Research Article

Workplace Violence against Paramedical Staff at a Moroccan University Hospital

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Abstract

Aim: The aim was to determine the prevalence of patient violence against paramedical staff in a university hospital, and the factors that contribute to it.

Materials and Methods: This is a cross-sectional and observational study conducted from April 2018 to April 2019 among nurses and health technicians in various departments of a university hospital. The self-questionnaire included indicators of violence experienced in the past 12 months. It consists of seven items and 49 questions.

Results: The participation rate was 71%. The average age was 42 ± 13 years and professional seniority 16 ± 12 years. The prevalence of violence was 79% (95%, CI: 74.8–82.9%). The prevalence of verbal violence was 79% (n = 324) and that of physical violence 32.2% (n = 132). The most frequent forms of physical violence were spitting and pushing, observed in a third of cases each, followed by damage to equipment in a quarter of cases. As for verbal abuse, the most frequent were insults (80.6%), shouting (63.3%), and verbal threats (44.4%). Accompanying staff were responsible for the violence. The main consequences of violence on staff health were: Stress (70.1%), feelings of insecurity (62.7%), anxiety (57.1%), depression (37%), and demotivation (52.8%). Independent factors favoring violence were: Professional seniority ≤5 years and working in a department in direct contact with patients and their careers.

Conclusion: Violence is a common problem in hospitals. The staff most at risk are those with the least experience. The development and implementation of preventive strategies against violent incidents for the benefit of staff, and specifically at-risk staff, are essential.

Keywords: Hospital, nurses, threat, violence, workplace aggression

Introduction

Violence is one of the main causes of morbidity and mortality. Every year, more than 1.6 million people worldwide lose their lives as a result of violence, and many more are injured and suffer from physical, sexual, and mental health problems.[1]

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Violence in the workplace can occur in any country and affects all professional sectors, including health-care establishments such as hospitals. It can take different forms, such as physical, verbal, psychological or sexual violence, and can be committed by customers, patients or patients' relatives.

The International Council of Nurses, the World Health Organization, the International Labour Organization, and Public Services International have called on nurses to unite against violence.[2]

Although nurses work as front-line care providers, they have the closest contact with patients and their families and are therefore the group of workers most exposed to the risk of violence.[3] They are often confronted with difficult situations in their daily work, including angry patients and families, work

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overloads, long working hours, and stressful situations; this can sometimes lead to violent behavior toward nurses.

Violence is predominantly endured, frequently underreported, or commonly disregarded.[4,5] Health-care professionals, especially nurses and health-care technicians, generally acknowledge it as an inherent occupational hazard and a risk stemming from the nature of caregiving.[6]

Despite the increasing concern among health-care providers regarding the escalating frequency of workplace violence, it is crucial to emphasize that this apprehension lacks substantial evidence due to the scant reporting of these aggressive incidents.[7]

Consequently, the issue of violence is currently drawing significant attention in surveys conducted within healthcare institutions, with a specific emphasis on nursing staff and healthcare technicians. Several researchers have conducted inquiries into violence within healthcare environments in recent decades, aiming to gauge the prevalence of this phenomenon.[8] In Europe, nursing professionals are at the forefront of encountering verbal or physical violence.[9,10] In Africa, instances of verbal violence have been observed in Nigeria.[8] In the Arab region, research on violence within health-care establishments is also relatively limited.[11-14] In Morocco, the matter of violence remains inadequately explored within the professional context, particularly within these environments.

Furthermore, these studies indicate that exposure to workplace violence can lead to various adverse consequences for nurses, including feelings of anger, fear, anxiety, sleep disturbances, the emergence of symptoms related to post-traumatic stress disorder, and job dissatisfaction.[15-17]

To this end, we carried out a study to determine the prevalence, forms, and consequences of workplace violence against paramedical staff in a Moroccan university hospital, as well as the factors contributing to it and the preventive measures recommended.

Materials and Methods

This cross-sectional qualitative observational study conducted between April 2018 and April 2019, at a Moroccan university hospital with a vocation to care for adult patients of all specialties. This hospital was chosen because of its important role in the national health-care system, the large number of nurses working there, and the fact that it is the only hospital in the country with a large number of nurses. It's includes multiplicity of specialized units, such as organs transplant, Intensive care, palliative care and ambulatory care with a large influx of patients accessing them.

Our hospital is a tertiary institution and part of the largest university hospital complex in the country. It offers a wide range of services for adults, including hospitalization, outpatient services, emergency services, operations, intensive care, and other services. It provides training for various categories of health-care staff, including nurses and health technicians.

All nurses and health technicians working in direct contact with patients in the study departments and who had given their consent to participate in the study were included. Staff with <12 months' experience, trainees, and those refusing to take part in the study were excluded from the study.

The instrument used to measure violence in the study was inspired by various international studies on violence.[18] The anonymous self-questionnaire includes various indicators of physical and verbal violence experienced over the past 12 months. It consists of seven items and 49 questions, divided into:

- Socioprofessional data: Age, gender, family status, level of education, qualifications, department, length of service, and working hours
- History of external violence: Whether or not victims of violence, type of violence suffered (physical, verbal), and place of occurrence
- Characteristics of physical violence: Nature of physical violence, injuries caused, location of injuries, quality of aggressor, frequency of assaults, immediate, and subsequent reactions of the victim
- Characteristics of verbal violence: Nature of the verbal violence, quality of the aggressor, frequency of aggression, immediate, and subsequent reactions of the victim
- Factors favoring external violence related to personnel and the work environment
- Consequences for nurses and aggressors
- Preventive measures formulated by participants.

Data collection was preceded by the obtaining of administrative authorizations. It was carried out simultaneously in the various hospital departments. In each department, we organized group and individual interview sessions in collaboration with the head nurses, to whom we had previously explained the aim and objectives of the study.

The study was approved by the local Biomedical Research Ethics Committee. All voluntary participants in this study were informed of the respect of anonymity and confidentiality, the objectives pursued, the measurements to be carried out, and the progress of the investigation before giving their informed consent.

Statistics

Assuming a response rate of 70%, an estimation margin of around 5%, a confidence interval of 95%, and a power of 80%, 580 questionnaires were distributed. Quantitative data were presented as mean ± standard deviation and qualitative variables as headcount and percentage. Qualitative variables were compared using the Chi-square test or Fisher's exact test, while quantitative variables were compared using the Student's t-test. Multivariate analysis was performed using logistic regression. Data were analyzed using SPSS 18 (Statistical Package for the Social Science version 18. Chicago, SPSS Inc.). The significance threshold was set at $P < 5\%$.

Results

Four hundred and ten questionnaires were collected from a total of 580 nurses and health technicians, representing a 71% participation rate. The sample comprised 62.4% of women and 37.6% of men. The average age of participants was 42 ± 13 years (extremes: 23–61) and their professional seniority 16 ± 12 years (extremes: 1–40 years). Respondent characteristics are shown in Table 1.

In the 12 months preceding the survey, the prevalence of violence experienced by participants was 79% (n = 324, CI95%: 74.8–82.9%). Verbal violence was (79%; n = 324) and physical violence (32.2%; n = 132).

Almost 41% (n = 132) of respondents said that they had experienced physical and verbal abuse simultaneously, and (59.3%; n = 192) verbal abuse alone.

Table 1: Participant characteristics

Characteristics	M±SD or n	% or extremes
Services		
Surgery	146	35.6
Medicine	130	31.7
Emergencies	111	27.1
Radiology	16	3.9
Other	7	1.7
Gender		
Male	154	38
Female	256	62
Age (years)	42±13 years	[23–61]
≤30 years	116	28.3
31–40 years	86	21
41–50 years	59	14.4
≥50 years	149	36.3
Marital status		
Single	115	28
Married	283	69
Divorced	8	2
Widowed	4	1
Education level		
Secondary	124	30
University	286	70
Professional group		
Multi-skilled nurse	285	69.5
Nurse anesthetist	36	8.8
Emergency nurse	2	0.5
Radiology technician	26	6.3
Physiotherapist	14	3.4
Social worker	4	1
Head nurse	32	7.8
General supervisor	8	2
Dietician	3	0.7
Job experience (years)	16±12	[1–40]
1–5	122	29.8
6–10	69	16.8
11–15	30	7.3
>15	189	46,1
Working time		
8 h–15 h	235	57.3
14 h–20 h	54	13.2
Day (12 h)	79	19.3
Night (12 h)	78	19

M±SD: Mean±standard deviation; n: Number

One thousand and forty-seven acts of verbal violence were suffered, and nearly 43%; (n = 140) of participants reported more than 6 recurrences in the year preceding the survey. With regard to physical violence, 252 acts were suffered, including 33 on property. Weekly exposure to verbal and physical violence was expressed by 59.3% and 58.3%, respectively.

The prevalence of external violence according to place of occurrence is shown in Table 2.

Moreover, the prevalence of verbal violence was almost similar between men and women, with 78.6% versus 79.3% respectively, and for physical violence, men were more affected than women, with 36.4% versus 29.7%.

In terms of aggressors, attendants were the most frequent perpetrators of external verbal and physical violence against nurses in Table 3.

Various types of physical violence were reported by the nurses, the most frequent of which were jostling and spitting, each observed in around a third of cases, followed by damage to equipment in a quarter of cases in Table 4.

Table 2: Prevalence of external violence by place of occurrence

Services	*n*	Percentage
Medicine	111	72.1
Surgery	114	87.7
Emergency	80	76.0
Radiology	12	75.0
Other	7	100
Total	384	79

Table 3: Perpetrators of violence

Source	Physical violence (%)	Verbal abuse (%)
Patient	57.6	58.6
Patient's parent	52.3	58.3
Companion	60.6	66
Visitor	29.5	28.1
User	6.9	12.0

Table 4: Nature of physical violence

Nature of physical violence	Frequency (%)
Firearm injury	0
Stabbing	0.8
Head shot	1.5
Drawn by hair	2.3
Projection of object or liquid	3.8
Kick	7.6
Moursure	7.6
Slap	9.5
Pinching	9.8
Scratches	9.8
Strike with an object	11.4
Punching	12.5
Strike with the hand	15.9
Damage to the equipment	25.0
Hustle and bustle	34.1
Sputum	38.6

As for verbal abuse, the most frequent were insults (80.6%; *n* = 261), incivilities (67.6%; *n* = 219), shouting (63.3%; *n* = 205), and verbal threats (44.4%; *n* = 144).

During the 5 days of the working week, nurses were physically assaulted (58.3%; *n* = 77). This violence took place in the morning (47.7%; *n* = 63), and in the afternoon in 28% of cases. Verbal violence was reported during the working week in (59.3%; *n* = 192). It took place in the morning (42%; *n* = 132), in the afternoon in 19.4% of cases, and at night in 12% of cases.

The victim's reactions to the violence varied according to its nature. In the case of physical violence, a written report to superiors was reported in (48.5%; *n* = 64), with a complaint filed in (22%; *n* = 9). Other reactions included calling the superior in (57.6; *n* = 76), losing one's temper in (46.2%; *n* = 61), defending oneself in (24.2%, *n* = 32), calling a colleague in (21.2%; *n* = 28), and running away in (16.7%; *n* = 22). In the case of verbal abuse, the reactions reported by victims were to get angry (59.9%; *n* = 194), contact their superior (46.3%; *n* = 150), make a written report to management (29.6%; *n* = 96), and file a complaint (4.3%; *n* = 14). Only 1.5% of those assaulted (*n* = 5) consulted an occupational physician.

Concerning the factors associated with violence, we report the results of univariate analysis in Table 5.

By adjusting these variables in the multivariate analysis, only short professional seniority, notably <5 years, and working in a department where direct contact with patients is more frequent, were found to be significantly associated with external violence [Table 6].

The main consequences of violence reported by victims exposed to violence were stress (70.1%; = 227), fear/insecurity (62.7%; *n* = 203), anxiety (57.1%; *n* = 185), and depressive syndrome (37%; *n* = 120) as well as exhaustion (32.7%; *n* = 106).

Concerning the impact of violence on their professional activity, nurses reported in ascending order: Demotivation (52.8%; *n* = 171), difficulty returning to the same position (22.5%; *n* = 73), change of position (17.6%; *n* = 57), reduced efficiency (17.6%; *n* = 57), and sick leave (4.6%; *n* = 15).

During the act of violence, the intervention of a hospital security guard was reported in (47.2%; *n* = 153) and (10.8%; *n* = 35) of the aggressors were apprehended by the police, of whom (4%; *n* = 13) were brought to justice.

The preventive measures expressed by staff who had been attacked, with a view to avoiding external violence in the course of their work, were: Training on violence and how to prevent it (89.2%, *n* = 289), organizing patient reception and orientation (79.3%; *n* = 257), training on what to do in the

Table 5: Univariate analysis of factors contributing to external violence

Variables	Violence group m±SD or % (n) *n*=324	Non-violence group m±SD or % (n) *n*=86	*P*-value
Age (years)	42±13	44±13	0.13
Nurse profile			
Multi-skilled nurse	71 (230)	64 (55)	0.4
Nurse anesthetist	5.9 (19)	19.8 (17)	0.001
Emergency Nurse	(2)	0 (0)	1
Radiology technician	7.7 (25)	1.2 (1)	0.02
Physiotherapist	2.2 (7)	8.1 (7)	0.01
Social worker	1.2 (4)	0	0.6
Head nurse	8.3 (27)	5.8 (5)	0.5
General supervisor	2.5 (8)	0 (0)	0.2
Dietician	0.6 (2)	1.2 (1)	0.5
Education level			
Secondary	78.2 (97)	21,7 (25)	0.9
University	79.4 (225)	20.6 (59)	
Units			
Surgery	34.3 (111)	40.7 (35)	0.3
Medicine	35.2 (114)	18.6 (16)	0.004
Emergencies	24.7 (80)	36 (31)	0.04
Radiology	3.7 (12)	4.7 (4)	0.8
Other	2.1 (7)	0 (0)	0.4
Professional experience			
Seniority≤5 years	32.7 (106)	18.6 (16)	0.01
Family situation			
Single	27.8 (90)	29.1 (25)	0.8
Married	69.4 (225)	67.4 (58)	0.8
Gender			
Male	78.6 (121)	21.4 (33)	0.9
Female	79.3 (203)	20.7 (53)	
Assignment department			
Operating theaters+emergency resuscitation	4.6 (15)	43 (37)	0.001
Other*	95.4 (309)	57 (49)	

*Units with direct contact with patients and their careers

Table 6: Independent factors predictive of violence

Variables	Odds ratio	95% CI	*P*-value
Professional experience ≤5 years	2.4	1.2–4.8	0.01
Units with direct contact with patients and their careers	0.06	0.03–0.1	0.0001
Constant	5.1	-	-

event of violence (78.7%; *n* = 255), reducing waiting time for reported patients (73.8%; *n* = 239), reinforcing internal security (69.8%; *n* = 226), and humanizing staff/patient relations (64.8%; *n* = 210).

Discussion

Out of 410 survey participants, 79% of respondents had experienced at least one incident of violence in the past year. This prevalence remains high compared to the overall prevalence of violence 57.3%, ranging from 24.7% to 88.9% over the past 12 months.[19] Workplace prevalence is an important issue for nurses although this study reported a higher prevalence than other studies conducted in developed countries.[20-22] The difference may be due to differences in context, workload, work style, and attitudes to reporting by the victim.

In this study, verbal violence was more frequent than physical violence (59.3% vs. 40.7%). Our rate of verbal violence is in line with that of developed countries, which ranges from 51% to 71%, while that of developing countries ranged from 32% to 48%.[23] Global results indicated that verbal violence was higher than physical violence (65.5% vs. 26.7%).[19] On the other hand, the prevalence of simultaneous verbal and physical violence (*n* = 132; 40.7%) in our study remains high compared with those in studies from developing countries, which range from 16.5% to 35%.[11,24,25]

In line with the studies, the nature of the violence varied from one study to another.[24] Insults, incivilities, shouting, and threats constituted the majority of cases of verbal violence. Our findings are in line with those described in the literature,[25,26] albeit with varying rates.[24] In our study, the most frequent types of physical violence were spitting and pushing. This is in line with other studies.[24]

Some studies report that the main perpetrators of violence are those accompanying the patient, as in our study.[24-26] This could be sociocultural in origin and linked to the spirit of family solidarity, which means that patients are often accompanied to the healthcare services by at least one member of their family, and always remain under their protection. In other studies, the patient is the main perpetrator of violence.[5,27]

Through the stress and sense of insecurity, it generates among staff working in the various departments, external violence is a source of demotivation and difficulty in returning to the same job, affecting the activity and quality of care.[12]

The factors contributing to workplace violence in the health-care sector fall under three levels of variables: Individual staff characteristics, workplace factors, and societal influences.[28] Logistic regression models can be used to examine violence in relation to the determinants of these three levels.[28] These factors are numerous and vary in frequency from one study to another. These differences can be explained by the methodological differences between studies and their objectives. Among these factors, the studies cite sex, age, marital status, and years of experience, as well as the assignment units.[29] Usually, men are more often the object of aggression, but in our study, no difference was observed between the two sexes in terms of exposure to violence, whatever its typology. This could be explained in part by the feminization of the profession.

In our study, lack of experience and assignment to a department with direct contact with patients and their attendants were negatively associated with external violence. According to this result, it seems that staff new to a department in our sample have not yet developed the skills to anticipate aggressive situations and avoid or neutralize them.[28] The at-risk work sites in this study included surgery, medicine, emergency, radiology, and general supervision. In contrast, previous studies have consistently reported that nurses working in the emergency department and the psychiatric ward had the highest prevalence of all forms of violence.[4,21,22,30] However, in our study, working in the emergency department was not at the top of the list for the prevalence of violence in this university hospital. This is due to the enhanced surveillance and security measures in the emergency department compared with other sites. In terms of protective factors, nurses in operating theatres and intensive care units experienced fewer acts of violence. This is explained by the fact that these departments prohibit access by escorts and that the patients admitted to them are often in a state of acute distress, sometimes with impaired consciousness.

The preventive measures to be put in place should focus on improving all these factors, taking into account the victim, the situation, and the perpetrator of the violence. According to our results, the prevention strategy should focus on improving organizational factors, and on actions aimed at users and staff, in line with their expectations in terms of care and improvement of their situation.

We consider the number of people surveyed to be representative, with a very acceptable rate. In this respect, and according to the studies, the survey participation rate varies between 38% and 89%.[18,26]

However, the absence of data on non-respondents could limit our study by introducing an information bias. Furthermore, it cannot be ruled out that nurses may have under-reported the phenomenon of violence, on the one hand because of the trivialization of minor events, integrated as usual elements linked to the activity and, on the other hand, the very type of investigation looking for facts that are sometimes old, exposing to memory bias. To counter this, the reporting of acts of violence must be encouraged and accompanied by

a commitment on the part of managers at various levels to implement strategies for managing violent incidents.

Conclusion

Based on these results, it can be concluded that paramedical staff at this teaching hospital have high rates of exposure to violence. This study provides a possible benchmark for nursing managers and directors, enabling them to identify groups of nurses at higher risk of violence and its main causes in teaching hospitals. This underscores the need to develop strategies and protocols for managing violent incidents, for the benefit of all staff and specifically at-risk personnel.

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Declaration of Interest

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