Background and Objectives: Workplace violence against female nurses is a significant and increasing problem. This study aimed to investigate workplace violence against female nurses in three general hospitals of Ilam (Western Iran) and identify factors influencing its incident.

Methods: Seventy seven nurses were randomly selected and surveyed. The data were collected using an author-designed instrument. The survey instrument consisted of 26 items on the demographic and employment characteristics of the participants (sex, age, work experience, marital status, degree of education, and the working department), and 19 multiple-choice questions related to verbal/physical abuse by the patients (5 items), verbal/physical abuse by the patients' visitors (5 items), and the nurse reactions (9 items). The validity and reliability of the questionnaire were examined using the CVI and Test-retest methods. T-test and ANOVA were used for comparison of the mean values. The correlation between the variables was explored using Pearson’s coefficient.

Findings: Overall, 83.1 % and 22.1 % of the participants had faced with verbal and physical violence by the patients during the last year, respectively. Moreover, 88.3 % and 31.2 % of the nurses had experienced verbal and physical assaults by the patients’ companions, respectively. Most nursing staff believe that reporting aggressive evident is not useful at all. A significant correlation was found between the physical assaults by patients and the nurses’ age (P < 0.05). In addition, a significant relationship between the verbal violence by patients and the nurses’ marriage status was identified (P < 0.05).

Conclusions: Our results revealed a high rate of workplace violence against the female nurses. To alleviate this problem, public training together with legally pursuing the individuals committing aggressive violence is essential. The fact that young and single nurses are more prone to violence shows the importance of employing experienced nurses in certain healthcare activities.

Keywords: Workplace violence, Nursing staff, Hospital, Hospital management, Health care system, Health care services
cally address the issue in their settings.

Among the different groups of healthcare workers, nurses are exposed to higher risk of workplace violence. Studies report the workplace violence prevalence of 62 to 95% against the nursing staff [20-23]. In Iran, there is a lack of data on the prevalence and causing factors of workplace violence against nurses. In addition, most information in this area is from the Nation's Capital. However, factors contributing to the emergence of workplace violence are culture-dependent, and developing a nation-wide strategy to cope with this health-related challenge requires comprehensive surveying of the nature of the problem throughout the country. To help narrow this gap, this study was designed to survey the prevalence of workplace violence against nurses, and the related contributing factors by sampling from three hospitals of Ilam Province, situated in Western Iran.

Methods

This cross-sectional study was conducted within July 2012–August 2012. A sample of 106 nurses working in three general hospitals Ilam Province (Imam Khomeini, Shahid Mustafa Khomeini and Ayatollah Taleghani) were invited to participate in the survey. The data were collected using a questionnaire according to which the nurses were asked to report their workplace violence experience during the past year. They were also asked to fully complete the questionnaire, and a questionnaire was considered invalid if the answers were missing for 1 or more questions.

The data were collected with an investigator-designed survey instrument that included 26 items, recording the demographic data (sex, age, job experience in nursing, marital status, educational degree, and the working department), and 19 multiple-choice questions related to workplace violence. The major topics of the questions included: 1) verbal/physical abuse from the patients (5 items), 2) verbal/physical abuse from the patients' visitors (5 items), and 3) the nurses' behaviors (9 items) when facing violence. The nurses were asked to report the instances, time and place of the violence incident(s), as well as the characteristics of the individual(s) guilty of violence.

The validity and reliability of the questionnaire were examined using the CVI and test-retest methods, respectively. The reliability analysis of the questionnaire was performed using the Cronbach’s alpha coefficient; the Cronbach α for the whole sample was obtained 0.78, showing adequate internal consistency reliability. Data were summarized using descriptive statistical methods. T-test and analysis of variance (ANOVA) was used for comparison of the mean values. Pearson’s correlation test was employed for identifying the possible correlation between the mean values. All statistical analyses were performed using the SPSS software (version 19.0).

Ethical Issues

An approval for conducting the study was obtained from the three hospitals’ administrative board. The target respondents were briefed about the objectives of the study, and their verbal consent for participating in the study was obtained. The confidentiality of the responses was assured by asking the participants to complete the questionnaire forms anonymously.

Results

Table 1 presents the demographic characteristics of the study sample. Most of the study subjects were 30-40 years old and married. Table 2 compares the frequency of different types of violence between the different hospital wards. As can be seen, verbal violence accounts for the majority of violence from both patients and their dependents. In addition, the rate of physical violence against nurses from the patients' companions is higher compared with that from the patients.

Table 3 classifies the rate of verbal and physical violence. As seen, more than 41% of the nurses stated that they face verbal violence from both patients and their companions more than 10 times per year. In addition, a considerable number of nurses have reported physical violence from patients or their companions with the rate of more than 5 times per year. Table 4 reports the perceptions and attitudes of the nurses towards the violence incidents they faced. Forgetting to report the violent event is the most frequent reason for not reporting. Most violence has been from the patients with mental illnesses. Lack of adequate staffing has been reported as the major cause of violent incidents. Most of the nurses stated that they try to invite to peace after occurrence of the violent event.

Figure 1 compares the rate of reporting violent incidents in different hospital wards. As shown,
the highest rate is related to the nursing staff in the Male Post-CCU Ward.

Pearson’s correlation test identified significant positive correlation between the rate of verbal violence and the number of work shifts (P < 0.05). Physical violence against male nurses was found to be significantly higher than that against female nurses (P < 0.05). In addition, the rate of reporting was higher in single nurses compared to their married counterparts (P < 0.05). No impact on violence rate was identified for other demographic and professional variables.

**Discussion**

Our study identified a rate of 83.1% and 22.1% for verbal and physical violence against nurses, respectively. This rate of violent incidents is consistent with the findings in several previous studies [24-26]. However, Jacobson [27] reported the rates of 97% and 74% for physical and verbal abuses, respectively. The discrepancy may be the result of different measurement instruments used by the researchers. Although, consistent with the present study, Nulan et al. (1999) [28] and Lawoko et al. (2004) [29] reported a higher vulnerability of male nurses against violent incidents compared with female nurses, several studies [30-32] have reported higher physical violent incidents against female nurses compared to their male counterparts. Therefore, based on our data, one could conclude that the rate of physical violence against female nurses in Iran is lower than that in several other counties.

Congruent with some previous studies [33-34], our study also shows that most violent events are originated from the patients’ companions. However, there are also reports of the patients’ visitors/companions being fewer perpetrators than the patients themselves, which may be due to intensive security guards in the western countries to visit the patients [35, 36].

Rafati Rahimzadeh (2012) [33] identified a prevalence rate of 30.5% for threat with weapons in Iran. Our results show that nurses prefer not to report violent incidents, except when harm is made. On the other hand, nurses in our study and many other nursing staff surveyed in other investigations believe that verbal abuse is a part of their job [26, 34, 37]. In addition, while most nurses believe that reporting aggressive events is not useful, some of them who report physical assaults did not officially pursue their complaints due to the lack of time and other reasons [38-40].

In the present research, it was found that non-trauma patients’ companions perpetrate most incidents of violence, followed by non-trauma patients, trauma patients’ visitors, and trauma patients’ visitors.
Workplace Violence against Nurses

Table 2  Rate of exposure of nurses to violence in different hospital wards

<table>
<thead>
<tr>
<th>Workplace ward</th>
<th>Threating with weapon by the patient’s companion (%)</th>
<th>Threating with weapon by the patient (%)</th>
<th>Physical assault from the patient’s companions (%)</th>
<th>Verbal abuse from the patient’s companions (%)</th>
<th>Physical assault from the patient (%)</th>
<th>Verbal abuse from the patient (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-CCU Ward (Male)</td>
<td>66</td>
<td>66</td>
<td>89</td>
<td>100</td>
<td>66</td>
<td>100</td>
</tr>
<tr>
<td>Emergency Ward</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>90</td>
<td>0</td>
<td>70</td>
</tr>
<tr>
<td>Post-CCU Ward (Female)</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>86</td>
<td>14</td>
<td>86</td>
</tr>
<tr>
<td>Dialyze Ward</td>
<td>33</td>
<td>14</td>
<td>28</td>
<td>72</td>
<td>28</td>
<td>72</td>
</tr>
<tr>
<td>ICU Ward</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>100</td>
<td>25</td>
<td>100</td>
</tr>
<tr>
<td>CCU Ward</td>
<td>50</td>
<td>20</td>
<td>20</td>
<td>100</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>ICU Ward++</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>75</td>
</tr>
<tr>
<td>Emergency Ward++</td>
<td>25</td>
<td>33</td>
<td>25</td>
<td>92</td>
<td>25</td>
<td>92</td>
</tr>
<tr>
<td>Neonatal Ward++</td>
<td>0</td>
<td>0</td>
<td>34</td>
<td>100</td>
<td>0</td>
<td>67</td>
</tr>
<tr>
<td>Emergency Ward+++</td>
<td>50</td>
<td>66</td>
<td>34</td>
<td>84</td>
<td>34</td>
<td>84</td>
</tr>
<tr>
<td>Burns Ward+++</td>
<td>14</td>
<td>14</td>
<td>28</td>
<td>57</td>
<td>14</td>
<td>72</td>
</tr>
</tbody>
</table>

*a* Shahid Mustafa Khomeini Hospital  
*b* Imam Khomeini Hospital  
*c* Ayatollah Taleghani Hospital
patients. These results are consistent with those from the study of Salimi et al. (2006) [34].

Inadequate nurse staffing, lack of sufficient security guards, and other factors such as delay of doctors to visit patients, limited facility, and inadequate patient care are found to be the major reasons for violent incidents, in agreement with previous reports [41]. Almost all nursing staff invited the perpetrators to peace. In cases where the invitation to peace had not been useful, a small number of nurses had resorted to self-defense. These behaviors corroborate the hypothesis that most nurses believe that workplace violence is a part of their job.

### Table 3 Frequency of different types of violent incident

<table>
<thead>
<tr>
<th>Frequency of violent incidents</th>
<th>Physical assault from the patient’s companion (%)</th>
<th>Verbal abuse from the patient’s companion (%)</th>
<th>Physical assault from the patient (%)</th>
<th>Verbal assault from the patient (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>64.9</td>
<td>13</td>
<td>66.2</td>
<td>14.3</td>
</tr>
<tr>
<td>&gt;5</td>
<td>24.3</td>
<td>35.1</td>
<td>19.5</td>
<td>35.1</td>
</tr>
<tr>
<td>01-5</td>
<td>4.1</td>
<td>10.4</td>
<td>9.1</td>
<td>9.1</td>
</tr>
<tr>
<td>&lt;01</td>
<td>6.7</td>
<td>41.6</td>
<td>5.2</td>
<td>41.6</td>
</tr>
</tbody>
</table>

### Table 4 Perceptions and attitudes of the nurses towards the violent incidents

<table>
<thead>
<tr>
<th>Perpetrator illness</th>
<th>9.3, Trauma patients</th>
<th>33.3, Non-trauma patients</th>
<th>13, Trauma patient’s companions</th>
<th>5.13, Non-trauma patient’s companions</th>
<th>13, More than one item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time of incident</td>
<td>15.3, Morning</td>
<td>8.5, Afternoon</td>
<td>22, Evening</td>
<td>28.8, Night</td>
<td>24.5, More than one item</td>
</tr>
<tr>
<td>Reason of not reporting violent incident</td>
<td>17, Insignificance</td>
<td>74.5, Not being useful</td>
<td>4.3, Lack of time</td>
<td>2.1, Forgetting</td>
<td>2.1, More than one item</td>
</tr>
<tr>
<td>Identification of perpetrator illness</td>
<td>29.3, Physical illness</td>
<td>32.8, Mental illness</td>
<td>5.2, Illness absence</td>
<td>31, Others</td>
<td>1.7, More than one item</td>
</tr>
<tr>
<td>Main cause of violent incident</td>
<td>4.5, Lack of patients</td>
<td>13.6, Lack of hospital facilities</td>
<td>37.9, Low number of nurses</td>
<td>24.2, Others</td>
<td>19.7, More than one item</td>
</tr>
<tr>
<td>Nurse’s reaction</td>
<td>24.6, No response</td>
<td>47.8, Invite to peace</td>
<td>5.8, Self-defense</td>
<td>13, Reporting to the manager</td>
<td>8.7, More than one item</td>
</tr>
</tbody>
</table>

*All values are reported in percentage*
Complete removal of workplace violence seems to be unrealistic. However, the legal pursuit of perpetrators may help increase the safety of the hospital staff. Strategies such as considering different visiting times for different wards and issuing visiting card for each patient’s relative/visitor can help better control the violent incidents. In addition, adequate nurse staffing, improving nurses’ salary, and providing opportunity to attend training courses or workshops on dealing with verbal and physical violence can help reducing the rate and intensity of violent incidents. For improving the rate of violent incident reporting, a standard violence incident management practice must be included in the curriculum of nursing students, and a specific office to record violent events is specified in the hospital settings.

Conclusions
This study provided provincial data on the rate and type of violent incidents against nurses that can be used in the development of coping strategies. It was found that most violent incidents are committed by the patients’ companions. Non-trauma patients’ companions committed the highest rate of violence followed by non-trauma patients, trauma patients’ visitors, and trauma patients. While male nurses are more exposed to physical violence, female nurses face with a higher rate of verbal violence. A significant correlation was found between the physical assaults by patients and the nurses’ age. In addition, a significant relationship between the verbal violence by patients and the nurses’ marriage status was identified.

The nurses surveyed in this study showed unwillingness to report violent events, most of them considering the violent incidents as a part of their daily job.

To alleviate this problem, public training together with legally pursuing the individuals committing aggressive violence is essential. The fact that young and single nurses are more prone to violence shows the importance of employing experienced nurses in certain healthcare activities and the need for training and empowerment of younger nurses in managing the violent event situations.

Competing Interests
The authors declare no competing interests.

Authors’ Contributions
HT conceived and designed the study, coordinated the study procedure and contributed to the interpretation of the data and to revising the manuscript. MS made the major contribution to collecting and analyzing the data, interpreting the results, and drafting and revising the manuscript. RM was involved in analysis and interpretation of the results and revising and drafting the manuscript. All authors read and approved the final manuscript.

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