the effect of being married, still the mean changes of anger control score had a significant difference in the two groups before and after the intervention. Other underlying variables such as gender,

**Table 1.** Frequency distribution of psychological (verbal) and physical violence in both groups (before and after the intervention)

| Group | Psychological (verbal) violence | | | Physical violence | | |
|---|---|---|---|---|---|---|
| | Before the intervention | After the intervention | Significant level | Before the intervention | After the intervention | Significant level |
| Test | 69.7% | 48.5% | 0.04 | 18.2% | 9.1% | 0.37 |
| Control | 66.7% | 69.7% | 0.35 | 15.2% | 12.1% | 0.5 |

**Table 2.** Mean score of anger management in both groups (before and after the intervention)

| Group | Before the intervention | | After the intervention | | Significant level |
|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | |
| Test | 59.52 | 9.12 | 79.07 | 9.23 | 0.001 |
| Control | 58.84 | 6.57 | 58.70 | 8.60 | 0.974 |

educational level, working shift type and the type of employment also had no significant difference between the two groups.

In reviewing the study objectives, the difference of the scores obtained from the mentioned questionnaire were compared before and after the intervention in both groups. Table 1 indicates frequency distribution of physical and psychological violence rate against nurses in the two groups before and after the intervention. In both groups, before the intervention, based on independent t-test there was no significant difference for physical violence ($p = 0.37$) and psychological violence ($p = 0.35$). Moreover, according to chi-square and Fisher tests, frequency distribution of physical violence against nurses in the test group was not significant ($p \geq 0.05$) but frequency distribution of psychological violence had a significant difference ($p \leq 0.05$). Frequency distribution of physical violence against nurses after the intervention between the two group showed no significant difference according to Fisher test ($p = 0.5$). Furthermore, frequency distribution of psychological violence against nurses showed a significant difference after the intervention according to chi-square test ($p \leq 0.04$).

Statistical independent t-test ($p = 0.001$) showed that in the test group, there was a significant difference between mean score of anger management before the intervention ($59.52 \pm 9.12$) with mean score of anger management after the intervention ($79.07 \pm 9.23$). In addition, paired t-test showed that there was no significant difference in the control group between mean score of anger management before the intervention ($58.84 \pm 6.57$) with mean score of anger management after the intervention ($58.70 \pm 8.60$) (Table2). Paired t-test showed that there was a significant difference between mean score of anger management after the intervention in the test group ($19.5 \pm 8.4$) with mean score of anger management after the intervention in the control group ($-0.14 \pm 11.8$). ($p = 0.001$)

## Discussion

The results of the present study showed that anger management training to the emergency nurses affects the incidence of violence against them. Fernandes et al indicated that after an educational program, verbal violence rate against the staff was significantly reduced. Verbal violence was reduced from 0.85 cases of violence per employee in each shift to 0.31 cases of violence in three months after the education.[16] Some parts of this study was in accordance with the results of the present study but in the present study, violence was assessed only immediately after the education, but in the above mentioned study, violence rate was assessed three and six months after the education. Different studies have shown that not providing the basic needs of each human can cause aggression in the individual. Factors such as hunger, pain, long waiting of the patients for implementation of an intervention, lack of awareness from the treatment process, crowd and noise are the set of factors which cause different types of violence and training the staff can reduce some of these factors and consequently reduce the types of violence.

Deans showed that educational program could improve understanding, attitude and skill of the nurses in managing aggressive behaviors of the patients. Findings of this study indicated that mean number of exposure of the staff with aggressive situations was $8.93 \pm 11.3$ before the intervention which was reduced to $4 \pm 3.45$ after the intervention. However, chi-square test showed that this reduction was not statistically significant ($p = 0.06$) [17] which was almost in ac-

cordance with the present study. The results of this study showed that education could have a positive effect on other aspects such as attitude of the individuals, how to manage violent behaviors and confidence in dealing with violent situations which statistically were significant. In the above mentioned study, dealing with violence was showed by *mean*, whereas, in the present study it was shown by percentage. Moreover, educational program of the above study was more emphasized on team reactions on violent behaviors and did not focused on self-control skills, while, in the present study, it was more relied on the self-control skills. That is because one of the factors of violent behaviors incidence in others (patients, relatives and partners) is inappropriate reactions and responses of the staff. Studies have shown that if 60% of the staff of a ward undergo training to deal with violence, the number of violence incidence in that ward would be reduced to one third in comparison with other wards [18].

Ansari et al showed that group training had effect on frequency reduction of expressing the anger ($p < 0.01$). Besides, the obtained results from covariance analysis showed that group training had effect on situational anger which was statistically significant ($p < 0.01$).[19] However, the above study did not illustrate the results separately as two groups of test and control and only sufficed the overall result. Some parts of the above study was in accordance with the present study, but the difference between this study and the above mentioned study was that first, the study of Ansari was carried out in two groups with the same gender (female) with nine 110-minute training sessions, but the present study was combination of both sexes in four 60-minute sessions. Furthermore, in the present study, in addition to anger management score, violence rate at workplace was also assessed.

The authors declare no conflict of interest in this study.

## Conclusion

In most of the studies, violence had been addressed from the patients' standpoint. This one-sided view has been formed in the minds of many as an emphasis to patient rights versus health staff rights. This right should be considered for both staff and patients with their relatives so that they can interact with each other without any violence at the workplace. It is hoped that the results of the present study can be a guidance to implement appropriate interventions for a better and safer workplace for the nurses and a solution to conduct further researches in this regard.

The authors declare no conflict of interest in this study.

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