

# Evaluation of Assaults on Doctors in Canakkale within the Last Year

Elif Karaahmet<sup>1</sup>, Bahadır Bakım<sup>2</sup>,  
Kursat Altınbaş<sup>1</sup>, Emel Peker<sup>3</sup>

<sup>1</sup>Assist. Prof. Dr. Canakkale Onsekizmart University,  
Faculty of Medicine, Department of Psychiatry,  
Canakkale - Turkey

<sup>2</sup>Assoc. Prof. Dr., Canakkale Onsekizmart University,  
Faculty of Medicine, Department of Psychiatry,  
Canakkale - Turkey

<sup>3</sup>Family Doctor, Canakkale Onsekizmart University,  
Faculty of Medicine, Department of Family Medicine  
Canakkale - Turkey

## ABSTRACT

Evaluation of assaults on doctors in Canakkale within the last year

**Objective:** Violence against doctors and health professionals in the healthcare environment is thought to have increased in recent years. Although physical and verbal assaults in the health care system have been evaluated in many different aspects, a limited amount of research has been done in this field in our country. For this reason, we aimed to investigate assaults towards doctors working at the Çanakkale State Hospital and Çanakkale Onsekiz Mart University in Turkey.

**Method:** A questionnaire was prepared by researchers assessing assaults within the last year on doctors working in the state and university hospitals. Data from 130 doctors who agreed to participation in the study were analysed with SPSS version 16. Descriptive statistics, independent sample T-test for normally distributed variables and Mann-Whitney U test for non-normally distributed variables were used to compare the groups.

**Results:** We found that 59.2% (n=77) of the doctors were verbally and/or physically assaulted at least once during the past year. The majority of attackers consisted of relatives of patients (40.8% verbal attack, n=31). The verbal assaults mostly occurred in outpatient clinics (61.5%), with half of the physical assaults occurring in the emergency department. The vast majority of doctors considered that poor health policies were the most important reason for assaults (83.3%, n=65), and nearly all of them thought that violence towards doctors has increased in recent years (97.4%).

**Conclusion:** The fact that most of the doctors exposed to assaults, regardless of gender, institution, or work position, perceived health policies as being responsible for this violent atmosphere, is very striking. We believe that larger sample-size and comprehensive countrywide studies in this area would help to provide solutions for this problem.

**Key words:** State hospital, university hospital, violence towards doctors



## ÖZET

Çanakkale ilinde son 1 yılda hekime yönelik saldırıların değerlendirilmesi

**Amaç:** Sağlık ortamında hekime ve sağlık çalışanlarına yönelik şiddetli son yıllarda artış gösterdiği düşünülmektedir. Günümüze kadar birçok çalışmada sağlık alanındaki fiziksel ve sözel saldırılar farklı açılardan işlenmiş olmasına rağmen; ülkemizde bu alanda yapılmış araştırma sayısı kısıtlıdır. Bu amaçla, Çanakkale Onsekiz Mart Üniversitesi ve Çanakkale Devlet Hastanesi'nde çalışan hekimlere yönelik saldırıları incelemeyi amaçladık.

**Yöntem:** Araştırmacılar tarafından hekimlerin son bir yılda uğradığı saldırılar baz alınarak hazırlanan anket formları, Çanakkale Onsekiz Mart Üniversitesi Tıp Fakültesi'nde ve Çanakkale Devlet Hastanesi'nde çalışmakta olan uzman hekimlere dağıtılmıştır. Anket doldurmayı kabul eden 130 kişiden elde edilen veriler SPSS'e girilerek tanımlayıcı istatistikler ve grupların sayısal değişkenlerinin karşılaştırmasında normal dağılım gösterenler için bağımsız grupların t-testi, normal dağılmayanlar için Mann Whitney-U testi kullanılmıştır.

**Bulgular:** Hekimlerin %59.2'si (n=77) son bir yıl içinde en az bir kez sözel ve/veya fiziksel saldırıya uğradığını bildirmiştir. Saldırganların büyük çoğunluğu hasta yakınlarından oluşmaktaydı (sözel saldırı %40.8, n=31). Sözel saldırılar büyük oranda poliklinik odalarında gerçekleşmişken (%61.5); fiziksel saldırıların yarısının (n=3) acil servislere gerçekleştiği bildirilmiştir. Hekimlerin büyük bir çoğunluğu uğradıkları saldırıların en önemli nedeni olarak kötü sağlık politikalarını görmekteydi (%83.3, n=65) ve neredeyse hepsi hekime yönelik şiddetin son yıllarda arttığını düşünmekteydi (%97.4).

**Sonuç:** Hekimlerin önemli bir bölümünün cinsiyet, çalıştığı kurum ve konumdan bağımsız olarak, saldırılardan benzer oranda etkilenmesi ve uygulanan sağlık politikalarını var olan şiddet ortamının sorumlusu olarak görmesi oldukça çarpıcıdır. Bu alanda, daha geniş örneklem ile daha kapsamlı, ülke genelinde yapılacak çalışmaların, bu sorunun çözümüne ilişkin çıkış yolları sağlayacağını düşünmekteyiz.

**Anahtar kelimeler:** Devlet hastanesi, üniversite hastanesi, hekime yönelik şiddet

Address reprint requests to / Yazışma adresi:  
Assist. Prof. Elif Karaahmet,  
Canakkale Onsekiz Mart University, Terzioğlu  
Campus, Dean Building of Faculty of Medicine,  
No: 130, Canakkale - Turkey

Phone / Telefon: +90-286-218-0018/2276

E-mail address / Elektronik posta adresi:  
elifkaraahmet@yahoo.com

Date of receipt / Geliş tarihi:  
June 25, 2013 / 25 Haziran 2013

Date of acceptance / Kabul tarihi:  
August 27, 2013 / 27 Ağustos 2013

## INTRODUCTION

In recent years, discussions on violent behavior have increased in the community, providing an opportunity for rethinking violence in the workplace in a broader way. In many studies, it has been reported that violence is more common in the area of health and the risk of assaults towards workers in health institutions is higher than in other work environments (1,2). The problem of assaults toward health care staff is global and on the increase (3,4). Assaults toward health care staff comprises behaviors that are intended to cause physical harm (physical assaults and/or the threat of assault) (5). It has been difficult to compare results on the definition and prevalence of assaults against doctors because of the difference of the research methods used.

The World Health Organization defines violence as follows: 'the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation (6).

It is difficult to gauge the extent of the problem since under-reporting of violent incidents is common (7-12) and is probably influenced by social roles or cultural factors (13). Annual rates of physical aggression towards health care workers range from a low of 3.1% (14), to higher (35-71%) levels (15-18). Non-physical aggression rates are even more difficult to evaluate; assessments range from 38% to 90% in a one-year period (14,19-23).

Although it has been emphasized that violence in society has increased in many respects, there are studies indicating a significant increase in violence against doctors in particular (24).

Although different aspects of physical and verbal attacks in healthcare have been reported in a number of studies, the reports on this topic are limited in our country (25-33). For this reason, we aimed to investigate assaults on doctors working at the Canakkale State Hospital and the Canakkale Onsekiz Mart University in Turkey.

## METHOD

### Sample

Participants who agreed to participate in the study were specialists at Canakkale State Hospital and residents or academics at Canakkale University. A self-administered questionnaire was given face-to-face and completed questionnaires were checked for duplication. In total, 236 doctors from university and state hospitals agreed to participate to the study and response rate was 71.5% (93/130). We could not reach to all doctors due to vacation period in summer. The most common reason for non-responders was hectic working conditions and having no time to fill out the questionnaire.

### Measure

Age, gender, workplace, professional position, duration of professional life, incidence of verbal and physical assaults in the past year, legal process after assaults and perception of assaults were collected by a questionnaire, which was prepared by the authors of the present study.

### Statistical Analysis

Statistical analysis was performed with Statistical Package for Social Sciences (SPSS) 16 for Windows. Descriptive statistics were used for proportions and student's t-test was used to compare the number of verbal and physical assaults during professional life. The chi-square (Fisher exact) test was used to compare nominal and ordinal variables, such as gender, work place, and professional position. Differences were considered significant at  $p < 0.05$  for all tests. All tests were two-tailed and were considered significant at  $p < 0.05$ .

## RESULTS

The participants in the research were consisted of 64.7% (n=84) male, 76.2% married (n=99), half of them (n=65) working in the internal medicine departments, 65.4% (n=85), (eight doctors working in the basic

**Table 1: Comparison of the characteristics of the participants**

|                              | Assault (+) |             | Assault (-) |             | $\chi^2$ value | p     |
|------------------------------|-------------|-------------|-------------|-------------|----------------|-------|
|                              | n           | %           | n           | %           |                |       |
| <b>Gender</b>                |             |             |             |             |                |       |
| Female                       | 32          | 24.6        | 14          | 10.8        | 3.2            | 0.07* |
| Male                         | 45          | 34.6        | 39          | 30.0        |                |       |
| <b>Area of specialty</b>     |             |             |             |             |                |       |
| Internal medicine            | 42          | 32.3        | 32          | 24.6        | 0.4            | 0.50* |
| Surgery                      | 35          | 26.9        | 21          | 16.2        |                |       |
| <b>Professional position</b> |             |             |             |             |                |       |
| Specialist/Academic          | 45          | 34.6        | 40          | 30.8        | 4.0            | 0.05* |
| Resident                     | 32          | 24.6        | 13          | 10.0        |                |       |
| <b>Workplace</b>             |             |             |             |             |                |       |
| University hospital          | 53          | 40.8        | 32          | 24.6        | 0.1            | 0.32* |
| State hospital               | 24          | 18.4        | 21          | 16.2        |                |       |
| <b>Total</b>                 | <b>77</b>   | <b>59.2</b> | <b>53</b>   | <b>40.8</b> |                |       |

\*p&gt;0.05 statistically not significant

**Table 2: Characteristics of the assaults**

|   | Verbal assault |      | Verbal and physical assault |      |
|---|----------------|------|-----------------------------|------|
|   | n=71           | %    | n=6                         | %    |
| <b>Place of the assault</b>                 |                |      |                             |      |
| Outpatient room                             | 47             | 66.2 | 1                           | 16.7 |
| Emergency department                        | 15             | 21.1 | 2                           | 33.3 |
| Inpatient ward                              | 5              | 7.1  | 1                           | 16.7 |
| Other                                       | 4              | 5.6  | 2                           | 33.3 |
| <b>Who was the assailant?</b>               |                |      |                             |      |
| Relatives of patients                       | 31             | 43.7 | 1                           | 16.7 |
| Patient under my treatment                  | 14             | 19.7 | 2                           | 33.3 |
| Patient who other doctors' treatment        | 14             | 19.7 | 1                           | 16.7 |
| Patients and relatives of patients together | 12             | 16.9 | 2                           | 33.3 |

sciences were included into internal medicine departments to be able to do statistical evaluation) working in the university hospital, and 58.5% (n=76) working as specialists or academics. The average age of the participants was  $36.7 \pm 8.3$  (median 35) years. The gender distribution was not statistically significant when comparing internal medicine versus surgical departments ( $p=0.42$ ), working as resident versus specialist ( $p=0.82$ ) or working at the state hospital versus the university hospital ( $p=0.46$ ).

We found that 59.2% (n=77) of the doctors were verbally or verbally and physically assaulted at least once in the past year. There were similar rates of assault when comparing residents, specialists or academics

( $p=0.05$ ); internal medicine versus surgical units ( $p=0.50$ ); or state versus university hospital ( $p=0.32$ ) (Table 1). The majority of assailants consisted of relatives of patients (43.7% verbal assaults, n=31). Verbal assaults mostly occurred in the outpatient room (61.6%), while half of the physical assaults occurred in the emergency department (Table 2).

The vast majority of doctors considered that poor health policies were the most important reason for these assaults (83.3%, n=65), and nearly all of them thought that violence towards doctors has increased in recent years (97.4%). Second and third common reported reasons were condition-specific working area (n=7, 9.0%) and lack of security (n=3, 3.8%).

## DISCUSSION

The average age of doctors working in the state hospital was found to be significantly higher in this study. There were no statistically significant differences in terms of exposure to assaults between the university hospital and the state hospital, or between academics and clinicians. However, it was found in a review of the literature that younger doctors and doctors working overtime were attacked more frequently (34). Similar trends have been observed in other countries, such as Canada and New Zealand (35-36).

The reason for the lack of difference between the age groups in our study may be that violence may not depend on the experience of the doctor or attitude toward the patient, but may depend on high expectations of the patient from the doctor, unsuitable environments for health care services, and overcrowded treatment environments.

There were no significant differences observed for attacks in comparing the gender of doctors. There are conflicting reports in the literature on this subject. It has been found that men were significantly more exposed to physical violence than women (37-40) and this is thought to be attributable to the dominant cultural norms that do not accept a lack of respect for women in these communities. However, in other studies, women were found to be more affected by violence than men (41).

The vast majority of attackers were relatives of the patient in our study (verbal attack 40.8%, n=31). Also in the literature, most attacks were reported to be carried out by patients and their relatives (42,43). The reason for this might be the anxiety of the patients' relatives for their family members, the lack of adequate attitudes for coping with stress, and negative discourses directed against doctors in oral and written media. A large proportion of verbal attacks were found in an outpatient setting (61.5%); physical attacks were found in the emergency department in our study. These settings are often used by aggressive and stressed patients/visitors. The tendency to violence toward healthcare professionals was carried out mostly by patients affected by drug addiction (20,44,45).

Non-physical attacks occurred mostly face to face (86%), in places such as outpatient clinics, patient rooms, and waiting rooms, where staff, patients and their families were in direct communication (60%), as found in Kitaneh and Hamdan's study. This is an indicator of poor communication skills between caregivers and receivers and it points out a weakness in the approach to patients and their families in controlling violent behavior (37). Psychiatric units (15,46) or emergency units (19,32,47-49) were investigated in most of the studies.

Patients in emergency settings, such as out-of-hours primary care, have acute illnesses or are in acute need of help, and some patients are intoxicated with drugs or alcohol. This may produce volatile situations for health care workers (50). Patients wait a long time in the ED and are under stress regarding their underlying medical condition. These factors, concomitantly with substance abuse and psychiatric comorbidities, also contribute to violence toward staff (3,9,51). Emergency departments appear to be especially problematic. Some studies reported that 1 in 3 emergency department doctors were physically assaulted during the previous year, and 75% of all US emergency department (ED) doctors experienced at least one verbal threat (52). Psychiatrists and other doctors whose practice includes many patients with mental illness and addiction problems are at higher risk of being assaulted (34,53,54). In our study, 59.2% of doctors (n=77) had been verbally and/or physically attacked at least once in the past year. The literature reports rates of 35-71% (15-18), which are compatible with our study. Verbal attack rates were 67%, and physical attack rates were 16% in a similar study conducted in Turkey. In this study, they reported no gender difference in attack rates (31), as in our study. Although Acik et al. (31) reported that attacks were mostly observed in surgical units, there was no difference between medical and surgical clinics in terms of exposure to attack in our study. However, this might be due to today's changing health policies, ease of access to doctors in both surgical and internal branches, and increased expectations from doctors. Considering these factors, both from our results and from the literature, we see the importance of preventing

violence against doctors through comprehensive studies and the introduction of precautions to decrease violence.

Our study has some limitations, such as the relatively small sample size, lack of information about emotional and psychiatric reactions to the assailants and the legal process after the assaults. Sufficient information could be obtained about the properties of the assailant because of the retrospective design of the study. We could not reach to all doctors due to vacation period in summer. Thus, our study sample does not reflect all Canakkale. However, further studies in this area would force health policies to be re-evaluated to provide preventive

precautions to protect workers in workplaces and, in the end, to help decrease the number and severity of the assaults.

In conclusion, the high rate of violence against doctors is noteworthy. We found that physical and verbal attacks occur in emergency departments and outpatient examination rooms in an environment of close communication between doctors and patients. We suggest that health policies can play an important role in influencing violence against doctors. There is a need to have further more detailed studies on this topic in order to examine the causes and to develop suggestions for solutions.

## REFERENCES

1. Lyneham J. Violence in New South Wales emergency departments. *Aust J Adv Nurs* 2000; 18:8-17.
2. Elliott PP. Violence in health care. What nurse managers need to know. *Nurs Manage* 1997; 28:38-41.
3. Gates DM. The epidemic of violence against healthcare workers. *Occup Environ Med* 2004; 61:649-650.
4. Kuehn BM. Violence in health care settings on rise. *JAMA* 2010; 304:511-512.
5. Schat ACH, Kelloway EK. Workplace violence: In Barling J, Kelloway EK, Frone M (editors). *Handbook of Work Stress*. Thousand Oaks CA: SAGE; 2005:189-218.
6. World Health Organization. *World Report on Violence and Health*. Geneva: World Health Organization, 2002.
7. Erdos BZ, Hughes DH. Emergency psychiatry: a review of assaults by patients against staff at psychiatric emergency centers. *Psychiatr Serv* 2001; 52:1175-1177.
8. Duncan SM, Hyndman K, Estabrooks CA, Hesketh K, Humphrey CK, Wong JS, Acorn S, Giovannetti P. Nurses' experience of violence in Alberta and British Columbia hospitals. *Can J Nurs Res* 2001; 32:57-78.
9. May DD, Grubbs LM. The extent, nature, and precipitating factors of nurse assault among three groups of registered nurses in a regional medical center. *J Emerg Nurs* 2002; 28:11-17.
10. Gates DM, Ross CS, McQueen L. Violence against emergency department workers. *J Emerg Med* 2006; 31:331-337.
11. Ferns T. Under-reporting of violent incidents against nursing staff. *Nurs Stand* 2006; 20:41-45.
12. Ray MM. The dark side of the job: violence in the emergency department. *J Emerg Nurs* 2007; 33:257-261.
13. Celik Y, Celik SS. Sexual harassment against nurses in Turkey. *J Nurs Scholarsh* 2007; 39:200-206.
14. Kamchuchat C, Chongsuvivatwong V, Oncheunjit S, Yip TW, Sangthong R. Workplace violence directed at nursing staff at a general hospital in Southern Thailand. *J Occup Health* 2008; 50:201-207.
15. Chen WC, Hwu HGH, Kung SM, Chiu HJ, Wang JD. Prevalence and determinants of workplace violence of health care workers in a psychiatric hospital in Taiwan. *J Occup Health* 2008; 50:288-293.
16. Zampieron A, Galeazzo M, Turra S, Buja A. Perceived aggression towards nurses: study in two Italian health institutions. *J Clin Nurs* 2010; 19:2329-2341.
17. 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.
18. 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; 19:3535-3546.
19. Gascon S, Martinez-Jarreta B, Gonzalez-Andrade JF, Santed MA, Casalod Y, Rueda MA. Aggression towards health care workers in Spain: a multi-facility study to evaluate the distribution of growing violence among professionals, health facilities and departments. *Int J Occup Environ Health* 2009; 15:29-35.

20. Gerberich SG, Church TR, McGovern PM, Hansen HE, 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. *Occup Environ Med* 2004; 61:495-503.
21. Roche M, Diers D, Duffield C, Catling-Paul C. Violence toward nurses, the work environment, and patient outcomes. *J Nurs Scholarship* 2010; 42:13-22.
22. Winstanley S, Whittington R. Aggression towards health care staff in a UK general hospital: variation among professions and departments. *J Clin Nurs* 2004; 13:3-10.
23. Lin YH, Liu HE. The impact of workplace violence on nurses in South Taiwan. *Int J Nurs Stud* 2005; 42:773-778.
24. Adas E, Elbek O. A Reflection on violence against physicians. *Community and Physician* 2008; 23:2:147-160.
25. Olmezoglu ZB, Vatansver K, Ergor A. Evaluation of violence to 112 health workers in Izmir Metropolis. *Community and Physician* 1999; 14:420-425.
26. Celik SS, Bayraktar N. A study of nursing student abuse in Turkey. *J Nurs Educ* 2004; 43:330-336.
27. Senuzun EF, Karadakovan A. Violence towards nursing staff in emergency departments in one Turkish city. *Int Nurs Rev* 2005; 52:154-160.
28. Ayranci U, Yenilmez C, Balci Y, Kaptanoglu C. Identification of violence in Turkish health care settings. *J Interpers Violence* 2006; 21:276-296.
29. Erkol H, Gokdogan MR, Erkol Z, Boz B. Aggression and violence towards health care providers—a problem in Turkey? *J Forensic Leg Med* 2007; 14:423-428.
30. Canbaz S, Dundar C, Dabak F, Sunter AT, Pekfien Y, Cetinoglu EC. Violence towards workers in hospital emergency services and in emergency medical care units in Samsun: an epidemiological study. *Ulus Travma Acil Cerrahi Derg* 2008; 14:239-244.
31. Acik Y, Deveci SE, Gunes G, Gulbayrak C, Dabak S, Saka G, Vural G, Can G, Bilgin NG, Dundar PE, Erguder T, Tokdemir M. Experience of workplace violence during medical speciality training in Turkey. *Occup Med (Lond)* 2008; 58:361-366.
32. Pinar R, Ucmak F. Verbal and physical violence in emergency departments: a survey of nurses in Istanbul, Turkey. *J Clin Nurs* 2011; 20:510-517.
33. Altinbas K, Altinbas G, Turkcan A, Oral ET, Walters J. A survey of verbal and physical assaults towards psychiatrists in Turkey. *Int J Soc Psychiatry* 2011; 57:631-636.
34. Magin PJ, Adams J, Ireland M, Heaney S, Darab S. After hours care—a qualitative study of GPs' perceptions of risk of violence and effect on service provision. *Aust Fam Physician* 2005; 34:91-92.
35. Phillips SP, Schneider MS. Sexual harassment of female doctors by patients. *N Engl J Med* 1993; 329:1936-1939.
36. Gale C, Arroll B, Coverdale J. Aggressive acts by patients against general practitioners in New Zealand: one-year prevalence. *N Z Med J* 2006; 119:2050.
37. Kitaneh M, Hamdan M. Workplace violence against physicians and nurses in Palestinian public hospitals: a cross-sectional study. *BMC Health Serv Res* 2012; 12:469.
38. Adib SM, Al-Shatti AK, Kamal S, El-Gerges N, Al-Raqem M. Violence against nurses in healthcare facilities in Kuwait. *Int J Nurs Stud* 2002; 39:469-478.
39. Abbas MA, Fiala LA, Abdel Rahman AG, Fahim AE. Epidemiology of workplace violence against nursing staff in Ismailia Governorate. Egypt. *J Egypt Public Health Assoc* 2010; 85:29-43.
40. Algwaiz WM, Alghanim SA. Violence exposure among health care professionals in Saudi public hospitals: a preliminary investigation. *Saudi Med J* 2012; 33:76-82.
41. Mayhew C, Chappell D. Workplace violence: an overview of risk and the emotional stress consequences on targets. *Int J Law Psychiatry* 2007; 30:327-339.
42. Anderson C. Workplace violence: are some nurses more vulnerable? *Issues Ment Health Nurs* 2002; 23:351-366.
43. Walsh A. Our white coats are not armour. Protecting physicians in the doctor-patient relationship. *Can Fam Physician* 2005; 51:1604-1605.
44. Fernandes CM, Bouthillette F, Raboud JM, Bullock L, Moore CF, Christenson JM, Grafstein E, Rae S, Ouellet L, Gillrie C, Way M. Violence in the emergency department: a survey of health care workers. *CMAJ* 1999; 161:1245-1248.
45. Alameddine M, Kazzi A, El-Jardali F, Dimassi H, Maalouf S. Occupational violence at Lebanese emergency departments: prevalence, characteristics and associated factors. *J Occup Health* 2011; 9:455-464.
46. Chen WC, Hwu HGH, Kung SM, Chiu HJ, Wang JD. Prevalence and determinants of workplace violence of health care workers in a psychiatric hospital in Taiwan. *J Occup Health* 2008; 50:288-293.
47. Gascon S, Martinez-Jarreta B, Gonzalez-Andrade JF, Santed MA, Casalod Y, Rueda MA. Aggression towards health care workers in Spain: a multi-facility study to evaluate the distribution of growing violence among professionals, health facilities and departments. *Int J Occup Environ Health* 2009; 15:29-35.

48. Taylor JL, Rew L. A systematic review of the literature: workplace violence in the emergency department. *J Clin Nurs* 2011; 19:1072-1085.
49. Pinar R, Ucmak F. Verbal and physical violence in emergency departments: a survey of nurses in Istanbul, Turkey. *J Clin Nurs* 2011; 20:510-517.
50. Henson B. Preventing interpersonal violence in emergency departments: practical applications of criminology theory. *Violence Vict* 2010; 25:553-565.
51. Luck L, Jackson D, Usher K. STAMP: components of observable behavior that indicate potential for patient violence in emergency departments. *J Adv Nurs* 2007; 59:11-19.
52. Kowalenko T, Walters BL, Khare RK, Compton S. Workplace violence: a survey of emergency physicians in the state of Michigan. *Ann Emerg Med* 2005; 46:142-147.
53. Galeazzi GM, Elkins K, Curci P. The stalking of mental health professionals by patients. *Psychiatr Serv* 2005; 56:137-138.
54. Antonius D, Fuchs L, Herbert F, Kwon J, Fried JL, Burton PR, Straka T, Levin Z, Caligor E, Malaspina D. Psychiatric assessment of aggressive patients: a violent attack on a resident. *Am J Psychiatry* 2010; 167:253-259.