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Research Article

Psychological Violence in the Health Care Settings in Iran: A Cross-Sectional Study

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Background: Psychological violence is the most common form of workplace violence that can affect professional performance and job satisfaction of health care workers. Although several studies have been conducted in Iran, but there is no consensus regarding current status of such violence.

Objectives: This study aimed to investigate the prevalence of psychological violence among healthcare workers employed at teaching hospitals in Iran.

Patients and Methods: In this cross-sectional study, 5874 health professionals were selected using multistage random sampling. Data were collected using a self-administered questionnaire developed by the International Labor Organization, International Council of Nurses, World Health Organization, and Public Services International. Descriptive statistics were used to analyze the data.

Results: It was found that 74.7% of the participants were subjected to psychological violence during the past 12 months. Totally, 64.5% of psychological violence was committed by patients' families, but 50.9% of participants had not reported the violence, and 69.9% of them believed that reporting was useless.

Conclusions: The results are indicative of high prevalence of psychological violence against healthcare workers. Considering non-reporting of violence in more than half of participants, use of an appropriate reporting system and providing training programs for health professionals in order to prevent and manage workplace violence are essential.

Keywords: Workplace Violence; psychological Violence; Health Personnel; Health Care Setting; Iran

1. Background

The wellbeing of healthcare staff and a healthy workplace are considered key components of an effective healthcare system (1). Workplace violence, as one of the most important psychosocial risks (2), is a serious (3) and a multidimensional problem that adversely affects on the professional and personal life and leads to a high staff turnover (4). Health care workers experience violence 16 times more than other workers, and nurses in particular, are three times more likely to experience workplace violence (5). According to the World Health Organization (WHO), workplace violence is categorized into physical, psychological (emotional), sexual, and racial violence (6). The phenomenon of physical and psychological violence is common, but psychological violence occurs more than other types (7). Evidence show that people who experience psychological violence are seven times more likely to be victims of physical violence (8). Psychological violence is defined as:

“intentional use of power including threat of physical force, against another person or group that can result in harm to physical, mental, spiritual, moral or social development. It includes verbal abuse, bullying/mobbing, harassment and threats” (9). Psychological violence can include abusive, humiliating, intimidating, ridiculing, and insulting behaviors (10). In a study in Canada, 56.7% of the healthcare personnel experienced psychological violence, most of them were in emergency departments (11). Psychological violence was reported 51.4% in Taiwan (2), and 76% in Hong Kong (12). In Jordan, 70% of personnel reported exposure to verbal violence (13). In Iran, a systematic review reported the incidence rate of verbal violence was between 23.2% and 97.8% (14). Prevalence of psychological violence also was reported by Hasani et al. (15) and Sahebi (16) to be 77.5% and 64.3%, respectively. Workplace violence may result in reductions in job satisfaction, quality of life, and productivity, and increase

in nurses' turnover (17, 18); that consequently might lead to increased medical errors, reduced quality of patient care, and adverse effects on nurse-patient communication (19, 20). Although numerous studies have been conducted on workplace violence, however, there is no consensus regarding the current status of psychological violence towards healthcare workers in Iran.

2. Objectives

This study aimed to investigate the incidence rate of psychological violence in teaching hospitals in Iran, its associated factors and the staff's reactions toward such violence.

3. Patients and Methods

3.1. Study Design and Participants

This cross-sectional study was conducted among Iranian healthcare professionals who worked in teaching hospitals in 2011. Study population were physicians, nurses, nurse aids, midwives and paramedical staff that numbered 57000 personnel according to the latest Ministry of Health and Medical Education statistics in 2011. Inclusion criteria were: working in a teaching hospital, and having at least one year of professional experience. The exclusion criterion was a participant's decision to leave the study.

Sample size was estimated based on previous studies by Zamanzadeh et al. and Hossein Abadi et al. (21, 22) who studied workplace violence against nurses and reported that about 75% of nurses experienced a psychological violence. Then, using the following formulas, 6485 subjects were estimated to be recruited in the present study and we selected 6500 ones to be more sure about the final included subjects. (equation 1).

$$\text{Equation 1.} \\ m = (Z_{1-\alpha/2}/d)^2(p)(1-p) = (1.96/0.01)^2(0.75)(0.25) = 7203 \\ n = (M)(\text{total})/M + \text{total} = (7203)(65000)/7203 + 65000 = 6485$$

After calculating the sample size, a multistage random sampling was conducted in three phases. In the first stage, all of provinces included in this study (four provinces excluded due to administrative issues) and the needed sample size in each province were determined according to the proportion of healthcare professionals worked there. In the second stage, hospitals were selected through cluster random sampling based on geographic areas and 135 teaching hospitals were selected afterwards. In the last stage, samples were selected randomly from the list of staff in each hospital, provided by the office of nursing in each hospital.

3.2. Data Collection

Data were collected using the questionnaire of "workplace violence in the health sector", developed in 2003

by the International Labor Organization (ILO), International Council of Nurses (ICN), WHO, and Public Services International (PSI). This questionnaire contains five sections to assess personal and workplace information (21 items), physical violence (17 items), workplace psychological violence, including verbal violence, bullying, and sexual and racial harassment (37 items), health sector (8 items), and participants' views on workplace violence (3 open-ended questions). Higher frequency indicates more incidence of violence. In this article, only the results associated with psychological violence (emotional violence) are reported (except sexual and racial harassment), because of the extensive amount of data involved. The questionnaire was translated into Persian by a bilingual person, and back into English by another bilingual professional. After matching with other existing Persian version (23), the questionnaire was reviewed and re-edited in a panel of experts. Content validity of the final draft of the questionnaire was confirmed by 11 experts. Reliability of the questionnaire was assessed in a pilot study through completing it twice, with a 15-days interval, by 180 health workers and the correlation coefficient was $r = 0.71$. Several nurses in each province were trained on how to fill out the questionnaires. In each hospital questionnaires were received by the office of nursing and were distributed by the trained nurses among healthcare workers who were selected randomly. Participants were asked to fill the questionnaire in a private environment and return it back to the concerned nurses or the nursing office. Then the concerned nurses in the hospital gathered all the questionnaires and posted them to the main researcher. All participants were explained that they could choose more than one item in questions regarding the type of psychological violence and reasons of the violence.

3.3. Ethical Considerations

The Research Council and the research ethics committee in the University of Social Welfare and Rehabilitation Sciences approved the study (No.1393/76). Moreover, before data collection, permissions were obtained from the hospitals officials and ward managers. All of the participants were briefed on the study objectives, assured about the anonymity of the questionnaire and voluntary nature of participation in the study, and also signed a written informed consent.

3.4. Data Analysis

Descriptive statistics (means, standard deviations, and frequencies) were used to analyze the data using the SPSS software version 13.

4. Results

Of 6500 distributed questionnaires, 5874 were returned (response rate = 90.36%). In total, 82.7% of sam

Table 1. Demographic and Work Characteristics of Participants (n = 5874)^{a,b}

Variable	Values
Gender	
Male	1001 (17.3)
Female	4790 (82.7)
Age, y	
< 30	1544 (28)
30-40	2414 (44)
41-50	1337 (24.3)
51-60	199 (3.5)
> 60	9 (0.2)
Marital Status	
Single	1574 (27.3)
Married	4212 (72.7)
Profession	
Nurse	4505 (78.5)
Physician	43 (90.8)
Midwife	239 (94.1)
Nurse aid	619 (10.8)
Paramedical	337 (5.8)
Work between 7p.m. and 7 a.m.	
Yes	3269 (58.5)
No	2322 (41.5)
Work areas	
One area	1310 (25)
Multiple areas (in overtime)	3937 (75)
Professional experience in health care services, yr	
0-10	3215 (58.8)
11-20	1673 (30.6)
21-30	576 (10.6)
Employment status	
Full time	2344 (42.9)
Part time	680 (12.5)
Overtime	2433 (44.6)
Direct patient/client contact	
Yes	5471 (97.6)
No	132 (2.4)
Sex of the patients that health workers most frequently work with	
Male	599 (10.8)
Female	844 (15.1)
Male and Female	4120 (74.1)
Presence of security guards in the wards	
Yes	2036 (37)
No	3462 (63)
Workplace has been highly dangerous	
Always	1855 (32.7)
Sometimes	2746 (48.5)
Never	1069 (18.8)
Presence of protocols for reporting workplace violence	
Yes	1653 (39.4)
No	2539 (60.60)
Presence of training programs related to the incident management	
Yes	660 (14.9)
No	3767 (85.1)

^a Data are presented as No. (%).^b The sum may be less than total participants because of the missing data.

ples were female. The mean age of the participants was 34 ± 8.5 years, and 78.5% were nurses. The mean work experience was 10.35 ± 7.41 years. The majority of the participants reported that they work in different units of the hospitals in overtime (75.05%). More than half of the participants reported that they worked between 7 p.m. and 7 a.m. (58.5%). Almost all of the participants reported that they had direct contact with patients during their work (97.6%). More than half of the participants (60.6%) revealed that there was no guideline in their workplace for reporting violence. Eighty-five percent of the participants revealed that they had not passed workplace violence prevention programs. Demographic data are presented in Table 1.

About 75% of the participants reported that they had been subjected to workplace psychological violence in the past 12 months. Abuse (76.1%), insults (48.8%), verbal threats (35.8%), humiliation (34.7%), and bullying (34.3%) had the highest incidences, and intimidation (24.2%), ridicule (21%), and threatened with stabbing (2.2%) were the lowest violent incidences. Nurses were the main victims of such violence (80.7%). The main source of psychological violence was patients' families (64.5%). About 68% of the participants argued that no action has yet been taken to prevent violence, and where actions had been taken, 76.8% of the participants were dissatisfied with the process of pursuing violent action. Characteristics of psychological violence and its forms are presented in Tables 2 and 3.

Table 2. Frequency of Psychological Violence (n = 4179)^{a,b}

Variable	Values
Exposure to violent incidents in the past 12 months	
Yes	4179 (74.7)
No	1414 (25.3)
Type of psychological violence	
Abuse	3093 (76.1)
Insults	1987 (48.8)
Verbal threats	1455 (35.8)
Humiliation	1411 (34.7)
Bullying	1396 (34.3)
Intimidation	984 (24.2)
Ridicule	857 (21)
Threatened with stabbing	88 (2.2)
Threatened with weapon	40 (1)
Responsible persons for violent incidents	
Patient	1076 (27.5)
Relatives of patients/clients	2530 (64.5)
Staff members	213 (5.5)
Management/supervisor	100 (2.5)
Place of violence occurrence	
Inside hospital	2953 (91.1)
At patient's home	243 (7.5)
Outside (on way to work)	45 (1.4)
Time of violent incident occurrence	
07.00 a.m.-3.00 p.m.	1506 (42.7)
3.00 p.m.-11.00 p.m.	1020 (28.9)
11.00 p.m.-07.00 a.m.	998 (28.4)

^a Data are presented as No. (%).^b The sum may be less than total participants because of the missing data.

Table 3. Exposure to Psychological Violence Based on Demographic and Work Characteristics ^{a,b}

Variable	Values
Gender	
Male	768 (18.5)
Female	3383 (81.5)
Age, y	
< 30	1120 (29.5)
30-40	1852 (48.5)
41-50	754 (19.8)
51-60	87 (2)
> 60	4 (0.2)
Marital Status	
Single	1114 (27)
Married	3013 (73)
Direct patient/client contact	
Yes	3859 (92.5)
No	307 (7.5)
Profession	
Nurse	3339 (80.7)
Physician	30 (0.7)
Midwife	164 (4)
Nurse aid	438 (10.6)
Paramedical	167 (4)

^a Data are presented as No. (%).

^b The sum may be less than total participants because of the missing data.

In response to violence, 40.7% of the participants invited the perpetrators to stop. Totally, 50.9% of participants did not report violence, and 69.9% of them believed that reporting violence was useless (Table 4). More than half of the participants (51.4%) believed that "lack of people's knowledge about staff's duties" contributed to the occurrence of violence (Table 5).

5. Discussion

In this study, the response rate was 90.36% that indicates good cooperation of the target group.

The results indicated that 74.7% of health workers had been exposed to psychological violence over the past year. The rate of psychological violence among health-care workers in Iran was reported 72.5% by Rafati-Rahimzadeh et al. (24), 77.5% by Hasani et al. (15) and 93.4% by Fallahi-Khoshknab et al. (25). Also, prevalence of psychological violence was found 89.4% by Franz et al. (26), 100% by Merez et al. (27), and 50% by Hahn et al. (28). These results confirm that psychological violence against healthcare workers is a serious problem that requires immediate attention from the side of policy makers. In the present study, abuse, insult, and verbal threats were the

Table 4. Reactions of Health Care Workers to Psychological Violence (n = 4179) ^{a,b}

Variable	Values
Reactions of participants toward violence	
Took no action	583 (14)
Tried to pretend it never happened	523 (12.5)
Told the person to stop	1704 (40.7)
Tried to defend themselves	609 (14.5)
Told friends/family	230 (5.5)
Told a colleague	1011 (24.1)
Sought counseling	126 (3)
Sought help from union	425 (10.1)
Completed incident/accident form	194 (4.6)
Completed a compensation claim	24 (0.5)
Reporting the incident	
Yes	1577 (49.1)
No	1631 (50.9)
Reasons for not reporting the incident	
It was no important	510 (31.2)
Felt ashamed	94 (5.7)
Felt guilty	24 (1.5)
Afraid of negative consequences	119 (7.2)
Useless	1140 (70)
Did not know whom to report	160 (9.8)
Action taken with regard to the incident occurred	
Yes	879 (26)
No	2301 (67.7)
Do not know	214 (6.3)
Source for taking the action	
Head nurse	360 (33.8)
Management	497 (46.6)
Police	209 (19.6)
Satisfaction with the manner in which the incident was handled	
Very dissatisfied	1624 (58)
Dissatisfied	529 (18.8)
Moderately satisfied	435 (15.5)
Satisfied	204 (7.3)
Very satisfied	12 (0.4)

^a Data are presented as No. (%).

^b The sum may be less than total participants because of the missing data.

Table 5. Contributing Factors to Psychological Violence (n = 4179)^a

Variable	Values
Drug or alcohol use by patients	659 (15.7)
Staff shortage in the ward	1084 (25.9)
Patient's judicial and legal Issues	266 (6.3)
Lack of security facilities	1417 (33.9)
Patient's death	549 (13.1)
Lack of people's knowledge of employees' tasks	2149 (51.4)
Delays in aid	413 (9.8)
Lack of training program for preventing violence	704 (16.8)
Prolonged stay of the patients in the ward after discharge	423 (10.1)
Interval from hospital admission to diagnosis of the patient's disease	210 (5)
Having no visitors	236 (5.6)
Gathering of high-risk patients in one room	376 (8.9)

^a Data are presented as No. (%).

most forms of psychological violence, and intimidation, ridicule were the least forms, respectively. Talas et al. (29) indicated that 82.3% of verbal violence were reported as yelling, shouting, humiliation or abuse. Also, Erkol et al. (30) have reported that the most common forms of psychological violence were shouting, verbal threat, and abusive language. In previous studies in Iran, abuse, ridicule (24), humiliation and insults (31) were the most common forms of verbal violence, which concur with the present study. AbuAlRub et al. (13) have indicated that humiliation and bullying have significantly more severe negative effects on victims' mental health than other forms of workplace violence. Therefore, psychological violence and its destructive effects on mental health of workers should be considered by healthcare officials and planners. The present study showed that patients' families were the main source of psychological violence. Previous studies also reported that 64.52% to 98.8% of aggressors were patients' relatives (24, 29, 30, 32, 33). This finding might indicate the miscommunication between patients' families and healthcare staff especially nurses and shows the necessity of improvement in the quantity and the quality of nurses' communication with patients and families. However, unlike these results, Hesketh et al. (11) indicated that the most rate of psychological violence was committed by hospital staff (physician and nurses' colleagues).

In this study, violent incidence occurred mostly by young men during morning shift. Shoghi et al. (33) have also reported that the most violent incidence was reported in the morning shift. Due to high workload in the morning shift, the likelihood of psychological violence

increases. In the current study, more than half of the participants did not report violence. In other studies, despite high prevalence of psychological violence 65.3% to 75% of participants did not report violence (29, 30). Salimi et al. (34) noted that only 30.7% of health workers had reported verbal violence. In this study, participants considered reporting useless, which is parallel to Fallahi-Khoshknab et al. (25) and Teymoorzadeh et al. (35). Lack of reporting could be due to lack of proper feedback from officials and lack of proper guidelines for violence reporting. Moreover, this might indicate that healthcare personnel do not trust in their administrators. Hesketh et al. (11) have reported that when colleagues are violent, healthcare workers show low willingness to report violent incidents, but there is greater willingness to report if patients or their relatives are to blame. In the present study, the majority of participants believed that no guidelines existed in their workplace for reporting violent incidence, and even if reported, no particular action is taken by superiors to identify causes of violence. Furthermore, pursuing most reported violent cases has been unsatisfactory. In agreement with our results, Zamanzadeh et al. (21) and Rahmani et al. (36) have also reported that no guidelines existed in the healthcare settings for dealing with violence, and also, once violent are reported, no action is taken by superiors. Also, more than half of the participants in the current study believed that "lack of public knowledge of workers' duties" was a contributing factor to violence, which is parallel to the finding of Rahmani et al. (36) who studied the occurrence of physical violence in emergency medical technicians in East Azerbaijan province.

There were some limitations in the present study. First, the data were collected retrospectively, which might lead to recall bias. Second, due to the large sample size and self-report method used for data collection, missing data for each item was relatively significant. Also, the results may suffer from misunderstanding of the workplace violence definition or a lack of willingness to share private information.

In conclusion, the present study presented the high incidence of psychological violence among healthcare workers. This could have undesirable consequences. In this respect, there are no particular protocols or policies for prevention or post exposure action or reporting violence to superiors. In addition, most participants were not inclined to report. because they thought it would be pointless and there will be no appropriate support and follow up mechanisms on the part of authorities. It seems providing appropriate training programs to promote healthcare workers' communication skill, legislation of laws and policies, reporting system, security procedures and supporting workers-at-risk might be contribute to minimizing the violence acts. Also, providing adequate information and increasing awareness of the patients and their families regarding the phenomenon of workplace violence through mass media should be consid-

ered. Interventional studies are needed to compare the impact of different methods or programs on decreasing workplace violence.

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Authors' Contributions

MF, FO: Study design and conceptualization. NG, ZT, HA: Data collection. MF, FN, NG, ZT, HA: Data analysis and interpretation. FN: Manuscript writing. MF: study supervision.

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References

- Kling RN, Yassi A, Smailes E, Lovato CY, Koehoorn M. Characterizing violence in health care in British Columbia. *J Adv Nurs*. 2009;**65**(8):1655-63.
- Chen WC, Sun YH, Lan TH, Chiu HJ. Incidence and risk factors of workplace violence on nursing staffs caring for chronic psychiatric patients in taiwan. *Int J Environ Res Public Health*. 2009;**6**(11):2812-21.
- Rodwell J, Demir D. Oppression and exposure as differentiating predictors of types of workplace violence for nurses. *J Clin Nurs*. 2012;**21**(15-16):2296-305.
- Pieri L. Are nurses receiving enough education on workplace violence? *AWHONN Lifelines*. 2004;**8**(3):187-9.
- St-Pierre I, Holmes D. Managing nurses through disciplinary power: a Foucauldian analysis of workplace violence. *J Nurs Manag*. 2008;**16**(3):352-9.
- Ray MM. The dark side of the job: violence in the emergency department. *J Emerg Nurs*. 2007;**33**(3):257-61.
- Lau JBC, Magarey J, McCutcheon H. Violence in the emergency department: a literature review. *Australian Emerg Nurs J*. 2004;**7**(2):27-37.
- Lanza ML, Zeiss RA, Rierdan J. Non-physical violence: a risk factor for physical violence in health care settings. *AAOHN J*. 2006;**54**(9):397-402.
- Di Martino V. Workplace violence in the health sector. *Country case studies Brazil, Bulgaria, Lebanon, Portugal, South Africa, Thailand and an additional Australian study. Ginebra: Organización Internacional del Trabajo*. 2002.
- Rippon TJ. Aggression and violence in health care professions. *J Adv Nurs*. 2000;**31**(2):452-60.
- Hesketh KL, Duncan SM, Estabrooks CA, Reimer MA, Giovannetti P, Hyndman K, et al. Workplace violence in Alberta and British Columbia hospitals. *Health Policy*. 2003;**63**(3):311-21.
- Kwok RP, Law YK, Li KE, Ng YC, Cheung MH, Fung VK, et al. Prevalence of workplace violence against nurses in Hong Kong. *Hong Kong Med J*. 2006;**12**(1):6-9.
- AbuAlRub RF, Al-Asmar AH. Psychological violence in the workplace among Jordanian hospital nurses. *J Transcult Nurs*. 2014;**25**(1):6-14.
- Najafi F, Fallahi-Khoshknab M, Dalvandi A, Ahmadi F, Rahgozar M. [Workplace violence against Iranian nurses: A systematic review]. *J Health Prom Manag*. 2014;**3**(2):72-85.
- Hasani A, Zaheri MM, Abbasi M, Saeedi H, Hosseini M, Fathi M. [Incidence Rate of physical and verbal violence inflicted by patients and their companions on the emergency department staff of Hazrate-e-Rasoul hospital in the fourth trimester of the year 1385.]. *Razi J Med Sci*. 2010;**16**(67):46-51.
- Sahebi L. [Workplace violence against clinical workers in Tabriz educational hospitals.]. *Iran J Nurs*. 2011;**24**(73):27-35.
- Zeng JY, An FR, Xiang YT, Qi YK, Ungvari GS, Newhouse R, et al. Frequency and risk factors of workplace violence on psychiatric nurses and its impact on their quality of life in China. *Psychiatry Res*. 2013;**210**(2):510-4.
- Hegney D, Tuckett A, Parker D, Eley RM. Workplace violence: differences in perceptions of nursing work between those exposed and those not exposed: a cross-sector analysis. *Int J Nurs Pract*. 2010;**16**(2):188-202.
- Lau JB, Magarey J, Wiechula R. Violence in the emergency department: an ethnographic study (part II). *Int Emerg Nurs*. 2012;**20**(3):126-32.
- Blair PL. Lateral violence in nursing. *J Emerg Nurs*. 2013;**39**(5):e75-8.
- Zamanzadeh V, Abdollahzadeh F. [Nature of violence toward nurses working in hospitals.]. *Med J Tabriz Univ Med Sci*. 2007;**29**(2):61-6.
- HosseinAbadi R, Biranvand SH, Anbari KH, Heidari H. [Workplace Violence Against Nurses Working in Khorramabad Educational Hospitals and Their Confronting Behaviors in Violent Events.]. *J Urmia Nurs Midwif*. 2013;**11**(5).
- Esmailpour M, Salsali M, Ahmadi F. Workplace violence against Iranian nurses working in emergency departments. *Int Nurs Rev*. 2011;**58**(1):130-7.
- Rafati Rahimzadeh M, Zabihi A, Hosseini SJ. [Verbal and physical violence on nurses in hospitals of Babol University of Medical Sciences.]. *Hayat*. 2011;**17**(2):5-11.
- Fallahi Khoshknab M, Tamizi Z, Ghazanfari N. [Workplace violence status, vulnerable and preventive factors among nurses working in psychiatric wards.]. *J Health Prom Manag*. 2013;**2**(3):7-16.
- Franz S, Zeh A, Schablon A, Kuhnert S, Nienhaus A. Aggression and violence against health care workers in Germany—a cross sectional retrospective survey. *BMC Health Serv Res*. 2010;**10**:51.
- Merecz D, Rymaszewska J, Moscicka A, Kiejna A, Jarosz-Nowak J. Violence at the workplace—a questionnaire survey of nurses. *Eur Psychiatry*. 2006;**21**(7):442-50.
- Hahn S, Muller M, Needham I, Dassen T, Kok G, Halfens RJ. Factors associated with patient and visitor violence experienced by nurses in general hospitals in Switzerland: a cross-sectional survey. *J Clin Nurs*. 2010;**19**(23-24):3535-46.
- Talas MS, Kocaoz S, Akguc S. A survey of violence against staff working in the emergency department in ankara, Turkey. *Asian Nurs Res (Korean Soc Nurs Sci)*. 2011;**5**(4):197-203.
- Erkol H, Gokdogan MR, Erkol Z, Boz B. Aggression and violence towards health care providers—a problem in Turkey? *J Forensic Leg Med*. 2007;**14**(7):423-8.
- Koohestani HR, Baghcheghi N, Rezaei K, Abedi A, Seraji A, Zand S. [Occupational Violence in Nursing Students in Arak, Iran.]. *Iranian J Epidemiol*. 2011;**7**(2):44-50.
- Aghilinejad M, Nojomi M, Mehdi S, Mohammad S. [Study of prevalence of violence against nurses and related factors.]. *Razi J Med Sci*. 2011;**18**(86):49-58.
- Shoghi M, Sanjari M, Shirazi F, Heidari S, Salemi S, Mirzabeigi G. Workplace violence and abuse against nurses in hospitals in Iran. *Asian Nurs Res (Korean Soc Nurs Sci)*. 2008;**2**(3):184-93.
- Salimi J, Ezazi Erdi L, Karbakhsh Davari M. [Violence against nurses in non-psychiatry emergency wards.]. *Sci J Forensic Med*. 2007;**12**(4):202-9.
- Teymoorzadeh E, Rashidian A, Arab M, Akbari Sari A, Ghasemi M. [Exposure to psychological violence among the nursing staff in a large teaching hospital in Tehran.]. *J Sch Public Health Inst Public Health Res*. 2009;**7**(2):41-9.
- Rahmani A, Alah BA, Dadashzadeh A, Namdar H, Akbari Mohammad A. [Physical violence in working environments: viewpoints of EMT personnel in East Azerbaijan Province.]. *Iranian J Nurs Res*. 2008;**3**(11).