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CLINICAL & BASIC RESEARCH

Workplace Violence Against Nurses in Psychiatric Hospital Settings

Perspectives from Saudi Arabia

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العنف في مكان العمل ضد طاقم التمريض في مستشفيات الأمراض النفسية

وجهات نظر من المملكة العربية السعودية

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abstract: ***Objectives:*** Workplace violence (WPV) has become a world-wide concern. This study aimed to measure the prevalence of WPV among nurses working in psychiatric hospitals in Saudi Arabia. ***Methods:*** This cross-sectional study was conducted at three psychiatric hospitals in Saudi Arabia between March and May 2017. Participants completed a self-reported questionnaire which was used to measure the prevalence and explore the associated factors of WPV. A multivariate logistic regression analysis was also performed. ***Results:*** A total of 310 nurses (response rate: 62%) were included in this study. The prevalence of WPV against nurses was 90.3%, of which 57.7% had been exposed to both physical and verbal abuse. More nurses were exposed to WPV during the morning shift than the evening shift (58.4% versus 42.3%). Violent behaviour was exhibited mostly by the patients themselves (81.3%). Over half of the nurses (57.4%) required medical intervention in such cases. The majority of nurses felt either stressed (64.2%) or anxious (53.5%) and 34.2% felt depressed after the incident. Multivariate logistic regression analysis revealed that time of violence, source of violence, patient dissatisfaction with medical care and lack of organisational support for nurses were significantly associated with the occurrence of WPV in psychiatric units. ***Conclusion:*** WPV has reached an alarming rate among nurses in psychiatric hospitals in Saudi Arabia. It is crucial to invest in the prevention of WPV by constant training of workers and a mutual policy with the police and the civic prosecutor in Saudi Arabia on how to respond to violent psychiatric patients.

Keywords: Workplace Violence; Psychiatry; Nurse; Mental Health; Saudi Arabia.

الملخص: الهدف: أصبح العنف في مكان العمل مصدر قلق عالمي. تهدف هذه الدراسة إلى قياس معدل انتشار العنف ضد طاقم التمريض العاملين في مستشفيات الأمراض النفسية في المملكة العربية السعودية **الطريقة:** أجريت هذه الدراسة المستعرضة في ثلاثة مستشفيات للأمراض النفسية في المملكة العربية السعودية بين مارس 2017 ومايو 2017. أكمل المشاركون استبيانا ذاتيا والذي تم استخدامه لقياس انتشار واستكشاف العوامل المرتبطة بالعنف في أماكن العمل. وتم إجراء تحليل الانحدار المتعدد. **النتائج:** تم تضمين ما مجموعه 310 ممرض وممرضة (بمعدل استجابة: 62%) في هذه الدراسة. بلغت نسبة انتشار العنف في مكان العمل ضد الممرضين 90.3%، منهم 57.7% تعرضوا للإيذاء الجسدي واللفظي. تعرض عدد أكبر من الممرضين للعنف خلال مناوبة الصباح أكثر من مناوبة المساء (58.4% مقابل 42.3%). تم تسجيل السلوك العنيف في الغالب من قبل المرضى أنفسهم (81.3%). وفي أكثر من نصف الممرضين (57.4%) تطلب التدخل الطبي لعلاج الايذاء. غالبية الذين تعرضوا للعنف شعروا بالإجهاد (64.2%) أو القلق (53.5%) و 34% شعروا بالاكتئاب بعد الحادث. كشف تحليل الانحدار المتعدد أن وقت العنف، ومصدر العنف، واستياء المرضى من الرعاية الطبية ونقص الدعم التنظيمي للممرضين ارتبط بشكل كبير مع حدوث العنف في الوحدات النفسية. **الخلاصة:** لقد وصلت نسبة العنف ضد طاقم التمريض إلى معدل ينذر بالخطر في مستشفيات الأمراض النفسية بالمملكة العربية السعودية. من الأهمية بمكان الإستثمار في الوقاية من العنف من خلال التدريب المستمر لطاقم التمريض وسياسة التعاون المشترك مع الشرطة والأدعاء العام في المملكة العربية السعودية لدعم التمريض في كيفية الاستجابة لعنف مرضى الطب النفسي.

الكلمات المفتاحية: العنف في مكان العمل؛ الطب النفسي؛ التمريض؛ الصحة النفسية؛ المملكة السعودية.

Advances in Knowledge

- *This study provided an insight into the estimate, associated factors and characteristics of workplace violence (WPV) amongst nurses working in three psychiatric hospitals in Saudi Arabia.*
- *It highlighted the possible contextual factors surrounding workplace violence and the interactions with these factors.*

Application to Patient Care

- *The present study emphasised the importance of patients' characteristics and their dissatisfaction of nurses and medical care, which might contribute to the occurrence of WPV.*
- *The results of this study could help in tackling WPV with particular emphasis on the training of nurses on how to deal with and react to such violence safely and with special consideration to patients' mental health status.*

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Workplace violence (WPV) has been a persistent problem that is accepted and generally overlooked by the public and professional organisations.[1] There has been an increasing concern worldwide about the rise in WPV. It has been defined by The National Institute for Occupational Safety and Health "as violent acts (including physical assaults and threats of assaults) directed toward persons at work or on duty" and it "ranges from offensive or threatening language to homicide".[2] The World Health Organization highlighted that WPV includes "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".[3]

On an international level, it has been noticed that the highest number of these assaults are directed towards healthcare workers.[4] A study in Canada found that the overall patient violence rate over a one year period was 1.52 incidents per 100,000 worked hours.[5] Studies have emphasised that the well-being of healthcare staff and a healthy workplace are considered key components of effective healthcare systems. This should be applied to all sectors in any healthcare setting. This is particularly important among psychiatric nurses, who may be exposed to verbal, physical, emotional and psychological abuse.[2,6] A systematic review by Iozzino *et al.* emphasised that almost one in five patients admitted to acute psychiatric units may commit an act of violence towards nurses working within these units.[7] It is possible that these mentally unstable patients might be stressed and therefore express their anger towards the nurses who care for them. Iozzino *et al.* also found that factors associated with levels of violence in psychiatric units—including male gender, diagnosis of schizophrenia, substance use and a lifetime history of violence—were similar to factors associated with violence among individual patients.[7]

In Turkey, WPV is considered an important issue that adversely affects the personal lives of healthcare professionals and leads to a high staff turnover.[8,9] These studies found that such violence is particularly common among nurses compared to other healthcare providers. Furthermore, among healthcare workers in Iran, it was found that nurses reported the highest rate of violence; 74.7% of the participants were subjected to psychological violence.[10]

In Saudi Arabia, WPV has been explored in primary healthcare and studies have revealed a wide range of WPV prevalence (28–67.5% in 12 months), especially among nurses working in outpatient primary healthcare settings.[11,12] However, this study proposes that WPV is more serious in other inpatient hospital settings, such as in psychiatric care units where patients are mentally unstable and might be more aggressive. The safety of hospital staff is of paramount importance for the continuity and quality of care in all healthcare settings. Therefore, this study aimed to measure the prevalence and explore the associated factors of WPV among nurses working in mental-care hospitals in Saudi Arabia.

Methods

This cross-sectional study was conducted between March and May 2017 at three main psychiatric hospitals located in the Western region of Saudi Arabia. A total of 938 nurses worked in these three hospitals and it was initially intended to include all nurses. However, it was only possible to distribute 500 questionnaires due to a high turn-over of nurses between hospitals, some nurses being on holiday, attending courses or being assigned to administrative work.

The questionnaires were distributed to all participants via their hospital postal system. Nurses working in direct contact with psychiatric patients were included. Participants were asked to complete a self-reported questionnaire, which has previously been used in several countries with a similar cultural context as Saudi Arabia.[11,13–15] The language of the questionnaire was English in order to ensure its originality and avoid language-based distortions related to measurements of violence. The questionnaire was composed of 32 items under four sections: 1) sociodemographic variables; 2) questions measuring the frequency and type of WPV; 3) items asking participants on how they respond to such violence; and 4) open-ended questions exploring their needs in managing WPV The scale was scored with 'yes' or 'no' and participants were asked to tick the choices that applied to their situation. The explanation of the nature of each type of WPV (physical, verbal or both) was provided to all participants in a covering letter attached to the questionnaire, including examples of types of WPV.

The questionnaire was reviewed by two epidemiologists, four researchers and three professors in the Nursing College of Suliman AlFaqih in order to check its consistency, appropriateness and the relevance of the items. Furthermore, a pilot study including 30 nurses was conducted to ensure questionnaire applicability, wording and to identify any ambiguities in the items, after which the suggested changes were implemented and the questionnaire was modified accordingly. This pilot study is not reported here and was excluded from the results and analysis of the present study. Completed questionnaires were returned to a dedicated postal box in each hospital. All written materials were protected in secure closed cabinets accessible only to the researchers.

Data were analysed using Statistical Package for Social Sciences (SPSS), Version 22.0 (IBM Corp., Armonk, New York, USA). The level of statistical significance was set

at $P \leq 0.05$. A multivariate logistic regression model using a forward (Wald) model was also performed.

A consent form was signed by all participants and confidentiality was ensured by maintaining a completely anonymous involvement in the study. Approval for this study was obtained from the Instructional Review Board Ethics Committee of Fakeeh College for Medical Sciences, Riyadh, Saudi Arabia.

Results

A total of 310 nurses (response rate: 62%) completed the questionnaire and were included in the study. During the study period, many nurses were in transition between various departments, on leave or not interested in participating. The majority of the participants were middle-aged married Saudi females, mainly working in the inpatient department, with a diploma degree in nursing and an experience of 1–10 years [Table 1].

The prevalence of WPV against nurses was 90.3%; 43.2% were exposed to WPV more than three times in the last year and 57.7% had experienced both physical and verbal abuse. Most nurses were exposed to WPV during their morning shift (58.4%) followed by the afternoon (50.3%), evening (42.3%) and night shift (33.9%). The majority of violence originated from the patients themselves (81.3%) and some WPV came from their relatives (30%), visitors (26.1%), or co-workers (25.8%) [Table 2].

The majority of participants were rarely (24.2%) or sometimes (32.3%) concerned about WPV. After exposure to WPV, 57.4% of nurses required medical intervention and 15.8% experienced life-threatening acts that required emergency care. The majority felt either stress (64.2%) or anxiety (53.5%), while 34.2% felt depressed and few (8.4%) were not interested in attending work and were considering leaving their job [Table 2]. Nurses differed in their response to WPV and many selected more than one option when reacting to such acts. Over half of the nurses (54.2%) would report the WPV to their manager, 40.6% spoke to colleagues and 30% requested to be transferred to another department [Table 3].

Participants perceived that psychological problems (69.7%), shortage of staff (44.8%), denial of patients' request for admission (41%), smoking prohibition in thepsychiatric inpatient wards (37.1%), overcrowding of the inpatient wards (33.9%), long waiting times in the outpatient clinics (29.7%) and violation of visiting hours (28.4%) contributed to WPV [Table 4]. Participants also selected options from a range of preventive measures and the required resources to tackle WPV. The majority (61%) chose to train nurses on managing WPV and how to cope with stress associated with such violence. Additionally, over half of the participants (56%) selected the option that addressed the importance of policies related to WPV. Many (45%) also chose the option of awareness programmes to the public and staff with regards to unacceptable violent behaviour in a hospital environment. Some (39.4%) selected the option of the role of organisational support for victims of violence.

Univariate analysis of WPV occurrence revealed significant associations with several factors. However, a multivariate logistic regression revealed the dependent

Table 1: Characteristics of nurses working at psychiatric hospitals in Saudi Arabia (N = 310)

Characteristic	n (%)
Age	
20–29	95 (30.6)
30–39	158 (51)
40–49	40 (12.9)
50–59	17 (5.5)
Gender	
Male	142 (45.8)
Female	168 (54.2)
Marital status	
Single	95 (30.6)
Married	193 (62.3)
Divorced	14 (4.5)
Widow	8 (2.6)
Nationality	
Saudi Arabian	214 (69)
Not Saudi Arabian	96 (31)
Qualification in nursing	
Diploma	190 (61.3)
Bachelor	103 (33.2)
Master	17 (5.5)
Experience in psychiatric units in years	
<1	31 (10)
1–5	85 (27.4)
6–10	105 (33.9)
11–15	43 (13.9)
>15	46 (14.8)
Working shift	
Day	132 (42.6)
Evening	35 (11.3)
Night	19 (6.1)
Rotating days and nights	46 (14.8)
Rotating days, evenings and nights	78 (25.2)
Psychiatric department	
Emergency	54 (17.4)
Inpatient	204 (65.8)
Outpatient	52 (16.8)

Table 2: Prevalence, types and characteristics of workplace violence experienced by nurses working at psychiatric hospitals in Saudi Arabia (N = 310)

WPV characteristic	n (%)
Experienced violence at work	
Yes	280 (90.3)
No	30 (9.7)
Numbers of violent attacks in the previous year	
Once	59 (19)
Twice	47 (15.2)
Three times	43 (13.9
More than three times	134 (43.2)
Type of violence	
Physical abuse	44 (14.2)
Verbal abuse	61 (19.7)
Both	179 (57.7)
Consequence of violence	
Medical intervention required	176 (57.4)
Life-threatening	49 (15.8)
Both	53 (17.1)
Concerned regarding violence at work	
Never	23 (7.4)
Rarely	75 (24.2)
Sometimes	100 (32.3)
Usually	72 (23.2)
Always	40 (12.9)
Timing of WPV	
Morning	
Yes	181 (58.4)
No	129 (41.6)
Afternoon	
Yes	156 (50.3)
No	154 (49.7)
Evening	
Yes	131 (42.3)
No	179 (57.7)
Night	
Yes	105 (33.9)
No	205 (66.1)
Source of violence	
Patient's relative	
Yes	93 (30)
No	217 (70)
Patient	
Yes	252 (81.3)
No	58 (18.7)
Co-worker	
Yes	80 (25.8)
No	230 (74.2)
Visitor	
Yes	81 (26.1)
No	229 (73.9)
Feeling after exposure to WPV	
Stress	
Yes	199 (64.2)
No	111 (35.8)
Anxiety	
Yes	166 (53.5)
No	144 (46.5)
Depression	
Yes	106 (34.2)
No	204 (65.8)
No interest in going to work; consider leaving job	
Yes	26 (8.4)
No	284 (91.6)

WPV = workplace violence.

Table 3: Participants' response to workplace violence at psychiatric hospitals in Saudi Arabia (N = 310)

Response after exposure to a WPV incident	n (%)*
No response	89 (28.7)
Talking to family and friends	73 (23.5)
Request to be transferred to another department	93 (30)
Pretending nothing happened	50 (16.1)
Getting professional help	98 (31.6)
Getting help from the police	21 (6.8)
Warning the patient	79 (25.5)
Talking with colleagues	126 (40.6)
Reporting incident to the manager	168 (54.2)
Reacting with violence	46 (14.8)
Getting legal help	26 (8.4)

WPV = workplace violence.
**Participants had the option of choosing more than one item.*

variables that were significantly associated with WPV after controlling for other socio-demographic variables and other possible confounders, such as age and years of experience. WPV mostly occurred during the evening time (odds ration [OR]: 2.91; 95% confidence interval [CI]: 1.19–7.09; P = 0.02). Patients (OR: 2.99; 95% CI: 1.26–7.08; P = 0.01) and their relatives (OR: 0.29; 95% CI: 0.11–0.74; P = 0.01) were the main sources of violence. Patients' dissatisfaction with nursing or medical care was significantly associated with more WPV

Table 4: Participants' perception of causes of workplace violence at psychiatric hospitals in Saudi Arabia (N = 310)

Perceived causes of WPV	n (%)*
Violation of visiting hours	88 (28.4)
Long waiting periods in outpatient clinics	92 (29.7)
Psychological problems	216 (69.7)
Smoking prohibition in inpatient wards	115 (37.1)
Denial of patients' admission to the hospital	127 (41)
Delays in nursing care provision	54 (17.4)
Delays in medical care provision	65 (21)
Patient dissatisfaction with nursing or medical care	64 (20.6)
Shortage of staff	139 (44.8)
The patients' requests not satisfied	84 (27.1)
Poor organisation	68 (21.9)
Overcrowded inpatient ward	105 (33.9)
Patients' health condition	138 (44.5)

WPV = workplace violence.
**Participants had the option of choosing more than one item.*

Table 5: Multivariate logistic regression model using forward (Wald) model of factors associated with workplace violence towards nurses in psychiatric hospitals in Saudi Arabia

Variable	OR (95% CI)	*P* value
Time violent incident occurred		
Evening	2.91 (1.19–7.09)	0.02
Source of violence		
Relatives	0.29 (0.11–0.74)	0.01
Patients	2.99 (1.26–7.08)	0.01
Cause		
Patient dissatisfaction with nursing or medical care	2.70 (1.03–7.09)	0.04
Organisational support for victims of violence	0.33 (0.14–0.79)	0.01
Constant	3.08	0.005

OR = odds ratio; CI = confidence interval.

(OR: 2.70; 95% CI: 1.03–7.09; P = 0.04). The lack of organisational support to nurses exposed to such violence was significantly associated with the occurrence of WPV (OR: 0.33; 95% CI: 0.14–0.79; P = 0.01) [Table 5].

Discussion

The results of the present study showed that nurses in Saudi Arabia were exposed to WPV, similar to other nurses who work in psychiatric hospitals worldwide. However, there are some differences in terms of frequency and type of WPV as well as other associated factors. In the present study, the prevalence of WPV (90.3%) was higher than that reported in studies from China (50–76%), Egypt (27.7%) and Taiwan (49.6%).[16–19] The high prevalence in the present study may be due to the lack of policies related to WPV in Saudi Arabian hospitals, which could contribute to the continuity of such violence.

It was previously reported in a study by Hatch-Maillette *et al.* that 100% of the nurses experienced WPV at some point in their careers.[20] Such variability may be due to the different instruments used to measure WPV in various countries with diverse laws and health system regulations. Moreover, this might be because of differences in the definitions of violence and variations in the levels of under-reporting of WPV episodes by mental healthcare personnel. The high prevalence of WPV in the current study could also be explained by the nurses' lack of awareness of WPV, which reflects the lack of training and support from their hospital; this may subsequently lead to the occurrence of WPV. These concerns should be explored further using in-depth interviews and/or focus groups in order to elaborate the dimensions and factors underlying their perceptions about WPV.

The current study's participants were exposed to both physical and verbal abuse, mostly during morning and afternoon shifts. This is consistent with other studies that showed a high level of both verbal abuse and physical violence towards healthcare professionals, in particular, mental healthcare workers.[10,21,22] The current study showed that the source of WPV was mainly the psychiatric patients themselves followed by their relatives. This is similar to other studies which revealed that the main perpetrators of WPV were patients followed by their relatives.[23,24]

In addition to possible physical consequences, psychological consequences may also be significant.[1] Tonso *et al.* reported that almost one in three victims of violence (33%) rated themselves as being in psychological distress, while in the current study almost two in three felt the same (64.2%).[25] A study by van Leeuwen *et al.* in the Dutch mental health system revealed that one in five healthcare professionals working in psychiatric inpatient units experienced mental health complications as a consequence of WPV.[26] In addition, some (8.4%) of the current study's participants expressed a lack of interest to go to work or considered leaving their job. This is consistent with Nijman *et al.*'s study that indicated that WPV was associated with a decrease in productivity and higher rates of work non-attendance.[27] Violence against nurses is thought to contribute to low morale, high rates of sick leave and increased turnover.[28] This may instigate a cycle, as decreased staffing levels and

the presence of temporary staff can lead to more episodes of violence.[29]

The majority of the current participants responded to the WPV by reporting the incident to their manager (54.2%), which is comparable with Speroni *et al*.'s study where nurses reported incidents to managers or supervisors.[30] While several nurses (40.6%) chose to talk to their colleagues about their exposure to such violence, 30% requested to be transferred to another department.

Participants' perceptions of the causes of WPV revealed multiple reasons, including psychological problems of patients, shortage of staff, denial of patients' request for admission, smoking prohibition in the psychiatric inpatient wards, overcrowded inpatient wards, long waiting times in outpatient clinics and during visiting hours. Park *et al*.'s study showed that heavy work mandates under time pressure caused by shortage of staff, less trust and justice and a high patient turn-over created stressful situations for patients, families and healthcare workers.[23]

There were some limitations in the current study. There was a relatively low response rate (62%), but this could be due to several factors such as during the recruitment period, there was a high turn-over of nurses between hospitals and some were also on leave, attending courses or assigned to administrative work. However, it should be noted that other studies have reported an even lower response rate (25–26%).[15,25] There were discrepancies between the simple prevalence statistics and the regression statistics. This could be due to missing data in some of the items in the questionnaire. Additionally, some of the questionnaire sections allowed participants to choose more than one option and, hence, some estimates reflect these selections. Moreover, some healthcare workers who experienced serious physical or mental injuries due to WPV have left their jobs in mental healthcare and could not be reached. In addition, there might be a selection bias, resulting in more nurses who experienced WPV disproportionately completing the survey. The current findings should be seen in light of these limitations.

In future research, comparable methodologies, instruments and definitions could be used to establish a clearer conceptual framework. The authors' also suggest that in order to decrease the frequency of WPV, it is crucial to invest in its prevention by constant training of healthcare professionals to improve their verbal communication skills and other necessary techniques that are implemented in psychiatric units. However, even if staff are well-trained, WPV may still occur. Hence, it is of utmost importance that workers communicate that violence against them will not be tolerated under any circumstance and it may also have legal consequences. For that purpose, it is fundamental for all mental health organisations to have a mutual policy, which may involve the police and the judicial system, on how to react to violent psychiatric patients.

Conclusion

In healthcare settings, WPV is an occupational hazard with detrimental effects on work-related health. Such violence has reached an alarming rate among nurses working in three psychiatric hospitals in Saudi Arabia. Workplace characteristics and the interface between patients and healthcare professionals are important contextual factors that can contribute to the development of WPV. This study revealed that important factors associated significantly with WPV included lack of organisational support for nurses as WPV victims, staffing levels and patients' and/or relatives' dissatisfaction with the psychiatric care. These factors must be kept in mind to create policies and manage violence in a psychiatric healthcare setting.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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