

Workplace physical violence, verbal violence, and mobbing experienced by nurses at a university hospital

Fatma Nur BARAN AKSAKAL*, Emine Füsün KARAŞAHİN, Asiye UĞRAŞ DİKMEN, Emine AVCI, Seçil ÖZKAN
Department of Public Health, Faculty of Medicine, Gazi University, Ankara, Turkey

Received: 26.05.2014 • Accepted/Published Online: 13.10.2014 • Printed: 31.12.2015

Background/aim: The aim of this study was to determine the frequency of and risk factors for physical violence, verbal violence, and mobbing experienced by nurses in a university hospital.

Materials and methods: This was a cross-sectional study conducted at Gazi University Medical Faculty Hospital. A questionnaire form recommended by the WHO and the International Labor Organization was administered through face-to-face interviews to determine the violence experienced in the past 12 months by nurses.

Results: The prevalence of physical violence, verbal violence, and mobbing was 13.9%, 41.8%, and 17.1%, respectively. Working more than 40 h per week increased the risk of physical violence by 1.86 times. The majority of nurses who experienced verbal violence and mobbing were significantly more willing to change their work, their institution, and their profession if given the opportunity. Fewer than one-fourth of the victims indicated they reported any incident.

Conclusion: We knew that the prevalence of physical violence, verbal violence, and mobbing were high among nurses and that incidents were underreported, and the study corroborated this information. What this study adds to the topic is that long working hours increased the prevalence of physical violence and was defined as an important contributory factor.

Key words: Nurse, workplace, physical violence, verbal violence, mobbing

1. Introduction

Violence is a problem that affects the entire world. In 1996, the 49th United Nations World Health Committee announced that the prevention of violence is the foremost priority for researchers and implementers of public health (1). The World Health Organization defines workplace violence as follows: "incidents where staff are abused, threatened, or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being, or health" (2).

The 4th European Working Conditions Study, conducted through face-to-face meetings with 30,000 workers in 31 European Union countries, determined that 2% (10 million) of workers experienced violence from others at the workplace, 4% (20 million) experienced violence from individuals outside the workplace, 2% (10 million) were subject to sexual harassment, and 5% (25 million) were subject to threats and mobbing (3).

More than 50% of workers in the health sector are subject to violence (4). Previous studies conducted in

different countries have shown that nurses are under a greater risk of violence than other workers within their own field, as well as workers from other fields (5–7).

In Turkey, violence against health workers is no longer limited to physical and psychological violence but has begun to involve the killing of health workers as well; moreover, the frequency of such events is increasing. The death of a cardiothoracic surgeon after being stabbed by a relative of one of his patients was reported in the mass media (<http://gundem.milliyet.com.tr/17-yasindaki-cocugun-bicakladigi-doktor-urtarilamadi/gundem/gundemdetay/17.04.2012/1529418/default.htm>) and World Medical Association put the incident on its agenda (http://www.wma.net/en/40news/20archives/2012/2012_06/index.html).

In order to be able to improve conditions within health institutions, it is important to determine the frequency and risk of violence in these institutions. The aim of this study was to determine the frequency and risk factors of the violence experienced by nurses working at a university hospital in Ankara, the capital of Turkey.

* Correspondence: nuraksakal@gmail.com

2. Materials and methods

2.1. Design and subjects

This cross-sectional study was conducted between 25 May 2011 and 1 June 2011. To determine the workplace physical violence, verbal violence, and mobbing experienced by nurses at a university hospital, the questionnaire form recommended by the World Health Organization and the International Labor Organization, which consists of 5 sections and a total of 98 questions, was administered through face-to-face interviews after informed oral consent was obtained (8). Ethics committee approval was obtained prior to the study. The study population consisted of the 650 nurses working at the Gazi University Medical Faculty (GUMF) Hospital. Efforts were made to reach and contact the entire study population; however, as 60 of the 650 nurses were on their yearly leave, maternity leave, or sick leave, and 42 individuals refused to complete the questionnaire, only 538 (82.76%) of the nurses responded.

2.2. Statistical analysis

Descriptive statistics were presented with frequencies and percentages as well as arithmetical mean (\pm standard deviations), and median (minimum, maximum). The chi-square, the Yates' corrected chi-square, the Fisher's exact test, and the Mann-Whitney U tests were used to test significance. Logistic regression analysis was performed to investigate the risk factors associated with experiencing violence. The logistic regression model included variables that were identified as being $P < 0.25$ in any univariate analysis of the three forms of violence, and determined as being common risk factors (civil status, working time in the profession, institution and unit, average working time per week, unit where work is currently performed, status with regards to working in shifts, and the number of other personnel with whom work was performed for more than 50% of the working time) in the literature (7, 9–11) (model: Backward LR, entry: 0.05 and removal: 0.10). The level of statistical significance was accepted as $P < 0.05$.

3. Results

A total of 538 nurses responded to the study. When asked whether they experienced physical violence, verbal violence, or mobbing at least once within the past 12 months 13.9% of the nurses described experiencing physical violence, 41.8% described experiencing verbal violence, and 17.1% described experiencing mobbing (Table 1).

The distribution of the evaluated nurses by certain defining characteristics is shown in Table 2.

The mean age of the nurses participating in the study was 32.1 ± 6.4 , while the median age was 31 (20–55). Their mean time in the profession was 10.2 ± 6.9 years [median 9 (0–35)], and their mean time at the institution was 8.1 ± 6.7 years [median 6 (0–35)].

Distribution of physical violence, verbal violence, and mobbing experienced within the last 12 months by certain sociodemographics and working characteristics of the investigated nurses is shown in Table 3.

The increase in verbal violence experienced by nurses working for 6–10 years and 11–15 years in the profession, and over 13 years in the institution was found to be significant ($P = 0.01$, $P = 0.008$).

Among those subject to physical violence in the workplace, 61.3% described experiencing violence from patients' relatives, 42.7% from patients themselves, and 1.7% from doctors. Among those subject to verbal violence in the workplace, 54.7% described experiencing violence from patients' relatives, 32.6% from patients themselves, and 19.0% from doctors.

The results of the logistic regression analysis performed in order to determine the risk factors for experiencing violence are shown in Table 4.

It was determined that working more than 40 h per week increased the risk of physical violence by 1.86 times. No particular risk factor was identified as being significant for experiencing verbal violence and mobbing.

Nurses who did not experience any verbal violence or mobbing were significantly more satisfied with their profession ($P = 0.001$, $P = 0.0001$ respectively). The

Table 1. The prevalence of physical violence, verbal violence, and mobbing experienced in the past 12 months among investigated nurses.

Type of violence	n	%
Physical violence (n = 533*)	74	13.9
Verbal violence (n = 526*)	220	41.8
Mobbing (n = 514*)	88	17.1

*Number of responders

Table 2. Distribution of the investigated nurses by certain characteristics.

	Number	(%)*
Age Group (n = 536)		
≤30	250	46.6
31 and above	286	53.4
Marital Status (n = 538)		
Married	318	59.1
Single	220	40.9
Education Status (n = 532)		
Medical vocational high school graduate or Associate's degree	142	26.7
Bachelor's degree or above	390	73.3
Job duration (n = 533)		
0–5 years	176	33.0
6–10 years	133	25.0
11–15 years	106	19.9
16 years or more	118	22.1
Duration of employment in the institution (n = 517)		
0–4 years	189	35.0
5–8 years	141	27.3
9–12 years	74	14.3
13 years or more	113	21.9
Unit where work is currently performed (n = 467)		
Inpatient ward	231	49.5
Polyclinic	64	13.7
Intensive care unit – surgery room	172	36.8
Duration of work in the present unit (n = 528)		
0–3 years	263	49.8
4 years and above	265	50.2
Average working time per week (n = 531)		
≤40 h	382	71.9
>40 h	149	28.1
Shift work (n = 529)		
No	169	31.9
Yes	360	68.1
Patient population most frequently worked with (n = 532)§		
Infants	80	8.1
Children	129	13.1
Adolescents (10–18 years old)	111	11.3
Adults	390	39.8
The elderly	269	27.4
Special groups with whom more than 50% of the working time is spent (n = 429)§		
Physically handicapped	55	8.4
Mentally handicapped	33	5.0
Terminally/severely ill patients	162	24.8
Psychiatric patients	46	7.0
Mother/child care	77	11.7
Elderly patients	235	35.9
Other **	45	6.8
The number of other personnel with which work is performed more than 50% of the working time (n = 530)		
Working alone	41	7.7
1–5 persons	302	57.0
6 persons or more	187	35.3

*: Percent: percentage column. § More than one answer was provided to the question; the provided percentage is calculated based on the number of answers that were given. **Other: Chronic diseases, dialysis patients, adult patients, pregnant women.

Table 3. Distribution of physical violence, verbal violence, and mobbing experienced within the last 12 months by certain sociodemographics and working characteristics of the investigated nurses

	Physical violence		Verbal violence		Mobbing	
	Yes	No	Yes	No	Yes	No
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Age group						
≤30	36 (14.6)	210 (85.4)	100 (41.5)	141 (58.5)	43 (18.5)	190 (81.5)
31 and above	38 (13.3)	247 (86.7)	120 (42.4)	163 (57.6)	45 (16.1)	234 (83.9)
	P = 0.66		P = 0.83		P = 0.48	
Marital status						
Married	35 (16.1)	182 (83.9)	94 (43.5)	122 (56.5)	44 (20.8)	168 (79.2)
Single	39 (12.3)	277 (87.7)	126 (40.6)	184 (59.4)	44 (14.6)	258 (85.4)
	P = 0.21		P = 0.51		P = 0.06	
Educational status						
Medical vocational high School graduate or associate's degree	15 (10.6)	126 (89.4)	56 (39.7)	85 (60.3)	23 (16.8)	114 (83.2)
Bachelor's degree or above	57 (14.8)	329 (85.2)	160 (42.2)	219 (57.8)	65 (17.5)	306 (82.5)
	P = 0.28		P = 0.60		P = 0.84	
Job duration						
0-5 years	26 (15.1)	146 (84.9)	65 (38.7)	103 (61.3)	30 (18.4)	133 (81.6)
6-10 years	22 (16.5)	111 (83.5)	66 (50.0)	66 (50.0)	21 (16.3)	108 (83.7)
11-15 years	8 (7.6)	97 (92.4)	50 (47.6)	55 (52.4)	16 (15.5)	87 (84.5)
16 years or more	18 (15.3)	100 (84.7)	37 (31.9)	79 (68.1)	21 (18.3)	94 (81.7)
	P = 0.20		P = 0.01		P = 0.91	
Duration of employment in the institution						
0-4 years	27 (14.5)	159 (85.5)	76 (41.1)	109 (58.9)	31 (17.3)	148 (82.7)
5-8 years	27 (19.3)	113 (80.7)	70 (51.9)	65 (48.1)	24 (18.0)	109 (82.0)
9-12 years	5 (6.8)	69 (93.2)	33 (44.6)	41 (55.4)	12 (16.4)	61 (83.6)
13 years or more	15 (13.3)	98 (86.7)	34 (30.4)	78 (69.6)	20 (18.2)	90 (81.8)
	P = 0.09		P = 0.008		P = 0.98	
Unit where work is currently performed						
Inpatient ward	28 (12.2)	201 (87.8)	101 (44.7)	125 (55.3)	33 (14.7)	191 (85.3)
Polyclinic	10 (15.6)	54 (84.4)	21 (32.8)	43 (67.2)	11 (17.5)	52 (82.5)
Intensive care unit - surgery room	21 (12.4)	148 (87.6)	63 (38.2)	102 (61.8)	29 (18.4)	129 (81.6)
	P = 0.76		P = 0.16		P = 0.62	
Time working in the unit						
0-3 years	42 (16.1)	219 (83.9)	108 (41.7)	151 (58.3)	48 (19.0)	205 (81.0)
4 years and above	30 (11.5)	232 (88.5)	108 (42.0)	149 (58.0)	39 (15.5)	212 (84.5)
	P = 0.12		P = 0.94		P = 0.30	
Average working time per week						
≤40 h	48 (12.7)	331 (87.3)	157 (41.9)	218 (58.1)	57 (15.7)	307 (84.3)
≥40 h	24 (16.2)	124 (83.8)	61 (42.1)	84 (57.9)	30 (20.8)	114 (79.2)
	P = 0.35		P = 0.96		P = 0.16	
Work shift						
No	21 (12.4)	148 (87.6)	60 (35.7)	108 (64.3)	27 (16.4)	138 (83.6)
Yes	51 (14.3)	305 (85.7)	155 (44.3)	195 (55.7)	59 (17.3)	283 (82.7)
	P = 0.64		P = 0.06		P = 0.80	
The number of other personnel with which work is performed more than 50% of the working time						
Working alone	2 (4.9)	39 (95.1)	14 (35.0)	26 (65.0)	5 (12.5)	35 (87.5)
1-5 persons	48 (16.1)	251 (83.9)	124 (41.9)	172 (58.1)	54 (19.0)	230 (81.0)
6 persons or more	23 (12.4)	163 (87.6)	79 (43.2)	104 (56.8)	28 (15.3)	155 (84.7)
	P = 0.11		P = 0.63		P = 0.41	

Table 4. Adjusted odds ratios with 95% confidence intervals (CIs) estimated by multiple logistic regression model by types of violence experienced.

	Physical violence		Verbal violence		Mobbing	
	OR	95% CI	OR	95% CI	OR	95% CI
Marital status						
Married	1.0	-	1.0	-	1.0	-
Single	1.20	0.63–2.29	1.01	0.65–1.56	1.46	0.82–2.62
Job duration						
0–5 years	1.0	-	1.0	-	1.0	-
6–10 years	1.18	0.55–2.53	1.34	0.71–2.52	0.83	0.40–1.72
11–15 years	0.60	0.21–1.67	1.77	0.77–4.04	0.67	0.28–1.60
16 years or more	0.74	0.23–2.35	1.33	0.45–3.92	1.08	0.40–2.93
Unit where work is currently performed						
Inpatient ward	1.0	-	1.0	-	1.0	-
Polyclinic	1.05	0.54–2.06	1.46	0.93–2.31	0.59	0.32–1.08
Intensive care unit/surgery room	1.49	0.51–4.38	1.06	0.51–2.24	1.05	0.40–2.73
Time working in the unit						
0–3 years	1.0	-	1.0	-	1.0	-
4 years and above	0.69	0.35–1.33	0.89	0.56–1.39	1.09	0.60–1.97
Average working time per week						
≤40 h	1.0	-	1.0	-	1.0	-
>40 h	1.86	1.01–3.46	0.89	0.56–1.41	0.78	0.35–1.70
Shift work						
No	1.0	-	1.0	-	1.0	-
Yes	1.02	0.42–2.43	0.88	0.49–1.58	0.86	0.38–1.91
The number of other personnel with which work is performed more than 50% of the working time						
Working alone	1.0	-	1.0	-	1.0	-
1–5 persons	3.49	0.76–16.01	1.03	0.48–2.24	3.57	0.98–12.97
6 persons or more	2.97	0.63–14.07	1.31	0.58–2.91	2.13	0.57–7.99

majority of nurses who experienced verbal violence and mobbing were significantly more willing to change their work ($P = 0.001$, $P = 0.005$ respectively), to change their profession if given the opportunity ($P = 0.004$, $P = 0.011$ respectively), and to change their institution ($P = 0.01$, $P = 0.002$ respectively). The scores regarding anxiety about violence were found to be significantly higher among nurses subject to physical violence, verbal violence, and mobbing ($P = 0.001$ for each). It was determined that 25.3% of the nurses had no anxiety about workplace

violence, while 11.0% had an anxiety score of 4 or higher. The mean anxiety score of the nurses participating in the study was 2.30 ± 1.04 , while the median anxiety score was 2 (1–5) (Table 5).

Reactions given by the investigated nurses to types of violence experienced are shown in Table 6. Most nurses indicated that, if subject to physical or verbal violence, they frequently asked the person to stop (41.66% and 46.15%, respectively). Most nurses subject to mobbing indicated that they informed a colleague (43.18%).

Table 5. Distribution of physical violence, verbal violence, and mobbing experienced within the last 12 months by job satisfaction, willingness to change work, profession, or institution, and the anxiety about violence scores.

	Physical violence				Verbal violence				Mobbing			
	No		Yes		No		Yes		No		Yes	
	n	%*	N	%*	n	%*	n	%*	n	%*	N	%*
Job satisfaction												
Satisfied	187	68.5	31	62.0	142	75.1	74	56.9	186	72.1	25	47.2
Not satisfied	86	31.5	19	38.0	47	24.9	56	43.1	72	27.9	28	52.8
	P = 0.46				P = 0.001				P = 0.0001			
Willingness to change work												
No	185	40.6	25	33.8	135	44.4	74	33.8	181	42.8	23	26.1
Yes	271	59.4	48	66.2	169	55.6	145	66.2	242	57.2	65	73.9
	P = 0.26				P = 0.01				P = 0.005			
Willingness to change profession if given the opportunity												
No	138	30.3	21	28.8	108	35.4	51	23.5	139	32.8	16	18.4
Yes	317	69.7	52	71.2	197	64.6	166	76.5	285	67.2	71	81.6
	P = 0.89				P = 0.004				P = 0.011			
Willingness to change institution												
No	171	37.7	19	25.7	123	40.5	64	29.5	168	39.7	19	21.8
Yes	283	62.3	55	74.3	181	59.5	153	70.5	255	60.3	68	78.2
	P = 0.06				P = 0.01				P = 0.002			
Anxiety about violence score §												
	2.16 ± 0.96		3.09 ± 1.11		2.04 ± 0.99		2.64 ± 1.01		2.18 ± 0.98		2.78 ± 1.12	
	2 (1-5)		3 (1-5)		2 (1-5)		3 (1-5)		2 (1-5)		3 (1-5)	
	P = 0.001				P = 0.001				P = 0.001			

* Percentage column. § Mann-Whitney U test was used.

Table 6. Nurses' reactions by types of violence experienced

	Physical violence (n = 72)		Verbal violence (n = 221)		Mobbing (n = 88)	
	n	%	n	%	n	%
Nurses' reactions to violence						
I showed no reaction	19	26.38	62	28.05	25	28.40
I told the person to stop	30	41.66	102	46.15	26	29.54
I told my friends/family	6	8.33	39	17.64	24	27.27
I told a colleague	11	15.27	92	41.62	38	43.18
I changed my workplace	-	-	2	0.90	3	3.40
I sought help from a professional association/society	-	-	2	0.90	1	1.13
I informed my superiors (manager/supervisor)	18	25.00	53	23.98	14	15.90
I made a claim for damages/resorted to jurisdiction	1	1.38	2	0.90	2	2.27
I tried to act as if nothing happened	11	15.27	34	15.38	11	12.50
I sought counseling	12	16.66	1	0.04	4	4.54
I tried to protect myself	-	-	-	-	27	30.68
Other*	-	-	1	0.04	2	2.27

*: Learning and requesting individual rights.

4. Discussion

It was reported that the nurses are three times more likely on average to experience violence in the workplace than other occupational groups (5). In this study, it was determined that more than one-tenth of the nurses had experienced at least one form of the investigated violence types. The most frequent form of violence was verbal violence, with 41.8%; followed by mobbing, with 17.1%; and physical violence, with 13.9%. The prevalence of physical and verbal violence reported here was similar to the figures reported by Gerberich et al. (12) in the Minnesota Nurses Study (13.2% and 38.8%, respectively), and Ahmed (13) among Jordanian nurses. Prevalence of mobbing was similar to the figures reported in Hong Kong (14), and Turkey (15). The prevalences for physical, verbal violence, and mobbing were lower than the prevalences reported by Pai and Lee (11) among clinical registered nurses in Taiwan (18.0%, 51.4%, and 29.8% respectively), Kwok et al. among nurses in a university teaching hospital in Hong Kong (18%, 73%, and 45%, respectively), and Gunaydin (15) among nurses in health care settings in İstanbul, Turkey (40.4%, 94.2%, and 39.9%, respectively). Our figures were higher than the prevalences reported by Magnavita and Heponiemi (16) among workers in a public health care facility in Italy, which reported 9.2% physical and 19.6% verbal violence prevalence. In the literature, frequencies varying between 2% and 75% for physical violence, 37% and 100% for verbal violence, and 3% and 30% for mobbing were reported, figures that varied depending on the actual differences as well as the differences in methodology (4–6,9,11,13,14,16–22). In studies reporting lower percentages of physical and verbal violence in comparison to our study, different health personnel were evaluated together, and studies identifying a lower frequency of mobbing than our study were conducted among nurses from psychiatric wards (9,13,16,18,20). Many studies frequently report that nurses working in psychiatric wards are most subject to physical and verbal violence (4,9,14,17,18,20).

As the majority of the nurses in Turkey, and all of the nurses in our study, are women, we think that this is a factor that led to the lower frequency of physical violence compared to verbal violence and mobbing. Similarly, studies conducted in Turkey indicated that experiencing physical violence was more common amongst male health workers (19). A multicountry study reported the fact that since the majority of the health workforce is female the sex dimension of the problem was very evident amongst female health workers (5). Various studies reported that these types of violence are becoming more frequent each day (4,9,17). This increase may be attributed to an actual rise in frequency, just as it may also be attributed to greater awareness and reporting of these forms of violence.

In this study, the perpetrators identified as most

frequently committing acts of physical and verbal violence were the patients' relatives, followed by the patients themselves. This finding parallels other studies' findings, in which the patients' relatives (6,11,13,14,17,21,22) and patients themselves (12,23–25) were reported to be the leading perpetrators. Patients' relatives were reported as committing verbal acts while patients were frequently committing physical violence (10). The perpetrators committing violent acts are reported to be mostly men. Moreover, psychiatric disease, and alcohol and drug abuse were reported to be the prominent risk factors. These factors were not part of our study.

In response to violent behavior, nurses most frequently asked the person committing the violence to stop. Only nurses who were subject to mobbing expressed that they were more likely to share their experiences with a colleague. For nurses who experienced all three forms of violence, the most common response was asking the person to stop. More tangible responses, such as resorting to jurisdiction, seeking counselling, requesting assistance from professional associations, and informing superiors were less frequent. Parallel to the findings from other studies, most nurses chose to show no reaction, to tell the person to stop, or to share their experience with family or friends when subjected to violence (11,13–15,21). The nonreporting of these events was also frequent (16,17,23). Reasons for not reporting were listed as the perceived futility of reporting (13,21), the inability to follow up and complete the relevant legal procedures (17), the lack of a reporting system, and the unsatisfactory responses from the superiors (21). Only one study reported that 65.4% of those subjected to mobbing reported their situation to a superior (11). The findings regarding nonreporting may be due to the perception that violence is a natural consequence of the occupation, to nurses' unwillingness to resort to jurisdiction, to their lack of confidence in professional associations, and to their inability to obtain satisfying results. Furthermore, while there is a telephone (hotline) number for complaints regarding health workers, the only organization to which health workers can report the violence they experience (known as "White Code") did not exist until May 2012 (Ministry of Health of Turkey 2013 - <http://www.beyazkod.saglik.gov.tr/Dokumanlar/calisanengelgesi.pdf>).

Some studies reported that the risk of encountering violence positively correlated with the length of education among nurses (7,26). In our study, no correlation was found between the length of education and the prevalence of nurses experiencing violence.

This study determined that nurses with longer working hours (above 40 h) had a greater risk of experiencing violence. However, evaluations of the effect of longer working hours were, surprisingly, not encountered in most

of the other studies. As nurses in Turkey cannot work part time, all nurses are required to work a minimum of 40 h per week. Other than the studies conducted in Turkey, only one study considered the effect of working full time, for more than 35 h a week. That study concluded that working full time increased the frequency of experiencing violence from colleagues and superiors, but also that it was unclear whether working full time resulted in any difference regarding the frequency of violence from patients' relatives (6). Studies have reported that exposure to violence has adverse effects on mental health, and that experiencing violence can lead to anxiety, frustration, anger, fear, dissatisfaction with work, posttraumatic stress disorder, sleep disorders, physical harm (including death and loss of consciousness), loss of work days, loss of skills, resignation from work, changing of work, and negative effects on the provision of health services (4,6,11,12,16,17,19,21,22). Another important issue that should not be neglected is the fact that verbal violence and mobbing may have more devastating results than physical violence (27). In a manner that is consistent with this information, our study determined that nurses who experienced violence were more willing to change work, profession (if given the opportunity), and their institution (or workplace); they were also identified as having a higher median in the scores regarding anxiety about violence.

Just as anxiety can result from violence, it is also a factor for violence, as numerous studies have reported (9,11,18). When anxiety was evaluated both as a result and

a cause of violence in our study, it was determined to be an important covariant in both cases.

In conclusion, our study has demonstrated that nurses are frequently subjected to violence. In contrast to previous studies, our study also showed that nurses working for more than 40 h a week had a higher risk of experiencing violence. However, the reporting of violence remains limited; most of the time, victims of violence share their experience solely with their colleagues.

Although eliminating the roots of violence among the community and health care sector seems very tough, it is possible to decrease the frequency and extent of hazards due to violence among health-workers with effective interventions. It is necessary to put into effect and enforce, in the shortest possible time frame, institutional and legal sanctions against violence towards health workers in Turkey, which has reached such proportions that it has even started to involve the killing of health workers. Furthermore, it is also necessary to provide a means for reporting violence and for the rehabilitation of health workers who are subject to violence, including the monitoring and evaluation of the "White Code" hotline in Turkey.

Limitations of the study: The prevalence of physical violence, verbal violence, and mobbing has been drawn from a 1 year period prior to the study. The results may be subjected to recall bias, and the incidences could not be presented.

References

- Dahlberg LL, Krug EG. Violence – a global public problem. In: Krug EG, Dahlberg LL, Mercy JA, Zwi AB, Lozano R editors. *World Report on Violence and Health*, Geneva, Switzerland: World Health Organization; 2002. pp. 1–22.
- International Labour Office/International Council of Nurses/World Health Organization/Public Services. *International Framework Guidelines for Addressing Workplace Violence in the Health Sector*. Geneva: International Labour Office; 2002.
- Parent-Thirion A, Fernández Macías E, Hurley J, Vermeylen G. *Fourth European Working Conditions Survey*. Dublin: European Foundation for the Improvement of Living and Working Conditions; 2007.
- Merecz D, Rymaszewska J, Mościcka A, Kiejna A, Jarosz-Nowak J. Violence at the workplace – a questionnaire survey of nurses. *Eur Psychiat* 2006; 21: 442–450.
- Di Martino V. *Workplace violence in the health sector country case studies (Brazil, Bulgaria, Lebanon, Portugal, South Africa, Thailand)*. A synthesis report. Geneva: World Health Organization; 2002.
- Camerino D, Estryng-Behar M, Conway PM, van Der Heijden BI, Hasselhorn HM. Work-related factors and violence among nursing staff in the European NEXT study: A longitudinal cohort study. *Int J Nurs Stud* 2008; 45: 35–50.
- Estryng-Behar M, van der Heijden B, Camerino D, Fry C, Le Nezet O, Conway PM. Violence risks in nursing - results from the European 'NEXT' Study. *Occup Med (Lond)* 2008; 58: 107–114.
- Workplace Violence in the health sector country case studies research instruments survey questionnaire. Joint Programme on Workplace Violence in the Health Sector. Geneva: International Labour Office (ILO) International Council of Nurses (ICN) World Health Organisation (WHO) Public Services International (PSI);, 2003.
- 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: 2812–2821.
- Buyukbayram A, Okcay H. The socio-cultural factors that affect violence in health care personnel. *Journal of Psychiatric Nursing* 2013; 4: 46–53.

11. Pai HS, Lee S. Risk factors for workplace violence in clinical registered nurses in Taiwan. *J Clin Nurs* 2011; 20: 1405–1412.
12. 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.
13. Ahmed AS. Verbal and physical abuse against Jordanian nurses in the work environment. *East Mediterr Health J* 2004; 18: 318–324.
14. Kwok RP, Law YK, Li KE, Ng YC, Cheung MH, Fung VKP, Kwok KTT, Tong JMK, Yen PF, Leung WC. Prevalence of workplace violence against nurses in Hong Kong. *Hong Kong Med J* 2006; 12: 6–9.
15. Gunaydin N, Kutlu Y. Experience of workplace violence among nurses in health-care settings. *J Psychiat Nurs* 2012; 3: 1–5.
16. Magnavita N, Heponiemi T. Violence towards health care workers in a public health care facility in Italy: a repeated cross-sectional study. *BMC Health Serv Res* 2012; 12: 108.
17. Senuzun EF, Karadakovan A. Violence towards nursing staff in emergency departments in one Turkish city. *Int Nurs Rev* 2005; 52: 154–160.
18. Chen WC, Hwu HG, 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.
19. Acik Y, Deveci SE, Gunes G, Gulbayrak C, Dabak S, Saka G. Experience of workplace violence during medical speciality training in Turkey. *Occup Med Adv Access* 2008; 58: 361–366.
20. Adas E. Privatization of health and publicization of violence: violence toward doctors in Turkey. *Critical Public Health* 2011; 21: 339–351.
21. Esmaeilpour M, Salsali, Ahmadi F. Workplace violence against Iranian nurses working in emergency departments. *Int Nurs Rev* 2011; 58: 130–137.
22. Pinar R, Ucmak F. Verbal and physical violence in emergency departments: a survey of nurses in Istanbul, Turkey. *J Clin Nurs* 2010; 20: 510–517.
23. Farrell GA, Bobrowski C, Bobrowski P. Scoping workplace aggression in nursing: findings from an Australian study. *J Adv Nurs* 2006; 55: 778–787.
24. Hahn S, Zeller A, Needham I, Kok G, Dassen T, Halfens RJG. Patient and visitor violence in general hospitals: a systematic review of the literature. *Aggr Viol Behav* 2008; 13: 431–441.
25. Jackson M, Ashley D. Physical and psychological violence in Jamaica's health sector. *Rev Panam Salud Publica* 2005; 18: 114–121.
26. Oztunc G. An examination of verbal and physical abuse incidents that nurses encounter in their work in various hospitals in Adana. C.U. *The Journal of Nursing College of Cumhuriyet University* 2001; 5: 1–9.
27. Pinar T, Pinar G. Healthcare workers and workplace violence. *TAF Prev. Med. Bull* 2012; 12: 315–326.