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## Patterns of Violence against Health Workers and Awareness about Anti-Violence Regulations in Saudi Arabia

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### Abstract

**Introduction:** There is a limited data about awareness of healthcare workers about the regulations that concern violence against healthcare workers in Saudi Arabia. The aim of this study is to assess the effect and types of violence against primary healthcare workers and possible association with work experience of health workers. Moreover, this study investigated the response of the health workers and their knowledge regarding polices and regulations of Ministry of Health in Saudi Arabia..

**Methods:** This is a cross-sectional study design targeted all healthcare workers who work in primary healthcare centers or outpatient units of governmental hospitals, during the proposed study period from April – May 2022. The sample was stratified according to the percentage of each profession in the statistics of Ministry of Health. A structured online questionnaire was sent to healthcare workers in order to collect data about study variables. The descriptive statistics such as frequencies, percentages were calculated to summarize nominal and ordinal data, while mean, median and standard deviation or the range to describe numerical variables. Chi-squared test was applied to evaluate the association between the determinants and the outcome variables at the level of 0.05 of significance.

**Results:** A total of 288 health workers in primary health centers were recruited in this study. The majority of the health workers were females. About 23% of the health workers were doctors, while 45% were nurses and the rest were distributed over other health professions. The prevalence of workplace violence among health workers was 46.7%, of them about 90% reported verbal violence, 34.3% have been intimidated, while 3% reported physical violence. Regarding the reporting system, 40.2% of the health workers said their institute has reporting system of violence, but 27.3% said they don't know. Furthermore, among those

who reported the presence of the system, 47.3% did not know how to use this reporting system. The outdoor workplace was associated with higher percentage of physical violence than indoor workplace.

**Conclusions:** The prevalence of violence among healthcare workers is high as a slightly less than a half of the workers was exposed to some sort of violence, particularly verbal violence. Regarding the reporting system, more than one quarter of the health workers did not know if their institute has a reporting system of violence or not.

**Keywords:** Violence, Health system. Awareness, Burnout, Saudi

## Introduction

Healthcare workers (HCW) are known as those who provide care for ill people either directly as physicians, pharmacists, laboratory technicians and nurses or indirectly as administrative or general service providers [1]. Many health hazards present in the work environment of health workers including biological, chemical, physical, musculoskeletal, work-place violence and psychological hazards [2, 3]. Hence, work environment of health workers should follow strict safety policies, procedures and practices [4].

Provision of safety work climate and safety practices played an important role in reduction of work-related injuries and reduced burnout among health workers [5-8]. There are limited number of studies focused on the violence against health workers in Saudi Arabia. Moreover, studied conducted in Saudi Arabia focused on either subgroup of health workers such as nurses or assessed certain type of violence [9-11]. There is a limited data about awareness of healthcare workers about the regulations that concern violence against healthcare workers in Saudi Arabia. The aim of this study is to assess the effect and types of violence against primary healthcare workers and possible association with work experience of health workers. Moreover, this study investigated the response of the health workers and their knowledge regarding polices and regulations of Ministry of Health in Saudi Arabia.

## Methods

This is a cross-sectional study design targeted all healthcare workers who work in primary healthcare centers or outpatient units of governmental hospitals, during the proposed study period from April – May

2022. The sample was stratified according to the percentage of each profession in the statistics of Ministry of Health. A structured online questionnaire was sent to healthcare workers in order to collect data about study variables. The validated version of a questionnaire was obtained with Cronbach's alpha  $>0.80$  for violence against healthcare workers. The questionnaire is self-administered and consists of three sections, section A contains questions about sociodemographic and workplace-related factors of the healthcare workers. Section B contains question about prevalence and frequency of violence. Section C contains questions related to reporting system in workplace. the questionnaire were distributed to the mobile phones of HCWs through online link.

Data were entered and analyzed by Statistical Package of Social Science SPSS, version 26. The descriptive statistics such as frequencies, percentages were calculated to summarize nominal and ordinal data, while mean, median and standard deviation or the range to describe numerical variables. Chi-squared test was applied to evaluate the association between the determinants and the outcome variables at the level of 0.05 of significance.

## Results

A total of 288 health workers in primary health centers were recruited in this study. The majority of the health workers were females (70.8%) and 78.3% were usually working with both male and female patients. About 23% of the health workers were doctors, while 45% were nurses. The vast majority of health workers were Saudis working in the morning shift usually with  $>10$  coworkers. About 75.9% of the health workers

have  $\geq 6$  years of work experience while only 2.8% have less than one-year experience (table 1).

**Table (1): Demographic and work characteristics of the respondents (n = 288)**

Characteristics	Frequency	Percent (%)
<b>Gender</b>		
Male	84	29.2
Female	204	70.8
<b>Marital status</b>		
Single	40	13.9
Married	237	82.2
Divorced	11	3.9
<b>Occupation</b>		
Doctor	67	23.3
Nurse	130	45.0
Pharmacist	14	5.0
Technician	34	11.7
Clerk	27	9.4
Other	16	5.6
<b>Nationality</b>		
Saudi	281	97.5
Non-Saudi	7	2.5
<b>Years of experience</b>		
Less than 1 year	8	2.8
1-5 years	62	21.4
6-10 years	110	38.1
More than 10 years	109	37.8
<b>Usual working shift</b>		
Morning shift	286	99.4
Evening shift	10	3.6
<b>Usual number of coworkers</b>		
1 – 5	75	26.1
6 – 10	43	15.0
> 10	170	58.9
<b>Usual patient gender</b>		
Male	29	10.0
Female	34	11.7
Both	226	78.3

The prevalence of workplace violence among health workers was 46.7%, of them about 90% reported verbal violence, 34.3% have been intimidated, while 3% reported physical violence. The vast majority of violent incidences were inside workplace in the

morning shifts. About 62% of the health workers reported that 62% of the offenders were male and 81% reported that age of offenders were 21-45 years old. Approximately, 3 quarters of the health workers reported that the violent event was by patients while 45% reported that the violence were by the companion of the patients. Regarding the reporting system, 40.2% of the health workers said their institute has reporting system of violence, but 27.3% said they don't know. Furthermore, among those who reported the presence of the system, 47.3% did not know how to use this reporting system. About 36% said that there is no encouragement to use this system in their institute, while most of them highlighted the preventable nature of the violent events (table 2).

Regarding risk factors of violence against health workers, the associations with general category of violence were not statistically significant. Only the patterns of violence showed significant associations with certain factors. The reported physical violence found to be associated significantly with location of violence, occupation of health workers, and age group of the offenders. The outside workplace was associated with higher percentage of physical violence than inside workplace. Similarly, the technicians, nurses are more susceptible to the violence than doctors and clerks. Pharmacists reported no physical violent events. Only 0.7% of health workers reported that offender age was 21-45 years old in comparison to 12.5% reported the offender age was from other age groups (table 3).

Gender, age, marital status, occupation, nationality, city and experience of health workers were not significantly associated with exposure to the workplace violence. However, some workplace characteristics were associated with violence such as availability of system for reporting violence and perceived effectiveness of the system (table 4). A prevalence of violence reported among those who said there is no reporting system for violence in the workplace (61.3%) than those reported presence of this system (41.7%). Similarly, the prevalence of violence was higher (80%) among those thought that the system is non-effective than among those who reported the effectiveness of the system (33.3%).

**Table (2): Patterns of violence against healthcare workers and their awareness about regulations**

Characteristics	Frequency	Percent (%)
<b>Did you have any kind of work place violence over the past 12 months?</b>		
Yes	135	46.7
No	151	52.5
I don't know	2	0.8
<b>What type of violence did you have?</b>		
Physical violence	4	3.0
Verbal violence	122	89.9
Intimidation	46	34.3
More than one type of violence	37	27.2
<b>When was the attack?</b>		
Morning shift	126	93.5
Evening shift	21	15.4
<b>Where did the attack happened?</b>		
Inside workplace	132	97.6
Outside workplace	5	3.6
<b>Age of offender (offender) approximately?</b>		
≤ 20 years old	10	7.1
21 – 45 years old	110	81.1
≥ 46 years old	38	27.8
<b>Gender of the offender</b>		
Male	84	62.1
Female	83	61.5
<b>The offender was</b>		
Patient	100	74.0
Colleague	9	6.5
Companion	62	45.6
Other	7	5.3
<b>Is there a system for reporting violence in your institute?</b>		
yes	44	32.5
no	54	40.2
I don't know	37	27.2
<b>Do you know how to use the system of reporting? (n=55)</b>		
Yes	23	52.7
No	21	47.3
<b>Is there encouragement to report violence event? (n=55)</b>		
Yes	21	47.3
No	16	36.4
I don't know	7	16.4

## Discussion

In Saudi Arabia, the awareness of response to violence towards healthcare workers is low despite of high prevalence rate and significant impact on occupational health either in training or working status [11]. Working in healthcare setting is frequently associated with stress, anxiety, burnout and sometimes depression. The Saudi Commission for Health Specialties provides academic and psychological support system called DAEM which ensure the help with maintain of privacy and confidentiality. They provide interactive guidance to the residents during their training stage. Additionally, DAEM conducts periodic surveys to assess the magnitude and determinants of burnout among trainees. The effectiveness of this program has not been evaluated. The stress and work load among caregivers were found to be high either in the training or in the working stages [12].

In the present study, The prevalence of workplace violence among health workers was 46.7%, of them about 90% reported verbal violence, 34.3% have been intimidated, while 3% reported physical violence. A recent review, which included 20 studies, postulated that violence influences commonly frontline caregivers such as nurses and physicians [13]. This lead to an increased prevalence of burnout among health workers peaks to the level of epidemic with more than 50% affected health workers [14-16].

In the present study, the awareness about reporting system, in case of violence, was low among healthcare workers as 40.2% of the health workers said their institute has reporting system of violence, but 27.3% said they don't know. Furthermore, among those who reported the presence of the system, 47.3% did not know how to use this reporting system.

DAEM initiative by the SCFHS and only 14.9% have ever tried to contact DAEM support program. These low awareness and utilization rates are pointing to a window of improvement in support programs of medical professionals. Improvement of DAEM initiative in terms of accessibility, feasibility, and capacity is important for promotion of occupational and psychological health of the residents. The level of emotional exhaustion is much higher than that

reported by family medicine residents recruited from Madinah city by Aldubai et al., [17]. as only 33.3% had high emotional exhaustion with mean score of  $22.5 \pm 12.8$ . Similarly, lower levels of emotional exhaustion and depersonalization were reported among orthopedic residents in different regions in Saudi Arabia with 50% and 39.4% had high emotional exhaustion and depersonalization, respectively [18].

Limitations in the present study are mainly related to a cross-sectional design, as an alternative prospective design is recommended to assess the variation in the violence status with time. In the future, a surveillance data from Ministry of Health could be used to assess the incidence and determinants of violence against healthcare workers in the training programs. Moreover, testing the appropriate methods for intervention would be conducted using data of case management from the Ministry of Health.

### Conclusions:

The prevalence of violence among healthcare workers is high as a slightly less than a half of the workers was exposed to some sort of violence, particularly verbal violence. Regarding the reporting system, more than one quarter of the health workers did not know if their institute has a reporting system of violence or not. Physical violence was significantly associated with location of violence, occupation of health workers, and age group of the offenders. Technicians and nurses were more susceptible to the violence than doctors and clerks, while pharmacists reported no physical violent events.

### Conflict of interests

The authors declared no conflict of interests

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**Table (3): Significant determinants of physical violence occurrence on health workers**

<i>Characteristics</i>	<i>Occurrence of physical violence among health workers</i>		<i>Chi-square</i>	<i>P value</i>
	<b>No</b>	<b>Yes</b>		
<i>The location of violence</i>				
<i>Inside workplace</i>	98.2%	1.8%	<b>31.9</b>	<b>0.004</b>
<i>Outside workplace</i>	50.0%	50.0%		
<i>Occupation</i>				
<i>Doctor</i>	92.9%	7.1%	<b>4.183</b>	<b>0.523</b>
<i>Nurse</i>	97.5%	2.5%		
<i>Pharmacist</i>	100.0%	0.0%		
<i>Technician</i>	100.0%	0.0%		
<i>Clerk</i>	100.0%	0.0%		
<i>other</i>	100.0%	0.0%		
<i>Offender age</i>				
<i>Offender age 21-45</i>	99.3%	0.7%	<b>12.7</b>	<b>0.005</b>
<i>Other age groups</i>	87.5%	12.5%		

**Table (4): Association between workplace characteristics and occurrence of violence**

Factors	Violence		Chi-square	P value
	No	Yes		
<b>Usual working shift</b>				
No	0.0%	100.0%	2.27	0.132
Yes	53.4%	46.6%		
<b>Usual number of coworkers</b>				
1 – 5	50.0%	50.0%	0.768	0.681
6 – 10	57.4%	42.6%		
> 10	53.3%	46.7%		
<b>Usual patient gender</b>				
Male	52.8%	47.2%	0.804	0.669
Female	59.5%	40.5%		
Both	52.1%	47.9%		
<b>Availability of system for reporting violence</b>				
Yes	58.3%	41.7%	13.35	0.001*
No	38.7%	61.3%		
I don't know	60.7%	39.3%		
<b>Use of the system</b>				
Yes	63.7%	36.3%	5.38	0.068
No	42.1%	57.9%		
I don't know	66.7%	33.3%		
<b>Encouragement to use the system</b>				
Yes	65.3%	34.7%	4.32	0.115
No	45.9%	54.1%		
I don't know	50.0%	50.0%		
<b>Training on the system</b>				
Yes	66.7%	33.3%	5.24	0.730
No	50.9%	49.1%		
I don't know	100.0%	0.0%		
<b>Effectiveness of the system</b>				
Yes	66.7%	33.3%	14.45	0.001*
No	20.0%	80.0%		
I don't know	60.7%	39.3%		

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