Original article

Incidence and Risk Factors of Workplace Violence against Pre Hospital Staffs in Mazandaran; North of Iran

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Abstract:

Introduction: Ambulance personnel are often the first people to encounter patients needing emergency care. As they are the first healthcare systems who interface the patients and their relatives so they are susceptible to threat reactions and violence. Therefore unclearness of the threats nature against the ambulance staff and also their frequencies was the purpose of current study.

Methods: This was an observational cross-sectional study which was carried out in the primary health care centers in Mazandaran University of medical sciences from January 2016 to august 2017. All nurses available during the field work of the study in the primary health care centers (157 persons) were enrolled this study. The tool for data collection was a self-administered questionnaire. Data were imported to the SPSS v19 for both data analysis and tabular presentation.

Findings: 57 of respondents (35.2%) experienced physical violence. 110 (67.9%) of the personnel had been exposed to forms of verbal aggression. There was a significant relationship between the patient's age and occurrence of both verbal aggression and physical violence (P=0.067) and patients who were younger had more aggressive behavior (P=0.083). But there was not significant relationship between the site of staff duty and aggressions. No incidence of racial or sexual aggression was found in our study. The results regard to coping with the violence was "inviting to calm" in more than half of cases 64 of 113 (56.6%).

Conclusion: This study shows that threats and violence are a frequently occurring work-place problem within ambulance services.

Keywords: Pre Hospital Staff, Violence, Threats

Introduction:

Ambulance personnel are often the first people to encounter patients needing emergency care. This involves all conditions of illness, accidents, or drug related ones and can take place in everywhere. As they are the first healthcare systems who interface the patients and their relatives so they are susceptible to threat reactions and violence.

Studies have shown that the increasing numbers of violence against pre hospital staff are a serious concern for the emergency health care system (1,2). In a study in United States it was demonstrated that annually 25% of emergency care personnel are being attacked during their duty hours (3,4). These numbers are 67% in Swedish pre hospital staff.These events have deleterious effects on physical and psychological state of the personnel. These include fear, exhaustion, frustration, job satisfaction and et (5,6).

These violence threats also can have adverse effects on the quality of care provided to patients.(7,8)

Unfortunately despite the importance of violence threats and their damaging effects, this problem is not taken seriously in healthcare system of our country yet and only limited studies have been done in this area. Therefore unclearness of the threats nature against the ambulance staff and also their frequencies was the purpose of current study.

Methods:

This was an observational cross-sectional study which was carried out in the primary health care centers in Mazandaran University of medical sciences from January 2016 to august 2017. All nurses available during the field work of the study in the primary health care centers were enrolled this study. A total of centers are distributed. The total number of health care workers was 162; of these, only 157 agreed to participate in the study with a response rate of ۹۶.۹%.

The tool for data collection was a self-administered questionnaire. This questionnaire consisted of socio-demographic and a questionnaire about the determination of violence against emergency staff including physical, psychological, verbal, sexual and racial violence. And the last item in questionnaire was the reaction of the staff.

The domains were first introduced in the questionnaire before asking the questions. The domain of physical violence consisted of 7 questions, psychological had 4 questions and sexual had 4 and racial also had 4 questions. There was also a 5 open ended questions towards the reaction to the violence. The 36-item questionnaire (28 close-ended and 8 open-ended) used in this study was based on the literature on the treats and violence.

All the necessary approvals for carrying out the research were obtained. The Ethical Committee of the medical Health approved the research. A written format explaining the purpose of the research was prepared and signed by the participants. In addition, the purpose and importance of the research were discussed with the director of the health center.

Data were imported to the Statistical Package for Social Sciences (SPSS) which was used for both data analysis and tabular presentation. The level of significance selected for this study was $P \leq 0.05$.

Findings:

Finally 157 of 162 personnel completed the questionnaire (96.9%), all were males. the mean age of the respondents were 32.15years old. The demographics of the respondents are shown in table 1.the mean experience in the ambulance working was 5 years and 3 months. Of these, ٩٩ (63%) worked as ambulance nurses and ٥٨ (37%) as ambulance paramedics. The age of the respondents ranged from 25 to ٥٠ years (m = ٣٢,١٥ years); they had been serving in ambulance service for between 3 months and ٢٨years. Of respondents who replied the question asking about their employment (87.1%) were full time and 12.9% part time. And 89.6% were in close contact with the patients.

The mean number of duties were 14 within the week and the mean number of personnel in each duty was 2 persons. The most site of the staff duty were patients' homes (67.3%) and the 2nd in public places (60%) and in the 3rd place road traffic injuries (57.8%).

There was no significant relationship between the work experience and number of attacks. 57 of respondents (35.2%) experienced physical violence on at least one occasion during the past year. Among them , Pushing pushed , beaten , kicking , scratching/gashing , biting, spatting at , Other acts of violence and hitting were most frequent forms. 110 (67.9%) of the personnel had been exposed to forms of verbal aggression. The incidence was frequent in 64 persons (39.5%) and 27(16.7%) reported low frequency during the past 12 months. This was in 60 cases (37%) was by the patients relatives and in 22(13.6%) cases it was by the patients.

There was a significant relationship between the patient's age and occurrence of both verbal aggression and physical violence. (P=0.067) and (P=0.083) patients who were younger had more aggressive behavior. But there was not significant relationship between the site of staff duty and aggressions. No incidence of racial or sexual aggression was found in our study.

The results regard to coping with the violence was "inviting to calm" in more than half of cases 64 of 113 (56.6%). And in the second degree "doing nothing "(15.9%) was the second frequent response of staffs regarding violence and in 4.4 % of staff personnel they replied "I defended myself". The reason of "doing nothing" in53.2% was the believing "usefulness of reporting", 23.4% the reason was "I dint know to report whom" and 18.5% believed that it "was not important and violence is a part of the job". None of respondents addressed a reporting mechanism in their work place. In 82.1% of personnel nobody have done any specific reaction for follow-up of the reported violence event. But in 17.9% with follow up, in 80% the person was the chief of EMS system and in 15% the president of hospital were involved.

And at last the satisfaction of personnel towards follow up of violence threat reporting, 45% responded "I'm not at all satisfied", 30.5% responded "a little satisfied" and 7.3% stated "totally satisfied". 75.6% of respondents believed that lack of general population education towards the role and responsibility of health care setting personnel specially ambulance staff was the main reason of these threats. And in second

degree it was the lack of security mechanisms for ambulance personnel (43%) other reasons including absence of violence preventive programs for general population, drug and alcohol abuse, delay in reaching ambulance had less effects on this situation.

Of our ambulance personnel 84.2% stated that they have not attended any class for violence situation control and 90% believed these training courses are necessary to face the threats.

Discussion:

This study shows that threats and violence are a frequently occurring work-place problem within ambulance services (٩). The results of this study support other studies that found that nurses, physicians, and patient care assistants are at high risk for verbal and physical violence from patients and their relatives (10,11).

As many of the respondents have, at one time or another, been subjected to threats and/or violence while carrying out their ambulance duty hours (9).

the study showed a high level of verbal aggression (67.9%) and physical violence (35.2%) at least one occasion during the past year which indicates this form of aggression in such working environments has become more common .in the study of rahmani et al. in east Azarbayejan (north west region of our country) the prevalence was 70% verbal threats and 37.7% physical violence (12). This was similar to our study. In another study in turkey by Erkol H et al. the results were verbal aggression (total of 46.98%) and threatening behavior (33.56%)(13).in the study of Suserud et al., it was demonstrated that 78% of ambulance staff had been threatened and 67% had been subjected to physical violence during their professional work in providing pre-hospital care(14). But in some countries like Sweden the results are more different and in the study of Petzall et al., 26% of respondents had been subjected to threats and 16% were physically attacked (15). 75.6% of respondents believed that lack of general population education towards the role and responsibility of health care setting personnel's specially ambulance staff are the main reason of these threats. But some of our respondents stated that some difference in socioeconomic states of patients may be an interfering factor for this issue. They suggested that some patients and their families because of their economic status are not aware of the personnel's responsibility and have unrealistic expectations but we believe it is underlying the educational issue toward the personnel's roles.

The other findings of this study was a statistically significant relation between staff age and the reported rates of verbal threat ($p=0.007$) and staff members aged 35 years and over were exposed to physical assaults more often. Because in our country the ambulance nurses are all men and women are not employed for ambulance emergency care we did not have any difference between male and female in assaults.

In our study we did not have any report of sexual assaults. But in some studies like The Kisa Dziegielewski, and Ates (2002) study in Turkey sexual harassment rate was 62.5% in women (16). In another study by Talas et al. 2011 this rate was reported 15.9% and women reported more sexual harassment in the workplace than men did. Note to this issue that being in the risk

Reaction to the violence was in 56.6% of cases inviting to calm and in the second place "doing nothing and keeping silent" 15.9 and unfortunately 4.4.% of our respondents "I defended myself" which would be noted that such these behaviors would destroy the mutual trust between patients and health care personnel which is the essential prerequisite for health care services.

Lack of protocols and training to handle workplace threats was verified in our study .and 96% of our respondents expressed that workshops on prevention from violence in their work place and better communication skills would be the most effective intervention. Although this was limited to the north of Iran another study from Rahmani et al. in Tabriz (North West of our country) also revealed that (12). Some evidences from other studies also emphasized this issue (18,19).

In our study no mechanism for reporting the violence was detected and the reason of "doing nothing" in53.2% was the believing "usefulness of reporting", 23.4% the reason was "I dint know to report whom" and 18.5% believed that it "was not important and violence is a part of the job". Which indicates the necessity for existence of reporting mechanism in our pre hospital care system. This is similar to some other studies (13, 15, 19, 20).

References:

1. Ferns T. Violence in the accident and emergency department – An international perspective. Accid Emerg Nurs. 2005 Jul; 13 (3): 180-5.

2. Ayranci U. Violence toward health care workers in emergency departments in west Turkey. J Emerg Med. 2005 Apr; 28 (3): 361-5.

3. Boyle M, Koritsas S, Coles J, et al. A pilot study of workplace violence towards paramedics. Emerg Med J 2007 Nov; 24 (11); 760-3.

4. Pozzi C. Exposure of prehospital providers to violence and abuse. J Emerg Nurs. 1998 Aug; 24 (4): 320-3.

5. Anderson C, Parish M. Report of workplace violence by Hispanic nurses. J Transcult Nurs. 2003 Jul; 14 (3): 237-43.

6. Catlette M. A descriptive study of the perceptions of workplace violence and safety strategies of nurses working in level I trauma centers. J Emerg Nurs. 2005 Dec; 31 (6): 519-25.

7. Rodger M, Hills J, Kristjanson L. A Delphi study on research priorities for emergency nurses in western Australia. J Emerg Nurs. 2004 Apr; 30 (2): 117-25. 17

8. Holleran RS. Mars TS. Preventing staff injuries from violence. J Emerg Nurs. 2006 Dec; 32 (6): 523-4.

9. Gerberich SG, Church TR, McGovern PM, Hansen Helen, Nachreiner NM, Geisser MS, Ryan AD, Mongin SJ, Watt GD. An epidemiological study of the magnitude and consequences of work-related violence: The Minnesota nurses' study, Occupational and Environmental Medicine 61:495-503, 2004. [SGG: PhD Thesis Advisor for NMN]

10. Gates D, Ross CS, McQueen L. Violence against emergency depart- ment workers. J Emerg Med. 2006;31(3):331-7.

11. Bensley, L., Nelson, N., Kaufman, J., Silverstein, B., Kalat, J., & Shields, J. W.

(1997). Injuries due to assaults on psychiatric hospital employees in Washington State. American Journal of Industrial Medicine, 31, 92-9.

12. Rahamani A, Allah Bakhshiyan A, Dadashzadeh A, Namdar H, Akbari MA. Physical violence in working environments: Viewpoints of EMT' personnel in East Azerbaijan Province Iranian Journal of Nursing Research 2009; 11(3) 33-41.

13. Hayri Erkol, Mira R Gökdoğan, Zerrin Erkol, Bora Boz. Aggression and violence towards health care providers--a problem in Turkey?. J Forensic Leg Med 2007 Oct 12;14(7):423-8.

14. Suserud, B.-O., Blomqvist, M., Johansson, I., 2002. Experiences of threats and violence in the Swedish ambulance service. Accident and Emergency Nursing 10, 127–135.

15. Petzäll K, Tällberg J, Lundin T, Suserud B-O (2011) Threats and violenceintheSwedishpre-hospitalemergencycare.IntEmergNurs 19(1):5–11

16. Kisa, A., Dziegielewski, S.F. & Ates. M. (2002). Sexual harassment and its consequences: A study within

17. Turkish hospitals. Journal of Health and Social Policy, 15(1), 77-94. (Peer-reviewed)

18. Melek Serpil Talas, Rn, Phd1, , , Semra KocaÖZ, Rn, Phd2, Selma AkgÜÇ, Rn3 A Survey of Violence Against Staff Working in the Emergency Department in Ankara, Turkey. Asian Nursing Research 5 (2011) 197-203.

19. Ayranci, U., Yenilmez, C., Balci, Y., & Kaptanoglu, C. (2006). Identification of violence

20. in Turkish health care setting. Journal of Interpersonal Violence, 21, 276-298

21. Adib, S. M., Al-Shatti, A. K., Kamal, S., El-Gerges, N., & Al-Raqem, M. (2002). Violence against nurses in healthcare facilities in Kuwait. International Journal of Nursing Studies, 39, 469-478.

22. Crilly, J., Chaboyer, W., Creedy, D., 2004. Violence towards ED nurses by patients. Accident and Emergency Nursing 12 (2), 67–73.