

# VIOLENCE AMONG PHARMACISTS AND THEIR ASSISTANTS IN THE COMMUNITY PHARMACIES

By

ElHadidy S and El-Gilany A

*Department of Public Health and Community Medicine, Faculty of Medicine, Mansoura University, Egypt.*

*Corresponding author: ElHadidy S; email: samah.elhadidy@man.edu.eg*

## Abstract

**Introduction:** The staffs working in community pharmacies are at high risk of all forms of workplace violence. The studies investigating the prevalence or the psychological impacts of work related violence in community pharmacies are deficient. **Aim of work:** To estimate the period prevalence (last 12 months) of work-related violence, its types, associated factors and psychological effects among pharmacists/assistants in community pharmacies in Mansoura city. **Materials and methods:** A cross-sectional study was done in community pharmacies in Mansoura city. A total of 509 pharmacists/assistants completed the questionnaire. Data was collected using a questionnaire included personal and socio-demographic data, occupational history and history of exposure to any violent incident in the last 12 months. The questionnaire included details of the last violent incident and the subjective response to a violent event, using the Arabic version of the Impact of Event Scale-Revised (IES-R). **Results:** The overall prevalence of exposure to any type of violence in the last 12 months was 34.6 %. The prevalence of verbal violence was higher than the prevalence of threat, physical violence and bullying (29.7% vs. 11.6%, 10.8% and 9.6%; respectively). The significant independent predictors of any form of workplace violence were the age group from 19 to 40 years, being assistant pharmacist, working in night shifts and having little or moderate/severe worrying about work related violence. **Conclusion:** The workplace violence was prevalent among working pharmacists / assistants in Mansoura city (in the last 12 months) and the verbal violence was the commonest type. About one third of those exposed to violence had clinically significant IES-R scores indicating having post-traumatic stress disorder.

**Keywords:** Workplace violence, Pharmacists, IES-R score, Mansoura city and Community pharmacies., Occupational health and safety, Nurses and Incidence rate.

## **Introduction**

Workplace violence is an occupational health hazard (Peterson et al., 2011) and is defined as “Any incident in which a person is abused, threatened or assaulted in circumstances related to their work” (OSHA, 2015). It is classified according to the nature of behavior into incidents of verbal abuse, threats, bullying/mobbing, physical assaults and sexual harassment (OSHA, 2016). Violence can be further classified into three basic categories according to the source of the behavior: “external” violence (Criminal Intent or Ideological Violence or Domestic Violence), “client-initiated” violence (Customer/Client), and “internal” violence (Worker-to-Worker), (Mayhew and Chappell, 2003).

Work related violence has direct physical, emotional, behavioral and financial consequences for the recipients (Basilua et al., 2015; Ferri et al., 2016). In addition, there are also other considerable secondary economic impacts to the employer (e.g. absenteeism, lowered morale, reduced productivity, increased insurance costs, and compensation pay outs) (Arnetz et al., 2017). Hence, the U.S. Department of Labor produced guidelines for

dealing with workplace violence to reduce these negative impacts (OSHA, 2016).

The staff working in community pharmacies may be considered at high risk of experiencing violence as the community pharmacies fulfill the main risk factors for workplace violence as face to face contact with clients or customers (who may have a history of violence, abuse alcohol or drugs), and cash or high-value goods that may attract perpetrators of violence (Mayhew and Chappel, 2005). Also the poor environmental design of most of the pharmacies may block the pharmacy employees’ vision or interfere with their escape from a violent incident in addition to that the pharmacy may be located in neighborhoods with high crime rates (Sun et al., 2017; Cerulli et al., 2019).

The majority of researches so far had investigated the violence for doctors and nurses and to our knowledge; no Egyptian studies investigated violence in community pharmacies resulting in lack of data regarding the prevalence of this problem.

### **Aim of work**

To estimate the period prevalence (during the last 12 months) of work-

related violence, its types, associated factors and psychological effects among pharmacists and their assistants in private pharmacies in Mansoura city.

### **Materials and methods**

**Study design:** It is a cross-sectional study.

**Place and duration of the study:** The study was performed in community pharmacies at Mansoura city from September to November 2019.

The target population was all pharmacists/assistants working in private pharmacies in Mansoura city and on duty at the time of the study. The inclusion criteria are age from 19 to 60 years, at least 1 year work experience and agreed to participate in the study.

**Study sample:** The sample size was calculated using Open Epi program ([www.openepi.com/SampleSize/SSPropor.htm](http://www.openepi.com/SampleSize/SSPropor.htm)). A previous study found 31% of community pharmacists were assaulted (Smith and Weidner, 1996). With 95% confidence level, 5% precision and a design effect of 1.5, the sample size was calculated to be 494 pharmacists and their assistants. Ten percent was added to compensate for non-responders. Thus a total of 544 pharmacists and their assistants were approached and 509 completed the questionnaire (response rate of 93.6%).

A list of all registered community pharmacies in Mansoura city was obtained from The Pharmacy Administration of Dakahlia Directorate of Health. The list contained about 1068 pharmacies. Systematic random sample of 178 pharmacies were selected (every 6<sup>th</sup>) and on the average there were 3-4 pharmacists/assistants in each pharmacy.

### **Study methods:**

- All the study population answered the questionnaire during face to face interview to complete: The personal and socio-demographic data, occupational history and the history of exposure to any violent incident in the last 12 months.
- Only the staff members who had experienced violent acts in the workplace in the last 12 months completed this section containing :
  1. Details of the last violence incident (in the last 12 months).
  2. The subjective response to a violent event, using the Arabic version of the Impact of Event Scale-Revised (IES-R) for the individual employees' (Weiss, 2007). It includes 22-items and the responses are scored as : Not at all = 0; A little bit = 1; Moderately =

2; Quite a bit = 3; Extremely = 4, the total score ranges from 0 to 88. An IES-R score between 1-11: little or no symptoms of post-traumatic stress (No action is required) , an IES-R score between 12-32: several symptoms of post-traumatic stress (Patient monitoring is required) and an IES-R score equal to or greater than 33: most people with this score have post-traumatic stress disorder (It is not a diagnostic measure however, it reflects the subjective level of distress a person suffers as a response to a specific traumatic event and so can differentiate between persons with and without post-traumatic stress disorder (PTSD). Validity and reliability of the questionnaire were tested in previous studies (Weiss and Marmar, 1997; Sundin and Horowitz, 2003). The modified culturally adapted Arabic version of this questionnaire was developed and used in a previous study in Australia and showed good validity and reliability (Davey et al., 2015). Different types of violence were operationally defined according to the ILO/ICN/WHO/PSI (2003) definitions:

- Physical violence: The exposure to

the intended use of force (pushing, kicking, hitting, slapping, choking or biting).

- Verbal violence: The oral communication that negatively affects the dignity of anyone (directing insult, yelling or nudging).
- Threat: The intended use of words, signs, or behaviors to fear/harm the person.
- Bullying: To humiliate or undermine an employee through unjustified, continuous negative criticism.
- Sexual harassment: Any unwelcomed verbal or physical act of sexual nature.

### **Consent**

An informed written consent was obtained from all participants. They were informed that collected data will be confidential and used for scientific purposes only.

### **Ethical approval**

The study was approved by Institutional Review Board (IRB) of Faculty of Medicine, Mansoura University with code number (R/19.09.627).

### **Data management**

Data were analyzed using SPSS software (version 17.0 for Windows; SPSS Inc., Chicago, IL, USA). Descriptive

statistics were calculated for all variables (qualitative) that were presented as frequencies and percentages. Chi-square test was used for categorical data to compare the variation of violence exposure according to different associated factors. Crude Odd's ratio

(COR) and its 95% CI were calculated. Multivariate binary logistic regression was done to detect the independent predictors of workplace violence. Adjusted Odd's ratios (AOR) and their 95% CI were calculated. The statistical significance level was set at  $\leq 0.05$ .

## Results

**Table (1): Period prevalence of violence and its variation according to the socio-demographic and occupational characteristics of the studied group .**

Characteristics	Total No	Any violence No (%)	COR (95% CI) <sup>##</sup>	AOR (95% CI)
<b>Overall</b>	<b>509</b>	<b>176(34.6)</b>		
<b>Age (years):</b>				
19-40	393	150(38.2)**	2.1 (1.32-3.46)	<b>1.9 (1.2-3.3) **</b>
>40(r)	116	26(22.4)		
<b>Sex :</b>				
Male	393	137(34.9)	1.1 (0.68-1.6)	
Female(r)	116	39(33.6)		
<b>Marital status:</b>				
Married	299	102(34.1)	0.9 (0.7-1.4)	
Unmarried(r)	210	74(35.2)		
<b>Education :</b>				
Below University(r)	79	22(27.8)	1.3 (0.8-2.1)	
University& above	430	154(35.8)		
<b>Job:</b>				
Pharmacists (r)	321	92(28.7)***	2.0 (0.34-0.72)	<b>2.0 (0.3-0.7) ***</b>
Assistants	188	84(44.7)		
<b>Work duration(years):</b>				
≤10 years	315	124(39.4)**	1.8 (1.2-2.6)	
>10 years(r)	194	52(26.8)		
<b>Working hours:</b>				
≤8(r)	109	44(40.4)	0.7 (0.5-1.1)	
>8	400	132(33.0)		
<b>Night shifts<sup>§</sup>:</b>				
Yes	252	105(41.7)**	1.9 (1.3-2.7)	<b>2.1 (1.4-3.1) ***</b>
NO(r)	257	71(27.6)		
<b>24-hours opening:</b>				
Yes	285	93(32.6)	0.8(0.6-1.2)	
NO (r)	224	83(37.1)		
<b>Locality social status :</b>				
High/Moderate(r)	336	113(33.6)	1.1(0.8-1.7)	
Low	173	63(36.4)		
<b>Worry about work related violence:</b>				
Never (r)	132	23(17.4)	2.5(1.5-4.4) 3.4(2.0-5.7)	<b>3.9 (2.2-7.0) *** 5.2 (2.9-9.2) ***</b>
Little	183	68(37.2)***		
Moderate/Severe	194	85(43.8)***		

<sup>##</sup>CI: Confidence Interval    COR: crude odds ratio,    AOR: adjusted odds ratio.    r=reference category  
<sup>§</sup> : Night shifts: from 10pm to 8 am. \*, \*\*&\*\*\* significant difference at P ≤0.05, ≤0.01, ≤0.001; respectively.

Table 1 shows that the overall prevalence of exposure to any type of violence in the last 12 months was 34.6 % .The significant independent predictors of workplace violence are the age group from 19 to 40 years (AOR:1.9, 95% CI: 1.2-3.3), being

assistant pharmacist (AOR:2.0, 95% CI: 0.3-0.7), working in night shifts (AOR:2.1, 95% CI: 1.4-3.1 ) and having little (AOR:3.9, 95% CI: 2.2-7.0 ) or moderate/severe (AOR:5.2, 95% CI:2.9-9.2) worrying about work related violence.

**Table (2): Prevalence of verbal and physical violence and their associated factors.**

Characteristics	Total	Verbal			Physical		
		No (%)	COR (95%CI)	AOR (95%CI)	No (%)	COR (95%CI)	AOR (95%CI)
<b>Overall</b>	<b>509</b>	<b>151(29.7)</b>			<b>55(10.8)</b>		
<b>Age (years):</b>							
19-40	393	<b>127(32.3)*</b>	1.8	<b>1.7</b>	40(10.2)	0.8	
>40(r)	116	24(20.7)	(1.1-3.1)	<b>(0.9-2.8)*</b>	15(12.9)	(0.4-1.4)	
<b>Sex :</b>							
Male	393	116(29.5)	0.9		55(14.0)		
Female(r)	116	35(30.2)	(0.6-1.5)				
<b>Marital status:</b>							
Married	299	87(29.1)	0.9		<b>40(13.4)*</b>	2.1	<b>2.3(1.2-4.3)*</b>
Unmarried (r)	210	64(30.5)	(0.6-1.4)		15(7.1)	(1.1-3.7)	
<b>Education :</b>							
Below University (r)	79	21(26.6)	1.2		11(13.9)	0.7	
University& above	430	130(30.2)	(0.7-2.1)		44(10.2)	(0.3-1.4)	
<b>Job:</b>							
Pharmacists (r)	321	<b>80(29.9)**</b>	1.8	<b>2.0</b>	29(9.0)	1.6	
Assistants	188	71(37.8)	(1.2-2.7)	<b>(1.3-3.0)**</b>	26(13.8)	(0.9-2.8)	
<b>Work duration(years):</b>							
≤10 years	315	102(32.4)	1.4(0.9-2.1)		<b>27(8.6)*</b>	0.5	
>10 years(r)	194	49(25.3)			28(14.4)	(0.3-0.9)	
<b>Working hours:</b>							
≤8(r)	109	34(31.2)	0.9		3(2.8)	5.3	
>8	400	117(29.3)	(0.6-1.4)		52(13.0)	(1.6-17.3)	
<b>Night shifts<sup>s</sup>:</b>							
Yes	252	<b>88(34.9)*</b>	1.7	<b>1.8</b>	<b>35(13.9)*</b>	1.4	<b>2.3(1.2-4.1)**</b>
NO(r)	257	63(24.5)	(1.1-2.4)	<b>(1.2-2.8)**</b>	20(7.8)	(0.8-2.6)	
<b>24h opening:</b>							
Yes	285	84 (29.5)	0.9		32(11.2)	1.1	
NO (r)	224	67(29.9)	(0.7-1.4)		23(10.3)	(0.6-1.9)	
<b>Locality social status :</b>							
High/Moderate(r)	336	94(27.9)	1.3		<b>28(8.3)*</b>	2	
Low	173	57(32.9)	(0.9-1.9)		27(15.6)	(1.2-3.6)	
<b>Worry about work related violence:</b>							
Never (r)	132	17(12.9)	2.9	r (1)	4(3.0)		<b>1</b>
Little	183	<b>56(30.6)***</b>	(1.6-5.4)	3.9	12(6.6)	2(0.7-7.1)	<b>2.2(0.7-7.1)</b>
Moderate/Severe	194	<b>78(40.2)***</b>	4.5	<b>(2.1-7.3)***</b>	<b>39(20.1)***</b>	8(2.8-23.1)	<b>9.6(3.3-27.4)***</b>
			(2.5-8.1)	6.0			
				<b>(3.3-11.2)***</b>			

<sup>#</sup>CI: Confidence Interval      COR: crude odds ratio,      AOR: adjusted odds ratio.  
<sup>r</sup>=reference category      <sup>s</sup> : Night shifts: from 10pm to 8 am.  
\*, \*\*&\*\*\* significant difference at P ≤0.05, ≤0.01, ≤0.001; respectively.

Table 2 shows that the prevalence of verbal violence is 29.7%. The significant independent predictors of workplace verbal violence are age from 19-40 years (AOR:1.7, 95% CI: 0.9-2.8), being assistant pharmacist (AOR:2.0, 95% CI: 1.3-3.0), working in night shifts (AOR:1.8, 95% CI: 1.2-2.8) and having little (AOR:3.9, 95% CI: 2.1-7.3) or moderate/severe worrying about work related violence (AOR: 6.0, 95% CI: 3.3-11.2). The prevalence of physical violence was 10.8% .The significant independent predictors of workplace physical violence are being married (AOR: 2.3, 95% CI: 1.2-4.3), working in night shifts (AOR: 2.3, 95% CI: 1.2-4.1) and having moderate/severe worrying about work related violence (AOR: 9.6, 95% CI: 3.3-27.4).



**Table (3): Prevalence of threat and bullying violence and their associated factors.**

Characteristics	Total	Threat			Bullying		
		No (%)	COR (95%CI)	AOR (95%CI)	No (%)	COR (95%CI)	AOR (95%CI)
<b>Overall</b>	<b>509</b>	<b>59( 11.6)</b>			<b>49 (9.6)</b>		
<b>Age (years):</b>							
19-40	393	<b>52(13.2)*</b>	1.8		<b>44(11.2)*</b>	2.8	
>40(r)	116	7(6.0)	(1.1-3.1)		5(4.3)	(1.3-6.4)	
<b>Sex :</b>							
Male	393	47(11.9)	0.9		34(8.7)	2.8	
Female(r)	116	12(10.3)	(0.6-1.5)		15(12.9)	(1.1-7.2)	
<b>Marital status:</b>							
Married	299	30(10.0)	0.9		28(9.4)	0.6	
Unmarried(r)	210	29(13.8)	(0.6-1.4)		21(10.0)	(0.3-1.2)	
<b>Education :</b>							
Below University(r)	79	4(5.1)	2.7		6(7.6)	1.4	
University& above	430	55(12.8)	(0.9-7.6)		43(10.0)	(0.6-3.3)	
<b>Job:</b>							
Pharmacists(r)	321	32(10.0)	1.8		<b>23(7.2)*</b>	0.01	
Assistants	188	27(14.4)	(1.2-2.7)		26(13.8)	(0.01-0.03)	
<b>Work duration(years):</b>							
≤10 years	315	<b>46(14.6)**</b>	1.4	<b>2.5(1.3-4.8)**</b>	<b>43(13.7)***</b>	2	<b>5.4(2.2-</b>
>10 years (r)	194	13(6.7)	(0.9-2.1)	1	6(3.1)	(1.1-3.7)	<b>13.0)***</b>
<b>Working hours:</b>							
≤8(r)	109	13(11.9)	0.9		12(11.0)	4.9	
>8	400	46(11.5)	(0.6-1.4)		37(9.3)	(2.1-11.9)	
<b>Night shifts<sup>§</sup>:</b>							
Yes	252	35(13.9)	1.7		25(9.9)	0.8	
NO(r)	257	24(9.3)	(1.1-2.4)		24(9.3)	(0.4-1.6)	
<b>24h opening:</b>							
Yes	285	31(10.9)	0.9		21(7.4)	1.1	
NO (r)	224	28(12.5)	(0.7-1.4)		28(12.5)	(0.6-1.9)	
<b>Locality social status :</b>							
High/Moderate(r)	336	36(10.7)	1.3		35(10.4)	0.6	
Low	173	23(13.3)	(0.9-1.9)		14(8.1)	(0.3-1.0)	
<b>Worrying about work related violence:</b>							
Never (r)	132	8(6.1)	2.9	1	6(4.5)	<b>2.6(1.0-</b>	<b>3.1(1.1-</b>
Little	183	21(11.5)	(1.6-5.4)	2.3(0.9-5.3)	20(10.9)	<b>6.6)*</b>	<b>8.1)*</b>
Moderate/Severe	194	<b>30(15.5)**</b>	4.5	<b>3.0(1.3-</b>	<b>23(11.9)*</b>	<b>2.8(1.1-</b>	<b>3.1(1.2-</b>
			(2.5-8.1)	<b>6.8)**</b>		<b>7.1)*</b>	<b>7.9)*</b>

¶ No sexual violence was reported in the last 12 months. § : Night shifts: from 10pm to 8 am.

COR: crude odds ratio,

AOR: adjusted odds ratio.

Table 3 shows that the prevalence of threat is 11.6%. The significant independent predictors of workplace threat are working for  $\leq 10$  years (AOR: 2.5, 95% CI: 1.3-4.8) and having moderate/severe worrying about work related violence (AOR: 3.0, 95% CI: 1.3-6.8). The prevalence of bullying is 9.6%. The significant independent predictors of workplace bullying are working for  $\leq 10$  years (AOR: 5.4, 95% CI: 2.2-13.0) and having little (AOR: 3.1, 95% CI: 1.1-8.1) or moderate/severe worrying about work related violence (AOR: 3.1, 95% CI: 1.2-7.9).

**Table (4): Characteristics and effects of the last violent event in the last 12 months among the studied group.**

<b>The last violent event in the last 12 months</b>	<b>No (%)</b> <b>176(100.0)</b>
<b>Type of violence:</b>	
Verbal	93(52.8)
Physical	31(17.6)
Threat	31(17.6)
Bullying	21(11.9)
Sexual violence	0 (0.0)
<b>Time of event :</b>	
Morning shift	67(38.1)
Evening shift	75(42.6)
Night shift	34(19.3)
<b>Type of assailant :</b>	
Customer/Client	119(67.6)
Pharmacy neighbors	39(22.2)
Pharmacy colleague (Worker-to-Worker)	18(10.2)
<b>Assailant number:</b>	
1	120(68.2)
2	46(26.1)
>2	10(5.7)
<b>Assailant sex:</b>	
Male	153(86.9)
Female	23(13.1)
<b>Calling police</b>	19(10.8)
<b>Physical effect of violence:</b>	
No injuries	153(86.9)
Simple injuries needed self-treatment	18(10.2)
Serious injuries needed hospital referral	5(2.9)
<b>Psychological effect of violence (IES-R score):</b>	
Little or no symptoms of post-traumatic stress(1-11)	17( 9.7)
Have several symptoms of post-traumatic stress(12-32)	53(30.1 )
Have post-traumatic stress disorder(>33)	106(60.2 )

Table 4 shows that verbal violence is the most prevalent type of last violent incidents (52.8%) in the last 12 months while bullying is the least (11.9%) and none reported sexual violence. The majority of assailants were male, single and pharmacy clients (86.9%, 68.2% and 67.6%; respectively). About 42.6% of violence events occurred in the evening period. The majority of the violence events (86.9%) resulted in no physical injuries although 60.2% of the exposed population showed post-traumatic stress disorder. Only 10.8% of the victims responded to this violence by calling the police.

### **Discussion**

Generally, the frequency of workplace violence is increasing worldwide in the health care sector (Ferri et al., 2016) and the community pharmacies are not exception as violence was not only widespread, but also it was getting steadily worse (Mayhew and Chappel , 2005) and not well documented (FitzGerald and Reid ,2012). Irwin et al., (2013) in Scotland found that violent incidents were common in pharmacy practice.

The current study found that 34.6% of the pharmacists and their assistants, reported exposure to any form of workplace violence in the last 12 months (Table1). Similarly, Smith and Weidner (1996) reported in their studies in UK that 31 % of the community pharmacy staffs were exposed to workplace violence. However, FitzGerald and Reid (2012) in an Irish study concluded that a high percentage (77%) of community

pharmacies employees reported violent events within the preceding 12 months. Also it was in accordance with Peterson et al., (2011) who also reported in their survey in Australia that within the preceding 12 months , the majority of pharmacists (91%) experienced some forms of violence in community pharmacies. On the other side, Pompeii et al., (2015) reported a relatively low prevalence of violence among pharmacists (10.5%) and the least prevalence of violence among pharmacists (0.1%) was detected in the US by Groenewold et al., (2018). This considerable proportion of work-related violence found in the current study could be attributed to long waits , expensive and unavailable prescribed drugs as the participants admitted, helped by lack of adequate security, general economic problems and poor environmental design of most of the pharmacies .

Exposure to any type of violence, especially verbal violence and bullying was more likely to occur among community pharmacy employees aged from 19 to 40 years [AOR: 1.9, 1.7 and 2.8; respectively] (Table 1, 2, 3). Similarly, Tan et al., (2008) found that younger pharmacists were more subjected to workplace violence in Australia. In contrast, Alsaleem et al., (2018) detected in their study among healthcare workers (including pharmacists) in Saudi Arabia that the risk of violence was higher among older healthcare workers by about 3% more than the younger ones. Also, Jackson and Ashley (2005) found an increased likelihood of bullying among health staff >40years old. Lack of cumulative experience in the young pharmacy employee and decreased client respect to them explain this finding.

The present study found that exposure to any type of violence, especially verbal and physical violence were more likely to occur among community pharmacy employees working in night shifts [AOR:2.1, 1.8 and 2.3; respectively] (Table 1,2). In accordance with this result, Alsaleem et al., (2018) proved in their study among healthcare workers (including pharmacists) in Saudi Arabia that

working in night shifts increased the risk of exposure to violence [OR: 1.27]. However, FitzGerald and Reid (2012) detected lack of association between workplace violence and late night opening. The risk of workplace physical violence was increased among those who were married [AOR: 2.3] (Table 2). On the contrary, Hegney et al., (2006) and Wu et al.,(2012) found that the risk of exposure to violence increased with being unmarried ones.

Work duration for  $\leq 10$  years increased the likelihood of exposure to threat and bullying [AOR: 2.5 and 5.4; respectively] (Table 3). Similar result was reported by Kowalenko et al., (2005) who determined that less experienced personnel (less job duration) were more often exposed to violence than more experienced ones.

The results of the current study pointed to that pharmacists/assistants having little or moderate/severe worrying about workplace violence, were at increased risk of exposure to workplace violence [AOR: 3.9 and 5.2; respectively] (Table 1). FitzGerald and Reid (2012) agreed with this finding and reported that 63% of their participants were worried about workplace violence, and there were positive statistically

significant correlations between all types of violence and different worrying levels of employees in community pharmacies.

The present work revealed that the prevalence of verbal violence was higher than the prevalence of threat, physical violence and bullying (29.7% vs. 11.6%, 10.8% and 9.6%; respectively) (Table 2,3), which is consistent with the findings of many previous studies (Kamchuchat et al., 2008 , Landau & Bendalak, 2008 , El-Gilany et al., 2010 and FitzGerald & Reid ,2012).

No one in the present study admitted exposure to sexual violence in the last 12 months , while Peterson et al., (2011) in Australia reported that one-tenth of the pharmacists were exposed to sexual harassment/assault at least once monthly in the preceding 12 months. Our finding may be related to denial and sense of shame and shy of discussing such sensitive traditional taboos.

Analysis of the last violent incident (in the last 12 months) revealed that the verbal violence was the most prevalent last incident type (52.8%) (Table 4) which was in agreement with Rahim and Shah (2010) who studied the aggressive incidents in pharmacy

practice and reported that 40.0% of the respondents were exposed to verbal violence. Also, FitzGerald and Reid (2012) and Peterson et al., (2011) declared that the frequency of verbal violence reported from of community pharmacies in the last 12 months was 77% and 33%, respectively.

The current work showed that only 10.8% responded to the violent incident by calling the police (Table 4) , while, Peterson et al., (2011) found that 41% of their respondents took legal action and called the police. This can be explained by the prevalent concept that these incidents are considered insignificant and are normal exposures and part of this job as well as the fear of victimization stigma among some of them.

Most of the assailants (67.6 %) in the current study were pharmacy clients (Table 4) and this was consistent with Peterson et al., (2011) who stated that the customers were the most frequent responsible assailants for all types of violence .

The majority of assailants of the last violent incident in the last 12 months were male (86.9%)(Table 4) which is in accordance with James et al., (2006) and Mayhew and Chappel (2003) who

reported that male were the most likely to be perpetrators of violence. This can be attributed to that males show more aggression than do females.

About half (42.6%) of the last violent incidents in the present study occurred in the evening period (from 4 pm to 12 am) (Table 4). Alsaleem et al., (2018) found that 68.8% of the violent incidents occurred during night shift time. On the other hand, FitzGerald and Reid (2012) reported no association between late night opening hours and occurrence of violent incidents. This finding can be explained by the long working hours causing physical and mental fatigue of the pharmacies/assistants in addition to that night clients usually have critical or emergency patients. All the participants admitted unsafe workplace that enforces violent acts in accordance with different studies conducted in many countries which proved that the installation of security measures (alarms ,cameras, suitable building design.....) dramatically reduced the incidence of violence to zero (PDA, 2005).

Studying the impact of the last violent incident in the preceding 12 months showed that 33% of the respondents had clinically significant

IES-R scores ( $\geq 33$ ) indicating having post-traumatic stress disorder (Table 4) , while, FitzGerald and Reid (2012) reported that only (19%) of the respondents had clinically significant IES-R scores ( $\geq 33$ ) .

**Study Limitations:** The results of this study cannot be generalized to all community pharmacies in Egypt because this is a single city study. The nature of the cross-section study does not establish the cause-effect relationship, bias recall and social desirability images cannot be excluded. Under-reporting through unresponsiveness of some of the interviewed participants to the violence section of the questionnaire could be related to avoidance symptoms following stressful violent events.

**Conclusion:** The current study showed the prevalence of workplace violence in the last 12 months among the studied community pharmacists and their assistants. Verbal violence was the most common type. The significant independent predictors of workplace violence were: being in the age group from 19 to 40 years, being assistant pharmacist, working in night shifts and having little or moderate/severe worrying about work related violence. No sexual violence was reported.

**Recommendations:** Health education and promotion should be rolled for working population in community pharmacies especially young male assistants and who are working in night shifts; seeking to improve their health and well-being (this includes social and emotional learning and other forms of violence prevention). Further multicenter studies are recommended to express the magnitude of the workplace violence on a larger scale. Obligating all the pharmacies to get security elements (e.g. glass barriers, alarms, security guards) before obtaining /renewing the license.

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