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Research Article

The Impact of Criminalizing Workplace Violence: A Study of Healthcare Workers in Saudi Arabia After Policy Changes.

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Abstract

Background: Violence against the healthcare workers (HCW) is a growing problem. Workplace violence (WPV) has direct impact on the HCW health and well-being which adversely affect the services provided. Our study aimsto explore the landscape of workplace violence against healthcare workers in Saudi Arabia. We will examine the situation after the Ministry of Health's (MoH) crucial declaration classifying violence against healthcare personnel as a crime.

Methods: Web-based Self-administered questionnaire sent to HCW official emails. The World Health Organization questionnaire on violence against HCWs utilized to gather data on WPV. A sufficient sample size was found to be 377 participants. As such, the final sample consisted of 377 total HCWs, with a response rate of 50%.

Results: 458 responses received. Of them, (31.0%) experienced workplace violence, with verbal violence (91.5%) domination. Gender (x2= 6.23, *p*= 0.01), ooccupation(x2= 54.94, *p*= 0.001), years of experience (x2= 11.63, *p*= 0.04), working in shifts (x2= 21.50, *p*= 0.001), have direct contact with patients (x2= 60.10, *p*= 0.001), and working mostly with children(x2= 5.41, *p*= 0.02) and or adolescents (x2= 5.65, p= 0.01) are all factors significantly associated with workplace violence.

Conclusion: Our results confirm that criminalizing violence against healthcare workers has positive impact in reducing workplace violence.

INTRODUCTION

Healthcare workers are the backbone of any medical system, and their safety is very important. Unfortunately, in Saudi Arabia, these professionals have faced a significant threat: workplace violence. This violence, encompassing both physical and psychological abuse, has demonstrably impacted their well-being and the quality of care provided. Our study aims to explore the landscape of workplace violence against healthcare workers in Saudi Arabia. We will examine the situation after the Ministry of Health's (MoH) crucial declaration classifying violence against healthcare personnel as a crime. We will then analyze the potential impact of this declaration on reporting rates, perpetrator behavior, and the overall safety climate within healthcare facilities. By understanding the pre-existing situation and the potential effects of the MoH's intervention, we can gain valuable insights into the effectiveness of legal measures in curbing workplace violence and fostering

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a safer work environment for Saudi Arabia's healthcare heroes.

MATERIALS AND METHODS

This study protocol was reviewed and approved by the Institutional Review Board (IRB) of Jeddah Health Affairs, with National Registration number NCBE-KACST, KSA: (H-02-J-002). The IRB waived the need for written informed consent (IRB Log No A01286, 30/12/2021). Participants who completed the questionnaire were considered to have given implied consent to participate in the study.

Statistical Analysis and sample size

Based on Raosoft website (http://www.raosoft.com/samplesize.html; 5% margin of error and 95% CI), a sufficient sample size was found to be 377 participants of total HCWs, with a response rate of 50%.

Data was processed using the SPSS Statistics for Windows version 25, (IBM, Corp., Armonk, N.Y., USA). Descriptive statistics, Chi-square, and logistic regression utilized to analyze the data.

RESULTS

Study sample characteristics

A total of 458 responses were received from the targeted population , representing more than 50% response rate. The demographic characteristics of the respondents are shown in Table 1. The majority (51.7%) of the respondents were within the 30-39 age group, (64.2%) female, moved from another country, city, or workplace (38%) within the last 5 years (54.6%). Almost half of the respondents are categorized as allied health professionals (47.6%), nurses (17.2%), and physicians (14.2%). Nearly half of the respondents (46.7%) have 6-15 years of working experience. Of the respondents, (28.4%) reported to be working in shifts, and (33.6%) reported working between 6pm to 7am. More than half of the respondents reported to have direct contact with patients (65.9%) and mostly children (88.4%) and/or adolescents (63.8%).

Workplace violence experience

Of the respondents, (31.6%) reported to experience workplace violence. The reported violence included verbal violence (91.5%), physical (1.4%), or both physical and verbal (7.0%). The majority (41.9%) of the respondents reported not to be worried at all about violence in workplace . (11.8%) of the respondents revealed that they are extremely worried about workplace violence. Nearly half (45.8%) of the respondents reported to be attacked by patients. The rest either reported to be attacked by patients' relatives (20.8%), supervisors (20.8%), and staff members (12.5%).

In response to workplace violence Figure 1. presents respondents workplace violence experience. More than half (53.4 %) took no action and pretend it never happened. However, (47.6%) reported it to senior staff and colleagues, (21.2%) completed formal incidents report, (8.1%) sought counseling, while (2.9%) reported to trying to defend themselves physically.

Chi-square test for experienced workplace violence

To examine the relationship between experienced workplace violence and the categorical variables, chi -square independence test got utilized. Chi-square test showed that numbers of factors are not statistically associated with experienced workplace violence. For instance, age ($x^2 = 6.60$, $p = 0.08$); moved to this workplace ($x^2 = 0.78$, $p = 0.37$); are all factors found to be statistically not associated with experienced workplace violence.

On the other hand, it has been found that gender to be associated with experienced workplace violence ($x^2 = 6.3$, $p = 0.01$). Females were subjected to workplace violence significantly more than males (72.5% vs. 27.5%) . In addition, occupation was significantly associated with workplace violence ($x^2 = 57.21$, $p = 0.001$). With violence being highest for nurses (33.8%) , followed by allied health professional (28.2%), physician (16.2%), auxiliary and support staff (14.8%), and finally pharmacist (7.0%).

There is a significant difference in experienced violence according to years of work experience ($x^2 = 11.85$, $p = 0.03$). Those with 6-15 years of working experience (49.3%) reported significantly high level of workplace violence when compared to their counterparts.

This study also found a significant difference in experienced workplace violence based on working in shifts ($x^2 = 21.31$, $p = 0.001$). Those who are not working in shifts experience more violence when compared to their counterparts (57% vs. 43%). Moreover, our results revealed that respondents working between 6 pm to 7 am reported significantly less exposure to workplace violence ($x^2 = 15.06$, $p = 0.001$) when compared to others working during the day (46.5% vs. 53.5%).

Also, being in direct contact with patients found to have a significant association with experienced workplace violence ($x^2 = 59.60$, $p = 0.001$). T hose with direct contact with patients exposed more to workplace violence when compared to their counterparts (91.5% vs. 8.5%).

Providing care to children and adolescent found to be associated with experienced workplace violence. Working mostly with children ($x^2 = 5.31$, $p = 0.02$) and or adolescents ($x^2 = 5.52$, $p = 0.01$) put care providers at risk of being victim of workplace violence.

Predictors of workplace violence

The model of predicting workplace violence produces a non-significant Hosmer and Lemeshow test result of

Table 1: Descriptive statistics of overall background characteristics among a sample (n = 458) of healthcare workers from Jed-dah, 2022.

		Overall	
		n	%
Age			
	20-29	72	15.7
	30-39	237	51.7
	40-49	118	25.8
	50 and over	31	6.8
Gender			
	Male	164	35.8
	Female	294	64.2
Did you move from another country, city, or workplace?			
	Yes	174	38.0
	No	284	62.0
When did you move?			
	11 months or less	30	17.2
	1-5 years	95	54.6
	6 years or more	49	28.2
Professional group			
	Physician	65	14.2
	Nurse	79	17.2
	Pharmacist	21	4.6
	Auxiliary and support staff	75	16.4
	Allied health professionals	218	47.6

x 2 (8) = 7.98, p =0.44. Also, the model of predicting workplace violence produces overall 80.1 % of accuracy to classify cases.

Based on the model of logistic regression several factors found to predict the healthcare workers being subject to workplace violence. Table 2. presents the predictors of workplace violence.

The odds to be subject to workplace violence based on the professional categorization is 2.54 times higher for nurses (OR: 2.54; 95% CI: 1.12–5.74), and 3.86 times higher for pharmacists (OR: 3.86; 95% CI: 1.08–13.8) compared to physicians given the other variables in the model are held constant.

In addition, the odds to be subject to workplace violence based on the years of experience is 8.6 times higher for workers with 1-5 years' experience (OR: 8.60; 95% CI: 1.41–52.47), 6.58 times higher for those with 6-10 years of experience (OR: 6.58; 95% CI: 1.12–38.66), 6.14 times higher for those with 11-15 years of experience

(OR: 6.14; 95% CI: 1.04–36.15), and 7.60 times higher for those having more than 20 years of experience (OR: 7.60; 95% CI: 1.23–46.82) compared to those with less than 1 year of experience given the other variables in the model are held constant.

The odds to experience workplace violence based on direct contact with patients is 5.13 times higher for those not having direct contact with patients (OR: 5.13; 95% CI: 2.42–10.88) compared to those who have direct contact with patients. The odds to experience workplace violence based on the degree of worry about vio-

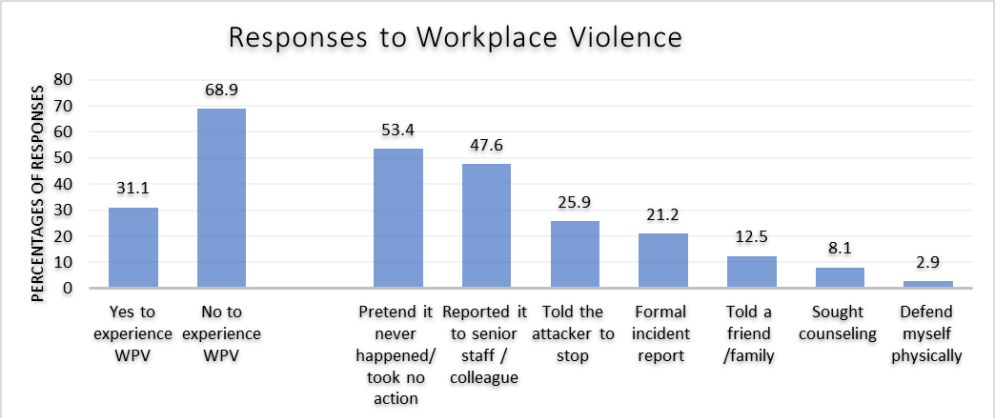

Figure 1: Respondents' workplace violence experience.

Table 2: The factors associated with experienced workplace violence.

Factors		Association with experienced workplace violence				
		nb	%	ORa	[95% CI]	P-value
Gender						
	Male [Reference]	39	27.5			
	Female	103	72.5	.768	[0.43-1.36]	0.367
Professional group						
	Physicians [Reference]	23	16.2			
	Nurses	48	33.8	2.54	[1.12-5.74]	0.025
	Pharmacist	10	7.0	3.86	[1.08-13.8]	0.037
	Auxiliary & support staff	21	14.8	1.51	[0.60-3.78]	0.375
	Allied health professional	40	28.2	0.925	[0.43-1.96]	0.840
Work experience						
	Under 1 year [Reference]	2	1.4			
	1-5 years	28	19.7	8.60	[1.41-52.47]	0.020
	6-10 years	33	23.2	6.58	[1.12-38.66]	0.037
	11-15 years	33	26.1	6.14	[1.04-36.15]	0.045
	16-20 years	20	14.1	4.30	[0.70-26.24]	0.114
	Over 20 years	22	15.5	7.60	[1.23-46.82]	0.029
Work in shifts						
	Yes [Reference]	61	43.0			
	No	81	57.0	2.04	[0.91-4.53]	0.080
Works between 6pm-7am						
	Yes	66	46.5	1.14	[0.54-2.40]	0.725
	No [Reference]	76	53.5			
Direct contact with patients						
	Yes [Reference]	130	91.5			
	No	12	8.5	5.13	[2.42-10.88]	<0.001
Works mostly with						
Children						
	Yes	56	39.4	0.96	[0.49-1.87]	0.910
	No [Reference]	90	28.6			
Adolescents						
	Yes	74	52.1	1.06	[0.55-2.02]	0.859
	No [Reference]	127	40.3			
Worry about workplace violence						
	Not worried at all	26	18.3	0.06	[0.02-0.16]	<0.001
	Slightly worried	21	14.8	0.11	[0.04-0.29]	<0.001
	Neutral	30	21.1	0.23	[0.09-0.57]	0.002
	Very worried	23	16.2	0.46	[0.16-1.33]	0.154
	Extremely worried [Reference]	42	29.6			

a Simple binary logistic regression was fitted. Odds ratios (OR) are reported.
b Number of (Yes) responses to have experienced workplace violence.

lence in workplace are decreased by 0.06 times (OR: 0.06; 95% CI: 0.02–0.16) among those who are not worried at all, decreased by 0.11 times (OR: 0.11; 95% CI: 0.04–0.29) among those who are slightly worried, decreased by 0.23 times (OR: 0.23; 95% CI: 0.09–0.57) among those who are neutral, and decreased by 0.46 times (OR: 0.46; 95% CI: 0.16–1.33) among those who are very worried compared to those who are extremely worried about workplace violence given the other variables in the model are held constant.

DISCUSSION

This is one of the very few studies on workplace violence against healthcare workers which has been conducted in the Western province of Saudi Arabia, involving 6 general hospitals and 13 primary care centres, and examining the situation after (MoH) declaration classifying violence against healthcare personnel as a crime.

Also, being in direct contact with patients found to have a significant association with experienced workplace violence. T hose with direct contact with patients exposed more to workplace violence when compared to their counterparts. Moreover, providing care to chil-

dren and adolescent found to be associated with experienced workplace violence. Working mostly with children and or adolescents put care providers at higher risk of being victim of workplace violence .

Interestingly enough, not having direct contact with patients increases the healthcare workers chances to be subject to workplace violence. Moreover, the degree of worry found to decrease the odds of workplace violence among healthcare workers.

Our study has number of limitations. This study was limited to the Western province of Saudi Arabia according to the local IRB jurisdiction. So, our results cannot be generalized to all healthcare workers practicing in Saudi Arabia. Our study got conducted in public hospitals and public health centers, more studies needed to investigate this problem in private hospitals. Finally, this study is collecting retrospective data on events that happened in the past, so recall bias can influence some responses.

CONCLUSION AND RECOMMENDATION

ur results confirm that criminalizing violence against healthcare workers has positive impact in reducing workplace violence. As a healthcare provider, it is part of your daily job to deal with difficult patients and or situations. Whether the reaction is justified or not, it is our responsibility to be understanding and consider the underlying reason for attackers' actions.

As a healthcare facility, efforts must be focused on improving the reporting system to help improve the workplace environment, the safety and well-being of healthcare workers, and the quality of care provided.

AUTHOR CONTRIBUTION

Author 1,2,3,4,5,6 conceived and planned the study and carried out the study in their workplace. All authors contributed to the study literature review. Authors 1,2 contributed to data analysis and interpretation of the results. 1,2 authors took the lead in writing the manuscript. All authors provided critical feedback and helped shape the research, analysis and manuscript. I certify that we have participated sufficiently in the intellectual content, conception and design of this work . All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

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DECLARATIONS

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REFERENCES

Al-Shamlan, N. A., Jayaseeli, N., Al-Shawi, M. M., & Al-Joudi, A. S. (2017). Are nurses verbally abused? A cross-sectional study of nurses at a university hospital, Eastern Province, Saudi Arabia. *Journal of family community medicine*, *24*(3), 173.

Al-Turki, N., Afify, A. A., & AlAteeq, M. (2016). Violence against health workers in Family Medicine Centers. *Journal of multidisciplinary healthcare*, 257-266.

Al Anazi, R. B., AlQahtani, S. M., Mohamad, A. E., Hammad, S. M., & Khleif, H. (2020). Violence against health-care workers in governmental health facilities in Arar City, Saudi Arabia. *The Scientific World Journal*, *2020*.

Al Khatib, O., Taha, H., Al Omari, L., Al-Sabbagh, M. Q., Al-Ani, A., Massad, F., & Berggren, V. (2023). Workplace violence against health care providers in emergency departments of public hospitals in Jordan: a cross-sectional study. *International journal of environmental research public*

health, *20*(4), 3675.

Alharthy, N., Mutairi, M., Alsahli, A., Alshehri, A., Almatrafi, A., Mahah, A., . . . Qureshi, S. (2017). Workplace violence among emergency medical services workers in Riyadh, Saudi Arabia. *Journal of Hospital Administration*, *6*(3), 26-32.

Alhusain, F., Aloqalaa, M., Alrusayyis, D., Alshehri, K., Wazzan, S., Alwelyee, N., & Nawfal, A. (2020). Workplace violence against healthcare providers in emergency departments in Saudi Arabia. *Saudi journal of emergency medicine*, *1*(1), 5-5.

Alkorashy, H. A. E., & Al Moalad, F. B. (2016). Workplace violence against nursing staff in a Saudi university hospital. *International nursing review*, *63*(2), 226-232.

Alsaleem, S. A., Alsabaani, A., Alamri, R. S., Hadi, R. A., Alkhayri, M. H., Badawi, K. K., . . . Al-Bishi, A. M. (2018). Violence towards healthcare workers: A study conducted in Abha City, Saudi Arabia. *Journal of family community medicine*, *25*(3), 188.

Alsmael, M. M., Gorab, A. H., & AlQahtani, A. M. (2020). Violence Against Healthcare Workers at Primary Care Centers in Dammam and Al Khobar, Eastern Province, Saudi Arabia, 2019. *International Journal of General Medicine*, *13*, 667.

Franz, S., Zeh, A., Schablon, A., Kuhnert, S., & Nienhaus, A. (2010). Aggression and violence against health care workers in Germany-a cross sectional retrospective survey. *BMC health services research*, *10*(1), 1-8.

Hahn, S., Zeller, A., Needham, I., Kok, G., Dassen, T., & Halfens, R. (2008). Patient and visitor violence in general hospitals: a systematic review of the literature. *Aggression violent behavior*, *13*(6), 431-441.

Harthi, M., Olayan, M., Abugad, H., & Wahab, M. A. J. E. M. h. j. (2020). Workplace violence among health-care workers in emergency departments of public hospitals in Dammam, Saudi Arabia. *26*(12), 1473-1481.

Heponiemi, T., Kouvonen, A., Virtanen, M., Vänskä, J., & Elovainio, M. (2014). The prospective effects of workplace violence on physicians' job satisfaction and turnover intentions: the buffering effect of job control. *BMC health services research*, *14*(1), 1-8.

Hills, D. J., Joyce, C. M., & Humphreys, J. S. (2011). Prevalence and prevention of workplace aggression in Australian clinical medical practice. *Australian health review*, *35*(3), 253-261.

Judy, K., & Veselik, J. (2009). Workplace violence: a survey of paediatric residents. *Occupational medicine*, *59*(7), 472-475.

Khan, M. N., Haq, Z. U., Khan, M., Wali, S., Baddia, F., Rasul, S., . . . Ramirez-Mendoza, J. Y. (2021). Prevalence and determinants of violence against health care in the metropolitan city of Peshawar: a cross sectional study. *BMC public health*, *21*(1), 1-11.

Liu, H., Zhao, S., Jiao, M., Wang, J., Peters, D. H., Qiao, H., . . . Xing, K. (2015). Extent, nature, and risk factors of workplace violence in public tertiary hospitals in China: a cross-sectional survey. *International journal of environmental research public health*, *12*(6), 6801-6817.

Majola, B., Orton, P., & Razak, A. (2018). 1351 Violence against student nurses by patients and their relatives in public hospitals in kwazulu-natal, south africa. In: BMJ Publishing Group Ltd.

Maran, D. A., Cortese, C. G., Pavanelli, P., Fornero, G., & Gianino, M. M. (2019). Gender differences in reporting workplace violence: a qualitative analysis of administrative records of violent episodes experienced by healthcare workers in a large public Italian hospital. *BMJ open*, *9*(11), e031546.

Newman, C. J., De Vries, D. H., Kanakuze, J. d. A., & Ngendahimana, G. (2011). Workplace violence and gender discrimination in Rwanda's health workforce: Increasing safety and gender equality. *Human resources for health*, *9*(1), 1-13.

Pompeii, L. A., Schoenfisch, A. L., Lipscomb, H. J., Dement, J. M., Smith, C. D., & Upadhyaya, M. (2015). Physical assault, physical threat, and verbal abuse perpetrated against hospital workers by patients or visitors in six US hospitals. *American journal of industrial medicine.*, *58*(11), 1194-1204.

Quine, L. (2001). Workplace bullying in nurses. *Journal of health psychology*, *6*(1), 73-84.

Sari, H., Yildiz, İ., Çağla Baloğlu, S., Özel, M., & Tekalp, R. J. P. o. (2023). The frequency of workplace violence against healthcare workers and affecting factors. *18*(7), e0289363.

Shaikh, S., Baig, L. A., Hashmi, I., Khan, M., Jamali, S., Khan, M. N., . . . Yasir, I. (2020). The magnitude and determinants of violence against health-

care workers in Pakistan. *BMJ global health*, *5*(4), e002112.

Sherman, M. F., Gershon, R. R., Samar, S. M., Pearson, J. M., Canton, A. N., & Damsky, M. R. (2008). Safety factors predictive of job satisfaction and job retention among home healthcare aides. *Journal of Occupational Environmental Medicine*, 1430-1441.

Shi, L., Li, G., Hao, J., Wang, W., Chen, W., Liu, S., . . . Fan, L. J. I. J. o. N. S. (2020). Psychological depletion in physicians and nurses exposed to workplace violence: A cross-sectional study using propensity score analysis. *103*, 103493.

Stanko, E. A. (2002). Knowledge about the impact of violence at work in the health sector. *State of Art*, 49-60.

Sun, P., Zhang, X., Sun, Y., Ma, H., Jiao, M., Xing, K., . . . Wu, Q. (2017). Workplace violence against health care workers in North Chinese hospitals: a cross-sectional survey. *International journal of environmental research public health*, *14*(1), 96.

Towhari, A. A., Bugis, B. A. J. R. m., & policy, h. (2020). The awareness of violence reporting system among healthcare providers and the impact of new ministry of health violence penalties in Saudi Arabia. 2057-2065.

Waleed M, A., & Saad A, A. (2012). Violence exposure among health care professionals in Saudi public hospitals. A preliminary investigation. *Saudi Medical Journal*, 76-82.

World Health Organization. (2003). Joint programme on workplace violence in the health sector. *Geneva: World Health Organization*.

Yenealem, D. G., Woldegebriel, M. K., Olana, A. T., & Mekonnen, T. H. (2019). Violence at work: determinants & prevalence among health care workers, northwest Ethiopia: an institutional based cross sectional study. *Annals of occupational environmental medicine*, *31*(1), 1-7.