Patterns, Prevalence and Impact of Violence against Health Care Workers in Beni-Suef Governmental Hospitals

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Abstract

Background: Violence against HCWs is an unethical aggressive behavior posing a problem that affects health care professionals' performance. Workplace Violence are incidents of abuse, threat or assault in the work related environment. ***Aim of the work*:** To assess the magnitude and patterns of violence against HCWs in Beni-Suef Governmental hospitals, exploring the reporting, consequences and impact of these aggression incidents on daily health service performance.

Subjects and Methods: A cross sectional study was conducted from December 2013 to October 2014 using a self-administered questionnaire addressed for 672 physicians, nurses and technicians working in the Beni-Suef University, General and Health Insurance Organization hospitals with a response rate of 72% (484/672).

Results: Mean age of the participants was 32.5 ±9.8 years. Violence was most against nurses (92.5%) followed by physicians (80%) with external violence being more prevalent in university hospital. External verbal violence was the most frequent pattern (82%) against nurses. Reporting was higher for verbal (56%) and psychological (52%) external violence among nurses; and *no actions taken* after reporting was the commonest leading to passive attitude of the HCW's. Depression and Stress had negative consequences on work performance.

Conclusion and Recommendations: Workplace Violence against HCWs is a growing health care facility problem; most common against nurses being the first line contact person with the patients and their relatives. Hospitals should enhance programs for training and incident reporting, particularly for nurses at higher risk of exposure. In addition; it is important to implement security and safety measures to protect HCWs from perpetrators.

Key Words: ***Violence, hospital, health care workers, reporting, Impact.***

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Introduction

Violence and aggression in health care facilities is currently encountered a significant problem in many countries including Egypt [(1)] and is attracting an increasing attention in public health research.

The actual magnitude of the problem in Egypt is not yet known due to individual hospitals reports. Work place violence

(WPV) reported Ismailia Hospital / primary health care facilities, Alexandria and Mansoura University hospitals; among 970 nurses; 540 female HCWs and 68 physicians respectively; revealed that verbal abuse was the most frequent recorded violence action (70%-76%) followed by physical abuse, bullying/mobbing (60%) and least was Sexual harassment (2%-9%). **(1-3)**

Workplace Violence is defined as "Incidents where staff are abused, threatened or assaulted in circumstances related to their work, involving an explicit or implicit challenge to their safety, well-being or health". It is classified into physical, psychological and/or sexual violence. (4)

Stress and workplace violence noted in health sectors are mainly reported against physicians, nurses and social workers. Violence in the health care facilities constitutes almost a quarter of all violence at work. Employers and workers are equally interested in the prevention of violence and severe stress at the workplace. When stress and violence interact at the workplace their negative effects cumulate in an exponential way, activating a vicious circle which is very difficult to break. (5)

Internal workplace violence is that which takes place between workers in the same workplace, including managers and supervisors. External workplace violence is the one which takes place between patients, their relatives or friends and workers, managers and supervisors of the workplace.(6)

Work Place Violence (WPV) factors include; *Individual factors* (e.g., particular gender of workers) may heighten the risk. *Environmental factors* (e.g., poor safety and security) can increase the risk of violence. *Understaffing* may increase the risk of violence due to longer patient waiting times and workers being alone with patients and their relatives/friends. Mistrust or miscommunication between health care providers and attendants may contribute to violence in health care settings. (5)

The objectives of this study are to measure the WPV prevalence, types of violence, type of perpetrators against HCWs working in in Governmental hospitals- Beni Suef governorate, and explore violence reporting, consequences and impact of these aggression incidents on daily work activities.

Subjects and Methods

Study locality: This study was carried out in University, General and Health Insurance hospitals; the 3 pillars of the health care system in Beni Suef governorate.

Study design: this is a descriptive cross-sectional study.

Study methods:

Data was collected during December 2013 to October 2014; using a self-administered questionnaire addressed to 672 health care workers (HCWs) in The study involved 484/672 participants with a response rate of 72%. Distribution of them was as follows: 297 (62%) nurses, 127 (26%) physicians, and 60 (12%) technicians.

The Self-administered questionnaire was prepared in Arabic language and used for data collection and analysis. This questionnaire was previously tested by a pilot study during December, 2013 done before data collection for 50 nurses and

50 physicians; purpose of which was to ensure the *clearness, easiness* of the questions. Results of that pilot study were not included in the final study ; yet, its feedback was taken in consideration as regards: question interpretation and relevance; appropriateness of response choices, ease of completion, questionnaire's overall 'look', and the interest of the respondents to fill the questionnaire.

Finally, the questionnaire was designed to cover *5 domains*;

1-Sociodemographics of the studied HCWs,

2- Lifetime working experience with aggression; types and frequency.

3- External aggression (Violence) and its effects on work and emotional consequences.

4- Internal aggression (Violence) and its impacts on work.

5- Attitude of HCWs following aggression incidents and the organizational response to reporting these incidents.

External aggression was that perpetrated by patients, their companions, relatives or friends; while the internal violence was that perpetrated by all the other HCWs inside the hospital.

Data Analysis

The data collected were coded then analyzed using the SPSS version 18 (Statistical package for social science). Descriptive statistics such as frequency and percentage were used for data summarization. Chi-squared test was used for comparing qualitative data. P-values equal to or less than 0.05 were considered statistically significant.

Ethical considerations:

To ensure privacy, dignity and integrity, the used questionnaire was anonymous. In addition; official permissions were obtained from the faculty of Medicine Beni-Suef University hospital, Beni-Suef General hospital and Health Insurance Organization hospital. The questionnaires included explanations about the purpose of the study, confirmation of confidentiality of data and assuring that it will never be used for purposes other than scientific research.

Results

The 484 participants included in this study were distributed as follows: 180 (37%) from University Hospital (UH), 163 (34%) from Health Insurance Organization Hospital (HIO) and 141 (29%) from the General Hospital (GH). Among HCWs participants; nurses constituted the highest percentage (62%) followed by physicians (26%), and only 12% of the participants were technicians.

Females constituted 81% (393/484) of the participants (as all nurses were females) compared to males participants who constituted 19% (91/484).

Mean age of the whole group was 32.5± 9.8 (range: 17-59). Residency in urban areas was reported in 68% (330/484) of the whole group compared to 32% (154/484) for rural residency. Majority of participants were married 70% (338/484). High education level was only reported in 39.5% (191/484). Nearly half of the Participants were working in Medicine and surgical health care sections. Rotatory day and night shifts were encountered in 73.5% (356/484) of participants. (*Table 1*)

External and internal violence were more prevalent among nurses followed by physicians then technicians. The

Prevalence of the last year to external and internal violence against HCWs (physicians, nurses and technicians) between the studied hospitals was statistically significant for external and internal violence among nurses and only significant difference found for internal violence against physicians. (*Table 2*)

More than Ten times exposure to last year external violence was highest for nurses (57%) followed by physicians (20.6%). The same result was observed as regard the internal violence and the percentages were being 24.5% among nurses compared to 19.4% among physicians. Technicians have the least % in both types of violence**.**

There was no statistically significant difference between Types of violence and percentage of reporting among the three studied group (*Table 3*).

Determinants of gender and job of perpetrator and violence incidents reported among physicians' showed a statistically significant difference for male perpetrator and external violence. While among nurses' reporting; a significant difference was reported for external violence and patients perpetrators compared to clerks being the most common perpetrators for internal violence. (*Table 4)*

As for Percentage & reporting pattern of external and internal violence reported incidents against HCWs; Reported external violence incidents were highest for nurses followed by physicians then technicians. In vain of reporting was the most common cause of non-reporting in all groups. Administration was the main authority reported to; Stopping of internal violence was the most common corrective action taken in favor of nurses. Measures taken after reporting were not enough, or not taken as reported by the 3 groups for both the internal or external incidents. (*Table 5*)

Self-reported consequences after HCWs ' exposure to external or internal violence at the three hospitals Showed that the most common consequences to violence affecting work environment reported by physicians were anger and stress; added to fear reported by nurses and humiliation feelings/ depression reported by technicians. (*Table 6*)

As regards Impact on work, job satisfaction and performance after HCWs' exposure to Violence in the three hospitals – among those reported that there was an impact; stressed of job and sense of absence of rights and justice were the most reported impact by physicians and nurses while absence of rights and justice besides sense of being bored of job and unsatisfied were most reported by physicians and nurses. There was no impact of violence on physicians', nurses' and technicians' work with feelings of being stressed of job for physicians compared to feelings of No rights and loss of justice for all groups. *(Table 7).*

Discussion

I- Prevalence, frequency and types of violence against physicians, nurses and technicians:

Prevalence of External and internal violence during the last year of work was notably highest against nurses followed by physicians then technicians (table2). These figures are in agreement with similar national studies which reported that 73%-86% of nurses and

92.6% of 68 physicians (Emergency Department) were exposed to WPV [1,3]; and in agreement with international series reporting that 78%, 73% and 38% of HCWs respondents had been victimized at least once during their careers in South Africa, USA and UK. [8-10] a finding that was further confirmed by a report from the Bureau of Justice Statistics using the National Crime Victimization Survey (NCVS) with a 22/1000, 6/1000 and 13/1000 of nurses, physicians and technicians were exposed to WPV confirming *t*hat nurses are more exposed to violence [11]**.** Physical violence can reach up to 60% among physician in the Emergency department [1] and in both public (71%) and private health sector (52%) in South Africa owing to the vulnerability of the public sector to more violence. [13]

II-Types of violence , percentage of reporting compared to gender and job of perpetrator among the three studied groups (Table 3-4)

Reporting was highest for physical (external/internal) violence among nurse (60-66%) followed by verbal external abuse among physicians (46%) and nurses (56%) while psychological (internal) was highest (83%) for technicians, in agreement with other reports: 41% in Lebanon; 52%- 60% in South Africa; 38% in Thailand; and up to 50% in Australia. [5]

Sexual (external / internal) violence was reported to be low; findings are in agreement with other studies in Egypt, Bulgaria; Lebanon, Thailand, Portugal and South Africa with reported sexual violence of 3%-30%, 4.7%, 2.3 %, 1.9 %, 2.7 % and 4.6 %, respectively [1,3,5]. Middle Eastern women would be quite hesitant to admit to sexual harassment and that under reporting is due to lack of organized reporting system.[14] *(Table 4)*

In this study male perpetrators committed most of the violence incidents against physicians, nurses and technicians for external and internal violence. Patients followed by their relatives were the main perpetrators who committed external violence against physicians, nurses and technicians (Table 5). Nearly similar percentages of violence actions (verbal and physical abuse) committed by patients and their relatives (main perpetrators) against HCWs especially nurses were reported by Egyptian and international studies [2,7,13,15-17] .

III- Reporting and measures taken in response to violence incidents against HCWs:

In the present study, external / internal violence incidents were under-reported. The main cause of non-reporting was due to the feeling that reporting is in vain (*Table 5*).Similarly; in Thailand only 37% of incidents were reported due negative attitude against reporting in addition to the absence of the authority responsible for reporting.[8] External / internal violence reporting to hospital administration or hospital security was under- reported (*Table 5*). Similar studies showed that about 70% of nurses who experienced violence/ abuse *did not* reported it [18, 19].

IV- Consequences and effects on HCWs after exposure to violence:

The most common consequences to external/internal violence reported by physicians were: anger and stress compared to fear and stress reported by nurses. While anger followed by humiliation feelings were the most

reported by technicians (*Table 6*).These findings concur with other studies which concluded that the most common reactions against abusive behavior were anger, helplessness, humiliation and depression [3, 20].

V-Impact of exposure to violence on job satisfaction and work performance:

In this study; more than half of respondent physicians and nurses were either stressed of job or felt no rights and loss of justice due to external/ internal violence (*Table 7*). Similarly, Samir et al., 2012 reported that 87.2% of nurses who were exposed to violence believed that workplace violence had a negative effect of on their work and may lead to increased errors and decreased quality of care as well as decreased job satisfaction [7] ; a confirmatory report from Great Britain showed that exposure to bullying and harassment was inversely related to job satisfaction, organizational commitment, work effort, productivity and performance and positively related to considering leaving, work load, stress from relationships with colleagues and autocratic leadership *[21,22].*

Conclusions and recommendations

Violence (external and internal) was prevalent against HCWs in Beni suef hospitals. Verbal and psychological violence were the most frequent types. Anger and stress were the commonest consequences among all participants; with no impact of violence on their work. Violence and bullying reporting should be encouraged and procedural corrective actions should be implemented immediately Patients, their relatives and visitors should be aware of their bill of rights and respect their responsibilities toward health care facilities. Further research is warranted to explore the nationwide magnitude of the problem to help in testing the effectiveness of different intervention measures.

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Table (1): Sociodemographics and occupational characteristics of the studied HCWs

	Physicians		Nurses		Technicians	
	No	(%)	No	(%)	No	(%)
Total 484	127	(26.2)	297	(61.4)	60	(12.4)
Gender:						
-Male	58	(45.7)	0	(0)	33	(55)
-Female	69	(54.3)	297	(100)	27	(45)
Mean age	30.74 ± 6.8 (range: 25-59)		32.41 ± 11.26 (range: 17-59)		29.46 ± 7.01 (range:20-53)	
Participants' residence						
-Urban	103	(81.7)	190	(70.6)	37	(61.7)
-Rural	23	(18.3)	79	(29.3)	23	(38.3)
Marital status						
-Married	89	(70.1)	209	(70.3)	40	(55.7)
-Single	37	(29.1)	43	(14.5)	19	(31.7)
-Divorced	1	(0.8)	21	(7.1)	0	(0)
-Widowed	0	(0)	9	(3.0)	1	(0.02)
Hospital Name:						
- University hospital	45	(45.4)	115	(38.7)	20	(33.3)
- Health Insurance hospital	44	(34.6)	99	(33.3)	20	(33.3)
- General hospitals	38	(29.9)	83	(27.9)	20	(33.4)
Participants' educational level:						
-Technician health Institute	----		------		47	(78.3)
-Faculty of science	----		--------		3	(0.05)
-Diploma	-----		223	(79.9)	6	(0.1)
- College / Nursing Institute (for nursing & technicians)	127	(100)	56	(20.0)	4	(0.07)
Shifts						
-Day time shifts only	31	(24.4)	58	(19.5)	21	(35)
-Rotatory day and night shifts	96	(75.5)	221	(74.4)	39	(65)
Current department						
-Medicine	10	(7.9)	108	(36.4)	-------	
-Surgery	11	(8.7)	86	(28.9)	-------	
-Gynecology and Obstetrics	11	(8.7)	21	(97.1)	-------	
-Pediatrics	25	(19.7)	32	(10.8)	29	(48.3)
- Others*	72	(56.5)	40	(13.5)	31	(51.7)
Mean period of experience	5.74 ± 6.56 (range: 0.5-34)		9.97 ± 9.58 (range: 1-38)		7.72 ± 6.03 (range: 0.5-30)	

*Others: Ophthalmology, ENT, Clinical Pathology l and Outpatient clinic

Table 2: Prevalence of external and internal violence against HCWs in the study hospitals.

	External violence (last year)	**Internal violence (last year)**
Prevalence of violence among physicians participants N=127	102 (80.3%) HIO=32/44 University =39/45 General=31/38	36 (28.3%) HIO=11/44 University =20/45 General=5/38
	P=0.27	**P=0.005**
Prevalence of violence among nurses participants N=297	255 (85.8%) HIO=72/99 University=107/115 General=76/83	135 (45.5%) HIO=32/99 University=69/115 General=34/83
	P=0.0001	**P=0.001**
Prevalence of violence among technicians participants N=60	27 (45%) HIO=10/20 University =5/20 General=12/20	9 (15%) HIO=0/20 University =4/20 General=5/20
	P=0.07	P=0.06

P≤0.05 were considered significant using χ^2

Table 3: Types of Violence and percentage of reporting among the three studied group

	Reporting by physicians				Reporting by nurses				Reporting by technicians			
	External		Internal		External		Internal		External		Internal	
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%
Type of violence												
Physical	3/9	(33.3)	2/3	(6.7)	43/65	(66.2)	6/10	(60)	1/2	(50)	0/1	(0)
Verbal	42/92	(45.7)	9/28	(32.1)	139/245	(56)	45/95	(47.4)	11/27	(40.7)	1/3	(33.3)
Psychological	34/70	(48.6)	9/25	(36)	103/197	(52)	51/87	(58.6)	6/14	(42.9)	5/6	(83.3)
Sexual	2/3	(66.7)	2/5	(40)	17/38	(44.7)	5/10	(50)	1/1	(100)	0/1	(0)
P >0.05 using χ_2												

Table 4: **Perpetrator Gender, Job and Percentage of Violence reporting among the studied groups**

	Reporting by physicians				Reporting by nurses				Reporting by technicians			
	External		Internal		External		Internal		External		Internal	
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%
Perpetrator Gender												
Male	**39/47*** **	**(83)**	**11/37****	**(29.7)**	47/101	(46.5)	48/67	(71.6)	7/30	(23.3)	4/5	(80)
Female	8/47	(17)	2/37	(0.4)	**35/41*** **	**(85.8)**	19/35	(54.3)	4/30	(13.3)	1/4	(25)
Both	----------		-------		27/55	(49.1)	-------		--------		--------	
Perpetrator Job												
Physician/colleague	----------		6/37	(16.2)			8/98	(8.1)			1/2	(50)
Clerk	----------		1/37	(2.7)	----------		**28/98* **	**(28.6)**	---------		1/1	(100)
Chief of hospital	----------		3/37	(8.1)	----------		14/98	(14.3)	---------		3/6	(50)
Head of department	----------		1/37	(2.7)	----------		13/98	(13.3)	---------		------	
Nurse	----------		2/37	(5.4)	----------		-------		---------		-------	
Patients	60/102	(58.8)	----------		**150/255* **	**(58.8)**	-------		13/27	(48.1)	-------	
Relatives	30/102	(29.4)	----------		90/255	(35.2)	-------		10/27	(37)	-------	
Companions /friends	20/102	(19.6)	----------		40/255	(15.6)			12/27	(44.4)	-------	

* P= 0.03-0.04, ** P≤0.01 and*** P≤0.0001, using χ^2

Table 5: Pattern of reporting and percentages of external and internal violence incidents against HCWs

Reporting	Physicians				Nurses				Technicians			
	External violence n = 102		Internal violence n =36		External violence n = 255		Internal violence n =135		External violence n = 27		Internal violence n =9	
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%
Non reported incidents	55/102	(53.9)	24/36	(66.7)	110/255	(43.1)	67/135	(49.7)	16/27	(59.5)	4/9	(44.4)
Causes of non-reporting												
In vain of reporting	30	(54.5)	15	(62.5)	60	(54.5)	55	(82.1)	9	(56.3)	3	(75)
The situation was overcame by the others	20	(36.5)	7	(29.1)	30	(27.3)	10	(14.9)	4	(25)	1	(25)
Regretting of the perpetrators	5	(9)	2	(8.4)	20	(18.2)	4	(3)	3	(18.7)	0	(0)
Reported to:												
Administration	20	(44.4)	9	(69.2)	79	(54.5)	45	(66.2)	5	(45.5)	1	(11.1)
Security	16	(34.0)	2	(15.4)	47	(32.4)	9	(13.2)	3	(27.3)	1	(11.1)
Physician	2	(4.3)	2	(15.4)	4	(2.8)	6	(8.8)	1	(9.1)	2	(22.2)
Relatives and friends	2	(4.4)	2	(15.4)	4	(2.7)	8	(11.8)	2	(18.2)	1	(11.1)
Results after reporting												
Stopping of violence	4	(29.8)	1	(7.7)	32	(19.9)	50	(73.5)	0	(0)	2	(22.2)
Continued in lower frequency	8	(38.3)	7	(53.8)	63	(43.4)	10	(6.8)	6	(55)	3	(33.3)
Continued in same frequency	0	(0)	0	(0)	0	(0)	6	(8.8)	0	(0)	0	(0)
Increased violence frequency	5	(31.9)	5	(38.5)	30	(20.7)	2	(2.9)	5	(45.5)	0	(0)
Measures taken after reporting												
-were enough	5/47	(10.6)	3/13	(23.1)	30/145	(20.9)	17/68	(25)	5/11	(45.5)	2/5	(40)
-were not enough	25/47	(53.2)	6/13	(46.2)	70/145	(48.3)	21/68	(30.9)	6/11	(54.5)	2/5	(40)
-No measures taken	17/47	(36.2)	4/13	(30.8)	45/145	(31)	30/68	(44.1)	0	(0)	1/5	(20)
-Justification of the reporters	9/47	(19.1)	5/13	(38.5)	31/145	(21.4)	16/68	(23.5)	2/11	(18.18)	3/5	(60)

Table 6: HCWs' self-reported consequences after exposure to external or internal violence in the study hospitals.

Consequences of violence	Physicians				Nurses				Technicians			
	External violence n=102		Internal violence n=37		External violence n=255		Internal violence n=135		External violence n=27		Internal violence n=9	
	NO	(%)	NO	(%)	NO	(%)	NO	(%)	NO	(%)	NO	(%)
No effects	31	(30.4)	10	(27)	17	(6.7)	11	(8.1)	10	(37.1)	2	(22.2)
Fear	7	(6.9)	0	(0)	59	(23.1)	44	(32.5)	0	(0)	0	(0)
Anger	41	(40.2)	12	(32.4)	66	(25.9)	24	(17.8)	12	(44.4)	3	(33.3)
Stress	38	(37.3)	15	(40.5)	73	(28.6)	40	(29.5)	4	(14.8)	5	(55.5)
Humiliation feelings	15	(14.7)	5	(13.5)	59	(23.1)	11	(8.1)	5	(18.5)	0	(0)
Depression	27	(26.4)	4	(10.9)	44	(17.2)	23	(17)	0	(0)	4	(44.4)
Guilty sensation	3	(2.9)	1	(2.7)	2	(0.8)	2	(1.5)	0	(0)	0	(0)
Desire to take revenge	6	(5.9)	6	(16.2)	20	(7.8)	2	(1.5)	0	(0)	0	(0)
Desire to leave work	7	(6.9)	4	(10.8)	16	(6.2)	2	(1.5)	0	(0)	1	(11.1)

Table 7: Impact of HCWs' exposure to violence on work performance in the study hospitals.

Impact of exposure to violence at work	Physicians				Nurses				Technicians			
	External violence n = 102		Internal violence n = 37		External violence n = 255		Internal violence n = 135		External violence n = 27		Internal violence n = 9	
	NO	(%)	NO	(%)	NO	(%)	NO	(%)	NO	(%)	NO	(%)
No impact on work	52	(50.9)	14	(37.8)	76	(29.8)	50	(37.5)	18	(66.7)	6	(66.7)
Not satisfied and bored of job	23	(22.5)	7	(18.9)	33	(12.9)	21	(15.6)	6	(22.2)	2	(22.2)
Decreased interest to work	6	(5.9)	6	(16.2)	23	(9.1)	13	(9.6)	0	(0)	2	(22.2)
Stressed of job	27	(26.5)	8	(21.6)	35	(13.7)	13	(9.6)	1	(3.7)	1	(11.1)
Humiliation feelings at work	13	(12.7)	7	(18.9)	19	(7.5)	8	(5.9)	1	(3.7)	0	(0)
No rights and loss of justice	20	(19.6)	13	(35.1)	65	(25.5)	18	(13.3)	8	(29.6)	1	(11.1)
Decreased efficiency at work	9	(8.8)	4	(10.8)	27	(10.6)	2	(1.5)	2	(7.4)	1	(11.1)