

# Dangers faced by emergency staff: experience in urban centers in southern Turkey

## Tehlikelerle karşılaşan sağlık personeli: Türkiyenin güney kent merkezlerinden deneyimler

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### BACKGROUND

The aim of this study was to investigate the incidence and characteristics of aggression, threat and physical violence directed towards the staff in emergency departments.

### METHODS

A questionnaire was completed by the emergency staff. The individualized data collected included the pattern and incidence of violence, sex, age, profession, and years of experience of the emergency staff, and the behavioral characteristics of the assailants, together with outcome of incidents. Data regarding incidences occurring between May 1-31, 2006 were abstracted.

### RESULTS

A total of 109 staff were evaluated. There was a statistically significant relationship between aggression and profession ( $p=0.000$ ), but no relation was determined with sex, age or years of experience ( $p$  values 0.464, 0.692, and 0.298, respectively). The relationship of incidences of threat with sex, age, profession, and experience was insignificant ( $p$  values 0.311, 0.278, 0.326, 0.994, respectively). On the other hand, significant relationships were identified between physical assault and sex, age, profession, and experience ( $p$  values 0.042, 0.000, 0.000, 0.011).

### CONCLUSION

Violence directed towards the emergency staff is common. Aggression occurs towards the emergency physician distinctively. Otherwise, there is no significant relationship between aggression or threat and personal characteristics. However, male sex,  $\geq 31$  years of age, being an emergency physician, and having worked for longer than five years in the emergency department are the risk factors for physical violence.

**Key Words:** Emergency department; emergency staff; questionnaires; violence.

### AMAÇ

Bu çalışmada, acil servislerde sağlık çalışanlarına yönelik şiddet, tehdit ve fiziksel saldırının sıklık ve özellikleri araştırıldı.

### GEREÇ VE YÖNTEM

Acil serviste çalışanlar tarafından anket dolduruldu. Toplanan bireysel bilgiler şiddet şekli ve sıklığı, cinsiyet, yaş, meslek, acil serviste deneyim süresi, saldırganların özellikleri, olayların sonucunu içermektedir. Veriler 1 ile 31 Mayıs 2006 tarihleri arasında elde edildi.

### BULGULAR

Toplam 109 personel değerlendirildi. Meslek ( $p=0,000$ ) dışında, şiddet ve cinsiyet, yaş, deneyim süresi arasında anlamlı ilişki yoktu ( $p$  değerleri sırasıyla 0,464, 0,692, 0,298). Tehdit oranı ile cinsiyet, yaş, meslek ve deneyim arasında ilişki anlamsızdı ( $p$  değerleri 0,311, 0,326, 0,278, 0,994). Diğer yandan fiziksel saldırı ile cinsiyet, yaş, meslek, deneyim arasında anlamlı ilişki bulundu ( $p$  değerleri 0,042, 0,000, 0,000 ve 0,011).

### SONUÇ

Acil personeline karşı şiddet sıktır. Şiddet belirgin olarak acil hekimine yönelik gelişmektedir. Bunun dışında şiddet, tehdit ve kişisel özellikler arasında anlamlı ilişki yoktur. Ama, erkek cinsiyet,  $\geq 31$  yaş, acil hekimisi olmak, acil serviste beş yıl ve üstünde çalışmış olmak, fiziksel saldırı için risk faktörleridir.

**Anahtar Sözcükler:** Acil servis; acil personeli; anket çalışması; şiddet.

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The emergency staff are more likely to be the victims of violence than any other health employees. Violence consists of aggression, threats and physical assaults.<sup>[1,2]</sup> Although there are many retrospective research studies published on this issue, few prospective studies have been researched on the current situation of staff exposure to violence.<sup>[1-3]</sup> Therefore, the purpose of this paper was to investigate the incidence of violence and the relationship with personal characteristics such as age, sex, profession, and experience of the staff in order to identify the most effective approach to employ in the future.

## MATERIALS AND METHODS

This individual questionnaire-based study was conducted in three state hospitals in the largest city of southern Turkey, Adana, during the period of May 1-31, 2006. All healthcare workers in the emergency department (ED) were asked to participate in the study, which included a total of 77 emergency physicians, 76 emergency nurses, 13 paramedics, and 55 nurses' aides. As only a few questionnaires were collected from security personnel (n=3) and secretarial staff (n=1), they were excluded. The average number of patients entering the ED daily was approximately 600-800. Staff had at least 10 shifts in a month of a minimum of 12 hours. In all EDs studied, patients were examined by the emergency practitioner doctors and then were admitted to the observational unit for treatment, consultation by specialists and to undergo other diagnostic studies. There were three demographic questions and the others were response items: a. the minimum number of aggressions, b. threats and c. physical assault they were exposed to in the one-month period, and their age, sex, profession, and experience. The answers were grouped.

Aggression was described as verbal abuse. Threat included all behavioral patterns and speech aimed to create fear among the staff. Physical violence included all physical contacts aimed to cause any harm such as being punched, kicked, bitten, pushed, or grabbed.<sup>[4]</sup> A confrontation outside included an unpleasant threatening interaction regarding the patient and/or the treatment. Staff were questioned regarding the incident of any confrontation outside occurring during their entire experience. Surveys were delivered to and collected from each staff member manually by the head of the EDs. Many respondents refused to participate with an explanation that the questionnaire would result in no changes of patient's and relative's behaves. Biostatistical tests were performed using descriptive and chi-square tests in SPSS 15.00.

## RESULTS

There were 109 voluntary participants; 52.29% (n=57) of the sample were females and 47.71% (n=52) males. 48% (n=37) of the physicians, 61% (n=47) of the nurses, 84% (n=11) of the paramedics, and 25% (n=14) of the nurses' aides participated. The mean age was 32.00±6.67 (range: 22-50). The mean number of years of experience was 4.78±4.72 (range: 1-19). All (100%) of the staff were reportedly exposed to aggression. The incidences of aggression towards the emergency staff in one month according to sex, age, profession and experience are given in Table 1. The incidences of threat to the emergency staff in one month according to sex, age, profession and experience are shown in Table 2. The incidences of physical assault to the emergency staff in one month according to sex, age, profession and experience are demonstrated in Table 3. The monthly frequency and percentage of types of verbal

**Table 1.** The distribution of aggression incidences towards the emergency staff during a one-month period with regard to their sex, age, profession and experience

	Aggression				p
	<30		≥30		
Sex	Female	Male	Female	Male	p=0.464
	46 (80.71%)	37 (71.16%)	11 (19.29%)	15 (28.84%)	
Age	20-30	≥31	20-30	≥31	p=0.692
	43 (78.19%)	40 (74.08%)	12 (21.81%)	14 (25.92%)	
Profession	Emergency physician	Other staff	Emergency physician	Other staff	p=0.000
	25 (67.6%)	58 (80.5%)	12 (32.4%)	14 (19.5%)	
Experience	0-5	>5	0-5	>5	p=0.298
	60 (72.29%)	16 (61.54%)	23 (27.71%)	10 (38.46%)	

**Table 2.** The distribution of threat incidences towards the emergency staff in a one-month period with regard to their sex, age, profession and experience

	Threat				p
	Unthreatened		≥1		
Sex	Female 36 (63.15%)	Male 11 (21.15%)	Female 21 (36.85%)	Male 41 (78.85%)	p=0.311
Age	20-30 30 (52.63%)	≥31 17 (32.69%)	20-30 27 (47.37%)	≥31 35 (67.31%)	p=0.278
Profession	Emergency physician 12 (32.4%)	Other staff 39 (54.2%)	Emergency physician 25 (67.6%)	Other staff 33 (45.8%)	p=0.326
Experience	0-5 42 (56.75%)	>5 6 (17.14%)	0-5 32 (43.25%)	>5 29 (82.86%)	p=0.994

**Table 3.** The distribution of physical assault incidences toward the emergency staff in a one-month period with regard to their sex, age, profession and experience

	Physical assault				p
	1-2		≥3		
Sex	Female 11 (84.6%)	Male 15 (51.7%)	Female 2 (15.4%)	Male 14 (48.3%)	p=0.042
Age	20-30 17 (100%)	≥31 9 (36%)	20-30 0 (0%)	≥31 16 (38.1%)	p=0.000
Profession	Emergency physician 7 (30.4%)	Other staff 19 (100%)	Emergency physician 16 (69.6%)	Other staff 0 (0%)	p=0.000
Experience	0-5 20 (76.9%)	>5 6 (37.5%)	0-5 6 (23.1%)	>5 10 (62.5%)	p=0.011

**Table 4.** The monthly frequency and percentage of types of verbal threats towards the emergency staff

Verbal threat	Frequency	Percent
“Killing”	35	32.10
“Fighting outside later”	10	9.17
“Litigation”	3	2.75
“Assignment to a remote area”	2	1.83
“Going to authorities with accusation”	3	2.75
“Setting a fire”	2	1.83
“Beating”	3	2.75
Total	58	53.21

threats to the emergency staff are shown in Table 4. While 13 undesirable events in the form of confrontation outside with patients and relatives were reported by participants in their entire experience period, no such incidences occurred in the month of the study.

Four healthcare workers (3.7%) questioned carried a device to protect themselves, while 96.3% did not. The instigators of violence in 98% of cases were

the relatives, and in 2% the patients. 15.8% (n=57) of assailants were female, 61.4% male, and 38.6% were unrecorded. The age of assailants was 15-30 years in 47.4% (n=57), 30-40 years in 12.3%, and unclear in 40.4%. Only 4.58% (n=5) of the staff reported to be knowledgeable about professional security methods (camera, detector etc.) in the ED. The suggestions of the staff regarding protecting against violence included preventing the entrance of too many relatives to the ED [2.75% (n=3)], increasing the number of ED staff [4.58% (n=5)], improving physical conditions [8.25% (n=9)], supplying armed security [2.75% (n=3)], employing professional security [16.51% (n=18)], installing cameras inside and outside [1.83% (n=2)], installing a detector on the ED entrance [2.75% (n=3)], and applying triage [0.91% (n=1)].

## DISCUSSION

Emergency departments are dicey to violence towards the staff, where occurs serious problems that has to be evaluated.<sup>[1,5,6]</sup> However, there have not

been any prospective descriptive studies addressing the ratios and types of assaults. Most events of violence in the healthcare setting go unreported.<sup>[4]</sup> In one study covering a one-month period, participants reported at least one verbal threat a day, 43% reported physical assault, and 18% reported threat with a weapon.<sup>[4]</sup> Fernandes revealed that 92% of staff were exposed to physical assaults, 97% to verbal threats, and 66% to verbal abuse at least once per shift.<sup>[2]</sup> The reports showed that violence against the emergency staff was common.<sup>[2,3,4]</sup> Knott et al. reported that 69% faced verbal and physical assault and 76% perceived threat of patient self-harm.<sup>[7]</sup>

Verbal aggression towards all (100%) staff professions was a daily part of the work in every shift in the ED. Despite the presence of stationary and unarmed security staff, 53.21% reported threats and 38.53% reported physical violence in a month.<sup>[8]</sup> In most studies, violence types are not related with age, sex, profession or experience. However, our study revealed a close relationships between aggression and profession and with physical violence and age, sex, profession, and experience. Alcohol and drug abuse aggravated the violence that was reported.<sup>[3,7]</sup> Albeit most of the assailants were females in a previous report, young males constituted the majority (61.4%) in our study.<sup>[3,7]</sup> Most of the assailants were between 15 and 30 years of age, similar to the literature. James et al.<sup>[3]</sup> reported that 88.2% of offenders were patients and 11.8% were relatives or visitors, but this study showed 98% of assailants to be relatives. Emergency doctors reported 13 events (11.93%) as confrontation outside during the course of their experience. The physical design of the ED is the one of the factors affecting violence. Protective barriers, affirmative communication behaves and an appropriate environment may help to decrease the incidence of assaults.<sup>[8]</sup> Qualified staff capacity and regular training sessions regarding violence may also contribute towards alleviating the problem.<sup>[8]</sup> Despite the high ratio of violence, only 3.76% (n=4) of emergency physicians carry devices for self-protection, such as a gun, knife, mace, or any other device. The staff (100%) believe that no sanctions will be imposed upon assailants even if incidences are reported.

There were some limitations to our study. It was a relatively small study for only one month and the answers to the questionnaire depended on the input of the participants. We did not include tertiary and private hospitals. There was no evaluation regarding the security and secretarial staff, although they are at high risk of exposure to violence.

In conclusion, the emergency physician is always held responsible by the assailants for every issue and therefore represents the first target for violence. Preventing the entrance of too many relatives of the patients and their usage of legal and illegal firearms and establishing regular training programs for the staff, together with the support of powerful legislation, can help to alleviate violence in EDs.

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