



# International Journal of Advanced Community Medicine

E-ISSN: 2616-3594

P-ISSN: 2616-3586

[www.comedjournal.com](http://www.comedjournal.com)

IJACM 2020; 3(2): 46-52

Received: 22-04-2020

Accepted: 23-05-2020

**Ola Alalmi**

Family and Community  
Medicine Department, Prince  
Sultan Military Medical City,  
Riyadh, Saudi Arabia

**Mostafa Kofi**

Family and Community  
Medicine Department, Prince  
Sultan Military Medical City,  
Riyadh, Saudi Arabia

**Corresponding Author:**

**Ola Alalmi**

Family and Community  
Medicine Department, Prince  
Sultan Military Medical City,  
Riyadh, Saudi Arabia

## Awareness and use of policies and procedures to report workplace violence against primary health care physicians

**Ola Alalmi and Mostafa Kofi**

DOI: <https://doi.org/10.33545/comed.2020.v3.i2a.150>

### Abstract

**Introduction:** Primary Health Care (PHC) physicians are prone to workplace violence since they are the front line in the health system. Few studies examined workplace violence against PHC workers in Saudi Arabia. This study aimed to assess the prevalence and PHC physician's awareness about policies/procedures for reporting violence and to establish the sociodemographic and workplace characteristics associated with violence.

**Methods:** A cross-sectional study included 154 PHC physicians in 11 PHC centers in Riyadh during January to March 2018. A structured questionnaire was used to examine the frequency, awareness of policies/procedures, type of assailants, reaction toward violence attack and reasons for not reporting violence. In addition, sociodemographic data and workplace characteristics of participants.

**Results:** A total of 76 (49.4%) of PHC physicians exposed to violence in the past 12 months. This included verbal violence 64 (84.2%), racial harassment 14 (18.4%), bullied or mobbed 6 (7.9%), physical violence 2 (2.6%) and sexual violence 2 (2.6%). Of all participants, 98 (63.6%) knew about policies/procedures for reporting violence, while the half read it and knew how to use it 53 (34.4%), 56 (36.4%) respectively. Twenty-four (31.6%) completed an incident report among participants who were exposed to violence, 24 (31.6%) report it to senior staff and 23 (30.3%) told the person to stop. A statistical significance was found of exposure to violence with job category, consultants (75%).

**Conclusion:** Violence against PHC physicians is a significant problem. The high frequency of violence and limited awareness about policies-procedures for reporting demonstrate defect in safety measures awareness. More safety training activities and educational sessions are needed for increasing awareness of violence reporting system. Strict policies also needed to limit PHC physician's exposure to violence.

**Keywords:** primary health care physicians, workplace violence, primary health care, violence, Saudi Arabia

### Introduction

Violence is one of the serious issues in healthcare settings worldwide. All healthcare workers are at risk to experience workplace violence <sup>[1]</sup>. While primary healthcare workers are considered the first line of medical care they are more prone to violence than other healthcare workers <sup>[2]</sup>. In order to limit workplace violence the healthcare system should have good management along with well-established protective measures, preventive strategies, and public education.

Violence in literature is defined by the World Health Organization as "The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either result in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation" <sup>[3]</sup>. Workplace violence was also defined by the National Institute for Occupational Safety and Health of the US Centers for Disease Control and Prevention as "violent acts (including physical assault and threats of assault) directed toward persons at work or on duty" <sup>[4]</sup>.

The National Institute of Occupational Safety and Health explained with examples of several types of workplace violence. It could be threats which is "expressions of intent to cause harm, including verbal threats, threatening body language, and written threats" <sup>[4]</sup>. Physical assaults could be in the form of slapping, beating or rape, or by using weapons such as knives or firearms <sup>[4]</sup>.

Awareness of hospital policy, physicians' and patients' rights and responsibilities is important to limit violence. During the past years, the prevalence of violence among

healthcare workers in Saudi Arabia have been increased [5, 6].

Worldwide there are several studies representing workplace violence prevalence, types, or causes. Done on various healthcare workers such as primary health care physicians, emergency department physicians or other hospital physicians also studies involved nurses in the majority of the departments, with different methodology and period. Indeed, these differences make rates comparison difficult.

A nationwide study in Germany 2015, done on 831 primary care physicians showed that 73% of the physicians experienced aggressive behavior in the past 12 months. While severe aggression was experienced by 11% of the physicians in the past 12 months and 23% experienced aggression during the entire career [7]. In 2016 a multicenter cross-sectional study covering all primary health care centers with all medical and non-medical staff in Madrid, 48.4% of family doctors reported assaults which is the highest percentage in comparison to all other staff. In describing the aggressor, 56.8% were men and 67.8% of the conflict situations were by patients and the rest by an accompanying person. The study represents that insult was the most common type in aggression 75.2%, and 4.7% is physical assault. Different reasons for incidents were reported, 36.3% was dissatisfaction with the provided care, 17% was waiting time and 12.9% was pharmacy prescription [8].

Another study was conducted in England, Elston *et al.* 2016. To assess violence and its effect by gender, by two methods a postal survey of 1300 General Practitioner (GPs) and in-depth interviews with 26 General Practitioner who experienced violence. Around 80% of GPs reported violence incident from patients or their relatives with no statistically significant gender difference. Verbal abuse was shown in male GPs by 74% while in female GPs 78%, while physical abuse in male GPs was 13% and in female GPs 7% with a p-value < 0.02. Male GPs had more threat of harm with a p-value < 0.001, while female GPs were more afraid of becoming a victim of violence. In 82% of the physical assault, the assailants were males, but it differs among GPs gender. For male GPs, 89% were male assailants and 56% were female assailants [9].

Family physicians are experiencing abusive encounters in Canada, Miedema *et al.* 2010. Almost all participants 98% have experienced at least one abusive encounter during their career. Abusive encounters were divided into mild, minor and severe. Verbal anger is an example of minor abuse, physical aggression as major abuse while assault causing injury is a severe abuse, it showed that 97.9% of respondent had at least one minor abuse, 75.1% reported at least one major abuse and 39.2% had at least one severe abuse during their career [10].

In the Asian region, a recently published study done in Pakistan, in 2017. It involved 769 primary healthcare physicians with 68% response rate. The majority of the respondent 85% experienced mild events, 62% experienced moderate events and 38% experienced severe events. Most of the respondent experienced more than one form of violence during the past 12 months and verbal abuse was the most frequent type 85.1% [11]. In 2015, a study conducted in China for assessing physical violence against general practitioners and nurses. Included 442 general practitioners and 398 nurses, it represented that 12.6% of them reported exposing to physical violence in the previous 12 months. Patient's relatives were the main attackers 62.3% followed

by the patients 22.6%, and 62.3% of the attacks were by knives and sticks. From all respondents, 47.4% responded that their workplace does not have procedures for reporting violence, and when the reporting system was available 58.4% of respondents knew how to use it. Approximately half of respondent 54.6% replied that there is no encouragement for reporting violence, while 37.3% replied they received training in dealing with violence and aggression [12].

In the Arabic region, several studies were done by physicians and nurses in primary care and other specialties. A published study in 2012 in Palestine, included 271 nurses and physicians, 80.4% of respondent report experiencing violence at their workplace in the previous 12 months. Physical assaults were 20.8% and non-physical assaults were 59.6%. Regarding policies/procedures for reporting, 60% of respondent reported there are no procedures for reporting and no encouragement for reporting violence and only 13% reported receiving training in safety measures and dealing with violence [13]. On the other hand, a study among nurses in Egypt showed that a statistical significance of male nurses exposed to violence was more than the female nurses with p-value = 0.0003. About one-third of nurses reported there is a system for reporting and an equal number reported not. While only 30.1% of nurses knew how to use the system of reporting violence [14].

Few studies were conducted in Saudi Arabia to examine workplace violence among primary health care physicians. A cross-sectional study included 270 healthcare workers in 12 family medicine centers in Riyadh, in 2014. From the total participants, 123 (45.6%) reported exposure to workplace violence in the past 12 months. Doctors and nurses were less experiencing violence than other healthcare workers in family medicine centers. The most common type of violence experienced was verbal 94.3%, and the majority of reactions toward violent event were do nothing (48%), active reporting/reaction (38.2%) and report it to a supervisor (30.9%). A significant association was shown of workplace violence with working multiple shifts and environmental encouragement for reporting violence with p value = <0.001 and 0.006 respectively [5]. In Al-Hassa, a study includes 1091 primary healthcare workers and found that 28% reported exposure to violence in the past 12 months. The most form of violence experienced was emotional 92.1% then physical 7.9% [15].

### Aims and Objectives

The aim of the study is raising awareness about policies and procedures controlling violence against primary health care (PHC) physicians in Family and Community Centers at Prince Sultan Medical Military City, Riyadh.

Specific objectives include assessing awareness of PHC physicians about hospital policies and procedures against violence. Assess the practices of PHC physicians in following the procedures and policies against violence. Describe workplace characteristics. Also, identify the frequencies and types of violence. Describe the responses to violence and reasons of not following policies and procedures against violence.

### Methods

The study was in the form of a descriptive cross-sectional design. Conducted in eleven Primary Health Care Centers in Prince Sultan Medical Military City, which is in Riyadh at the center of Saudi Arabia. The populations included were Primary Health Care Physicians who worked at Prince

Sultan Medical Military City for one year and more, who worked less than one year were excluded.

The sample size was calculated by using [www.surveysystem.com](http://www.surveysystem.com) with considering confidence level of 95 and confidence interval of 5, total population approximately 270. The sample size was 159 and by adding 10% of non-response or missing data, ended with a sample size of 174. Data was collected by two methods self-administered questionnaire and online monkey survey. From January to March 2018. By using random sampling technique.

**Data collection:** The questionnaire was formed by the researcher and supervisor and by reviewing the International Labor Office/International Council of Nurses/WHO/Public Services international Questionnaire [16]. It contains two parts, the first is sociodemographic data of participants (age, gender, marital status, nationality, job position and number of years in practice). The second part contained questions about workplace characteristics and physician’s awareness about policies/procedures against violence in their workplace. The questionnaire was reviewed for validation by three expert’s consultants in Family Medicine. A pilot study was done among 20 primary healthcare physicians to assess understanding of questions and feasibility of questionnaire.

**Statistical procedure:** All categorical variables were presented as frequencies and the continuous variables as a mean and standard deviation. The frequency of violence was measured by dividing the number of physicians who answered yes to “During past 12 months have you been exposed to any violence” by the total number of physicians who answered the question. Appropriate statistics were used for categorical and continuous data, by chi-square and student t-Test. A p-value of <0.05 is considered significant for all tests. SPSS Statistical Package for the Social Sciences software, version 20 was used for the statistical analysis.

**Results**

A total of 154 PHC physicians were included in the current study with response rate of (84%). The sociodemographic data of participants are shown in table 1. The majority of PHC physicians 63.6% reported that they are aware about the policies and procedures for reporting violence. Table 2 shows a comparison between participants who were aware about policies and procedures and who were not aware. Among them consultants (65.6%), senior registrars (72.7%), and registrars (92.8%) were showing more awareness about policies and procedures (p=0.001). Non Saudi PHC physicians were significantly aware about policies and procedures for reporting violence 83% with statistical

significance (p=0.001). No differences between male and female participants in the awareness.

Different resources about policies and procedures for reporting were available the majority were center in-charge (46.1%) then colleagues (43.4%). Others were quality improvement lecture, other hospital staff and hospital website.

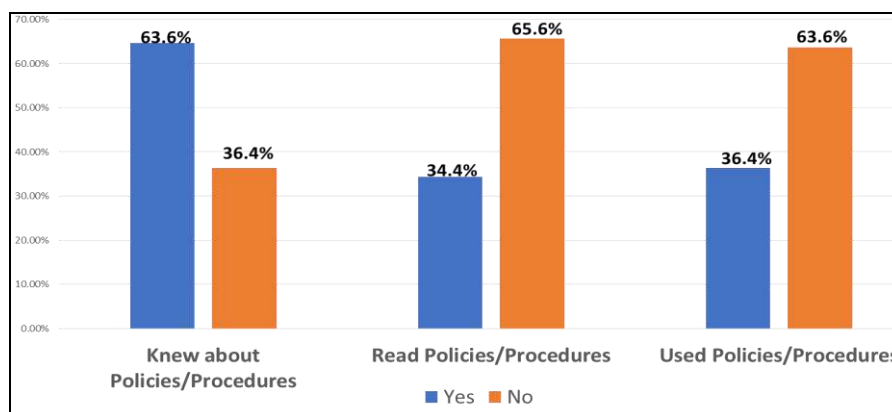
Among the participants 78 (50.6%) experienced violence at work place during past 12 months of the study. Verbal violence was the most reported pattern (84.2). Other least patterns were racial harassment, bullying, physical and sexual violence as shown in figure 4. The assailants were mostly the patients 58 (76.3%), and relatives of the patient’s 28 (36.8%).

Certain responses were taken by PHC physicians who experienced violence during the attacks. The majority of the responses was completing an incident report, reports it to senior staff and told the violator to stop (31.6%, 31.6% and 30.3%) respectively. While other responses were taken after the violent attacks, the most reported was told a colleague (9.3%), and a friend or family member (7.9%).

Some barriers of non-reporting a violent attack were faced by participants who experienced violence. They included useless (32.9%), it was not important (21.1%), did not know how to report (15.8%), afraid of negative consequence (11.8%), felt ashamed (6.6%) and felt guilty (2.6%).

**Table 1:** Sociodemographic Data for Primary Healthcare Physicians

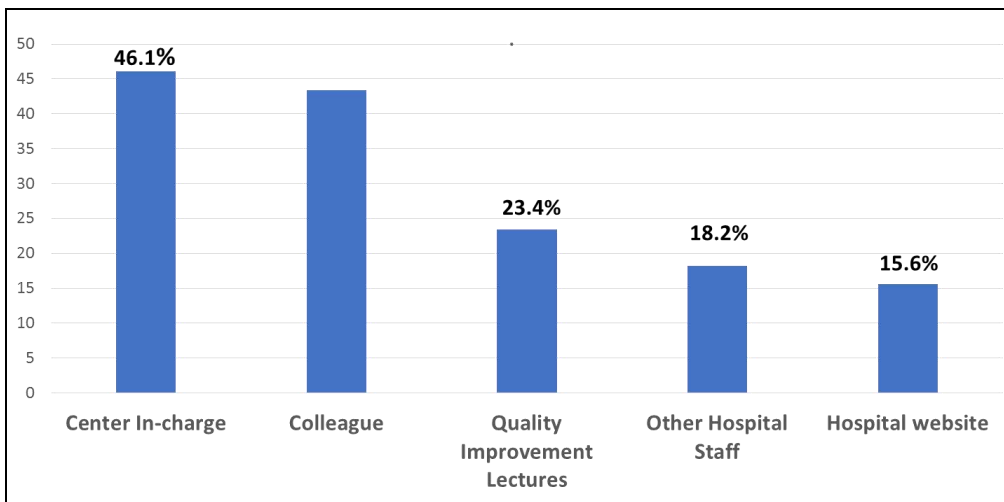
Variable	Number	Percentage
Gender		
Male	80/154	51.9
Female	74/154	48.1
Marital Status		
Single	39/154	25.3
Married	112/154	72.7
Divorced	2/154	1.3
Widowed	1/154	0.6
Nationality		
Saudi	113/154	73.4
Non-Saudi	41/154	26.6
Job Title		
Consultant	32/154	20.8
Senior Registrar	22/154	14.3
Registrar	28/154	18.2
Senior Hospital officer SHO	8/154	5.2
Senior Resident	40/154	26.0
Junior Resident	24/154	15.6
Variable	Mean	Standard Deviation
Age	34.73	9.034
Years of practice	9.16	8.061



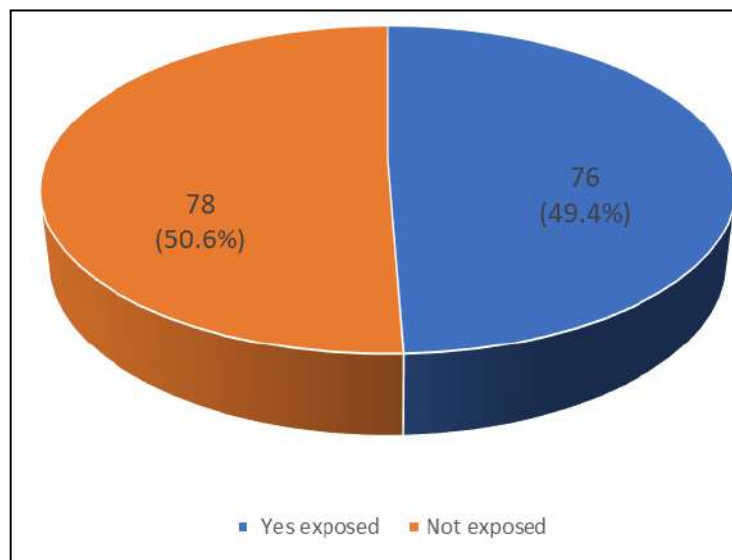
**Fig 1:** Primary HealthCare Physicians Awareness of Policies/Procedures for Reporting Violence

**Table 2:** Sociodemographic Data of Primary Healthcare Physicians According to Awareness of Policies and Procedures for Reporting Violence

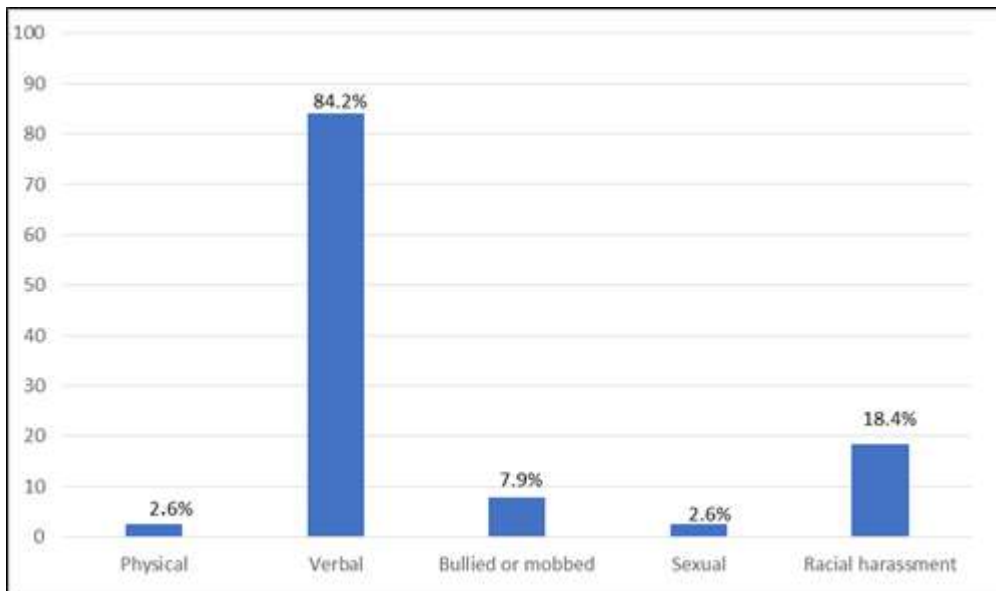
Variable		Aware of policies and procedures		Not aware of policies/procedures		P value
		N	%	N	%	
Gender	Male	51	63.7	29	36.3	0.976
	Female	47	63.5	27	36.5	
Nationality	Saudi	63	55.7	50	44.3	0.001*
	Non Saudi	35	85.4	6	14.6	
Job Title	Consultant	21	65.6	11	34.4	0.001*
	Senior Registrar	16	72.7	6	27.3	
	Registrar	26	92.8	2	7.2	
	SHO	5	62.5	3	37.5	
	Senior Resident	17	42.5	23	57.5	
	Junior Resident	13	54	11	46	
Age	Mean + SD	36.05+ 9.470		32.43+ 7.769		0.153
Years of Practice	Mean + SD	10.63 +8.439		6.59 +6.674		0.054



**Fig 2:** Primary healthcare Physicians Resources of Policies/procedures for Reporting Violence



**Fig 3:** Frequency of Primary Health Care Physicians Exposure to Workplace Violence in the past 12 months



**Fig 4:** Patterns of Violence experienced by Primary Health Care Physicians

**Table (3):** Response of Primary Health Care Physicians experienced violence to the attack(s)

Response During attack	Number	Percentage
Completed an incident report	24/76	31.6
Reported it to senior staff	24/76	31.6
Told the person to stop	23/76	30.3
Took no action	17/76	22.4
Tried to defend myself	14/76	18.4
Sought help from Hospital	14/76	18.4
Security	6/76	7.9
Tried to pretend it never happened	7/76	9.3
Response After attack	6/76	7.9
Told a colleague	4/76	5.3
Told friends/family	3/76	3.9
Sought counseling	2/76	2.6
Request transfer to other position		
Sought legal advice		

**Table (4):** Barriers of Not Reporting or Telling about an Incident

Barriers	Number	Percentage
Useless	25/76	32.9
It was not important	16/76	21.1
Did not know how to report it	12/76	15.8
Afraid of negative consequences	9/76	11.8
Felt ashamed	5/76	6.6
Felt guilty	2/76	2.6

**Discussion:** Primary health care services are considered the front line in providing health services in Saudi Arabia. According to that primary health care physicians are more prone to deal with patient’s aggression and violence. Lack of studies done among primary health care physicians in Saudi Arabia, but limited studies were done on primary healthcare workers or physicians working in other departments. Comparison to previous local and international studies is difficult due to using different violence definitions, methodology and type of healthcare workers included which is the major difference.

The current study showed that 49.4% of primary health care physicians exposed to violence in the past 12 months of the study in 11 primary care centers in Riyadh, Saudi Arabia.

This prevalence is higher than previous studies in Saudi Arabia, Al-Turki *et al.* (2016), reported that 46% of primary healthcare workers experienced violence during the past year of study [5]. While El-Gilany *et al.* (2010), reported that 28% of primary healthcare workers in primary healthcare centers in Al-Hassa were exposed to violence in their workplace during the past year [15]. However, another study was done among different settings included two public hospitals in Riyadh reported a higher prevalence in comparison to the current study, Algwaiz *et al.* (2010), showed that 67% of healthcare workers faced violence in past year of the study [6].

In comparing the current study to international studies, they had a higher prevalence of violence exposure. Rincon-Del Toro *et al.* (2016), reported that 53% of primary healthcare physicians in Madrid experienced violence in the past year, [8] and in Barbados, Abed, M., *et al.* (2016) showed that 63% of primary healthcare physicians exposed to violence [17]. A higher prevalence was shown in Germany 73% of primary healthcare physicians reported exposure to violence in the past 12 months of the study [7]. These differences from our current study may be related to the availability of hospital security more in our military hospital which may lead to less exposure to violence or the tendency to report is higher in the other areas.

A comparative study of aggression among healthcare workers in primary care and hospital care showed that primary care health workers are more prone to face aggression than in hospital care (63.9%, 35.5% respectively). In primary care settings mostly happened in the consultation room but in hospital care mainly in the emergency department [2].

The current study examined different patterns of violence, verbal abuse 64 (84.2%), racial harassment 14 (18.4%), bullied or mobbed 6 (7.9%), physical abuse 2 (2.6%) and sexual abuse 2 (2.6%). However, verbal abuse is considered that the most frequent pattern of violence experienced by physicians. Other studies showed a comparable frequency of exposure to verbal abuse among primary care physicians, In Pakistan, 85% of primary care physicians faced verbal abuse [11]. And 60% of verbal violence was reported in Barbados [17]. While in Australia was less frequent, 15% of general

practitioner reported verbal violence<sup>[18]</sup>. On the other hand, nurses in a university hospital in Khobar reported that 30.7% of nurses faced verbal violence in the past year of the study<sup>[19]</sup>.

In departments other than primary care, such as emergency department are considered the higher risk of exposure to violence. Bayram *et al.* (2017), showed that insults 94.5% and threats 76.4% were the most frequent violence experienced in emergency departments in Turkey<sup>[20]</sup>. Which is an overall a bit higher than current study.

Among general practitioners and nurses in Chinese Township hospitals examining exposure to physical violence, showed 12.6% reported exposure to it in the past 12 months of study<sup>[12]</sup>. Which is higher than reported in current study 2.6% only. Township hospitals locations in rural area makes it a risk for exposure of the physicians to more physical violence and reporting violence in psychological events is more protective factor than waiting for physical violence to happen<sup>[12]</sup>. Physician's awareness about policies/procedures for reporting workplace violence in current study is 63.6% of participants aware about it. Which is comparable to Al-Turki *et al.* (2016), done among similar population in Riyadh, and reported 58.8% of primary care workers were aware about policies /procedures<sup>[5]</sup>. While in Palestine, 60% of physicians and nurses were not aware about availability of procedures for reporting violence. Which is related to weak Ministry of Health violence prevention policies in Palestine<sup>[13]</sup>. Primary care physicians in China were more aware of using procedures for reporting violence in comparison to current study (58.4% and 36.4% respectively)<sup>[12]</sup>. In current study, it could be related to receiving policies/procedures of reporting violence mainly from supervisor/center in charge and colleague.

In the current study, there is no significant association between exposure to violence or being a violence victim and sociodemographic data except for job position/category. Consultants (75%) showed significant exposure to violence and this could be related to that they are dealing with complicated cases, emergency situations, and more facing problems. Other studies included job positions in general for all health workers in primary care settings which is not comparable with current study.<sup>[8, 12]</sup>

Gender differences in exposure to violence are not significant in current study, approximately 50% of female and male primary care physicians exposed to violence. On the other hand, some studies reported more female exposure to violence 56% and 84% than current study which included all primary care workers and could be due to higher number of female employee in primary care centers<sup>[5, 8]</sup>. Other studies have reported that male healthcare workers were more experiencing violence, especially physical violence in emergency departments<sup>[13, 21, 22]</sup>.

Physicians who worked in evening shifts (from 4 p.m. to 11 p.m.) were more exposed to violence 56.5% in the current study. Which is similar to several studies locally and in other countries, and could relate to less security at evening shifts, less staff availability both could be risk factors for facing violence<sup>[5, 14, 22, 23]</sup>.

Other workplace characteristics that were significantly linked to violence in the current study included encouraged for reporting violence by colleague, and preference of physicians to report violence. Fifty-two percent of participants who reported no workplace encouragement for reporting violence were exposed to violence. Participants who received encouragement by union were more reporting

exposure to violence, but who received encouragement by colleague reported higher percentage of no exposure to violence 72%. Al-Turki *et al.* (2016), reported that a statistical significance was found of exposure to violence with presence or absence of encouragement for reporting violence with p-value = 0.0006<sup>[5]</sup>.

Patients and patient's relatives were found as the more frequent assailants in current study, also found in several studies in Saudi Arabia, Egypt, Palestine, Germany, and other countries.<sup>[5-7, 14, 17, 21]</sup> This is more explained by that healthcare services are mainly provided for patients.

Several reactions were taken toward violent events, most frequent responses found in current study included completing an incident report, report to senior staff and told the person to stop. Other studies reported similar frequent responses to violence among primary care physicians or workers. Al-Turki *et al.* (2016), reported do nothing, active reporting and report to senior staff were more frequent<sup>[5]</sup>. Trying to defend self physically, told the person to stop or telling a colleague were the most frequent reaction found among primary care workers in China<sup>[12]</sup>. In Pakistan, 74% of primary care physicians report it to other people<sup>[11]</sup>.

Reasons of non-reporting or telling about a violent event varied in current study and other studies. Useless, it was not important and did not know how to report were the most reasons reported in current study which could be related to lack of encouraging violence reporting. Other studies reported similar major reasons of not reporting include not an efficient reaction, fear of losing my job, useless, afraid of negative consequence and felt ashamed<sup>[5, 12]</sup>.

Healthcare workers who reported experiencing violence in few studies showed several causes linked to violence exposure. Most causes were including dissatisfaction with provided care, pharmacy prescriptions, lack of penalty for offender, misunderstanding, overcrowding, long waiting time, lack of violence prevention methods<sup>[5, 8, 21]</sup> Some reported suggestions to prevent violence events such as availability of more security in workplace, restricted entry of the public, rules for patients and relatives entering workplace, less time alone with patient and training on procedures of workplace violence<sup>[14]</sup>. Risk factor/causes of violation were not examined in current study. Other limitations are characteristics of assailants (gender, age, level of education etc.) which could be examined in future studies.

## Conclusion and Recommendations

Working in safe environment is a major goal for healthcare workers and health authorities but violence against primary care physicians is considered a significant issue. This study reveals that half of primary care physicians were exposed to violence. Verbal abuse was the most frequent pattern experienced. Patients and patient's relatives were most frequent assailants. Consultants were most prone to violence exposure.

Based on the current study findings several prevention methods are suggested such as providing safety training programs to deal with workplace violence, improve healthcare workers encouragement to report violence and ensuring strict sanctions for assailants. Further studies should examine the effectiveness of awareness programs and safety training activities to reduce rates of violence against primary healthcare workers.

## References

- Gillespie GL, Gates DM, Miller M, Howard PK. Workplace violence in healthcare settings: risk factors

- and protective strategies. *Rehabilitation nursing: the official journal of the Association of Rehabilitation Nurses*. 2010; 35(5):177-84.
2. de-San-Segundo M, Granizo JJ, Camacho I, Martinez-de-Aramayona MJ, Fernandez M, Sanchez-Uriz MA. [A comparative study of aggression towards Primary Care and Hospital Health professionals in a Madrid health area (2009-2014)]. *Semergen*. 2017; 43(2):85-90.
  3. World Health Organization. World report on violence and health 2002. Available from: [http://whqlibdoc.who.int/publications/2002/9241545615\\_eng.pdf?ua=1](http://whqlibdoc.who.int/publications/2002/9241545615_eng.pdf?ua=1).
  4. The National Institute for Occupational Safety and Health. Violence Occupational Hazards in Hospitals 2002, April [cited 2018 21/6]. Available from: <https://www.cdc.gov/niosh/docs/2002-101/>.
  5. Al-Turki N, Afify AA, AlAteeq M. Violence against health workers in Family Medicine Centers. *Journal of multidisciplinary healthcare*. 2016; 9:257-66.
  6. Algaiz WM, Alghanim SA. Violence exposure among health care professionals in Saudi public hospitals. A preliminary investigation. *Saudi medical journal*. 2012; 33(1):76-82.
  7. Vorderwulbecke F, Feistle M, Mehring M, Schneider A, Linde K. Aggression and violence against primary care physicians-a nationwide questionnaire survey. *Dtsch Arztebl Int*. 2015; 112(10):159-65.
  8. Rincon-Del Toro T, Villanueva-Guerra A, Rodriguez-Barrientos R, Polentinos-Castro E, Torijano-Castillo MJ, de Castro-Monteiro E, *et al*. [Aggressions towards Primary Health Care Workers in Madrid, Spain, 2011-2012]. *Revista espanola de salud publica*. 2016; 90:e1-e12.
  9. Elston MA, Gabe J. Violence in general practice: a gendered risk? *Sociology of health & illness*. 2016; 38(3):426-41.
  10. Miedema B, Hamilton R, Lambert-Lanning A, Tatemichi SR, Lemire F, Manca D, *et al*. Prevalence of abusive encounters in the workplace of family physicians: a minor, major, or severe problem? *Canadian family physician Medecin de famille canadien*. 2010; 56(3):e101-8.
  11. Ahmed F, Khizar Memon M, Memon S. Violence against doctors, a serious concern for healthcare organizations to ponder about. *Annals of medicine and surgery* (2012). 2018; 25:3-5.
  12. Xing K, Jiao M, Ma H, Qiao H, Hao Y, Li Y, *et al*. Physical Violence against General Practitioners and Nurses in Chinese Township Hospitals: A Cross-Sectional Survey. *PloS one*. 2015; 10(11):e0142954.
  13. Kitaneh M, Hamdan M. Workplace violence against physicians and nurses in Palestinian public hospitals: a cross-sectional study. *BMC health services research*. 2012, 12 physical violence in comparison with females. Logistic regression analysis indicated that less experienced (OR: 8.03; 95% CI 3.91-16.47), and a lower level of education (OR, 469).
  14. Abbas MA, Fiala LA, Abdel Rahman AG, Fahim AE. Epidemiology of workplace violence against nursing staff in Ismailia Governorate, Egypt. *The Journal of the Egyptian Public Health Association*. 2010; 85(1-2):29-43.
  15. El-Gilany AH, El-Wehady A, Amr M. Violence against primary health care workers in Al-Hassa, Saudi Arabia. *Journal of interpersonal violence*. 2010; 25(4):716-34.
  16. International Labor Office. International Council of Nurses. World Health Organization. Public Services International. Workplace Violence in the Health Sector: Country Case Studies Research Instruments: Survey Questionnaire, 2003 [cited 2018 June, 23]. Available from: [http://www.who.int/violence\\_injury\\_prevention/violence/interpersonal/en/WVquestionnaire.pdf](http://www.who.int/violence_injury_prevention/violence/interpersonal/en/WVquestionnaire.pdf).
  17. Abed M, Morris E, Sobers-Grannum N. Workplace violence against medical staff in healthcare facilities in Barbados. *Occupational medicine (Oxford, England)*. 2016; 66(7):580-3.
  18. Moylan S. Occupational violence and staff safety in general practice. *Australian family physician*. 2017; 46(12):952-6.
  19. Al-Shamlan NA, Jayaseeli N, Al-Shawi MM, Al-Joudi AS. Are nurses verbally abused? A cross-sectional study of nurses at a university hospital, Eastern Province, Saudi Arabia. *Journal of family & community medicine*. 2017; 24(3):173-80.
  20. Bayram B, Cetin M, Colak Oray N, Can IO. Workplace violence against physicians in Turkey's emergency departments: a cross-sectional survey. *BMJ Open*. 2017; 7(6):e013568.
  21. Hamdan M, Abu Hamra A. Workplace violence towards workers in the emergency departments of Palestinian hospitals: a cross-sectional study. *Human resources for health*. 2015; 13:28.
  22. Zafar W, Siddiqui E, Ejaz K, Shehzad MU, Khan UR, Jamali S, *et al*. Health care personnel and workplace violence in the emergency departments of a volatile metropolis: results from Karachi, Pakistan. *The Journal of emergency medicine*. 2013; 45(5):761-72.
  23. Shafran-Tikva S, Chinitz D, Stern Z, Feder-Bubis P. Violence against physicians and nurses in a hospital: How does it happen? A mixed-methods study. *Isr J Health Policy Res*. 2017; 6(1):59.