

WORK PLACE VIOLENCE AGAINST TAXI DRIVERS AT ZAGAZIG CITY, EGYPT 2012. AN EPIDEMIOLOGICAL STUDY

By

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Abstract:

Background: Violence against Taxi drivers in Zagazig City is becoming common. However, the research of this issue never exists. **Aim of work:** to identify risk factors faced by taxi drivers for workplace violence and identifies current prevention measures. **Subjects and methods:** A cross-sectional approach was employed. A self-structured questionnaire was used to collect data and different aspects of workplace violence against Taxi drivers at Zagazig between April and May 2011. 85 taxi drivers agreed to participate. Since most of the participants were illiterate or semi-illiterate, all the interviews were face to face, performed by the research team and filled in the questionnaire on their own. Pearson's chi-square analysis was used to test the differences in exposure to physical and non-physical violence according to respondents' characteristics and perpetrators characteristics. Logistic regression model was used to determine the most factor affect in the outcome exposure (violence) **Results:** Less than half of the respondents (40.1%) reported exposure to violence in the previous 12 months; 30.6% physical assault and 16.5% to verbal assault. Logistic regression analysis was done; we found that working at night shift was the most independent factor which affects the outcome (violence). Respondents characteristics like young age (<45 years) represent (76.9%) of physical violence and (57.1%) of verbal violence. Low education(below high school diploma) represent (92.3%) of physical violence and (50%) of verbal violence, less year of experience (less than 10 years) represent

(73%) of physical violence and (74%) of verbal violence .Who work at night shift represent (80.7) of physical violence and(35.7%) from verbal violence. Perpetrator characteristic mostly male (100%) as regard physical violence, as regard verbal violence (64.2%) was male and(35.8%) was female ,in the age group (19-35) represent (53.8%) of those who committed physical violence and (64.3%) of verbal violence. Consequences of both physical and verbal violence were considerable .Only 7% of victims who need treatment by doctor, (10%) had stab wounds, (5%) had been beaten and (2.5%) had fractures. In 30% of them made changes in work schedule, 75% restrict trip outside the city and 70% stop night shift. **Conclusions:** Taxi drivers are at high risk of violent incidents in zagazig city. The Interior Ministry needs to introduce policy and strategies for prevention and management of Taxi drivers' violence, enhancement of incident reporting and follow up on reported events as well as providing adequate physical and psychological support to victims of Taxi drivers violence Decision makers need to be aware of the causes and potential consequences of such events. There is an urgent need for intervention to protect taxi drivers' health.

Keywords: Violence, Taxi drivers, Zagazig, Egypt.

Introduction

Workplace violence is defined as "behaviors by an individual or individuals, within or outside an organization, that is intended to physically and/or psychologically harm a worker/workers and occurs in a work related context (Couto et al, 2011).

It is recognized that the interactions between contextual, individual, workplace and societal risk factors increase workers' vulnerability and exposure to workplace violence (Chappell and Di Martino, 2000)

Taxi drivers are popular targets because they work alone, unprotected, accept passengers whose attitudes to violence are unknown and they carry cash, carrying mobile phones in the taxi, inadequate driver

knowledge of an area, customers with limited funds, Media publicity about assaults may unfortunately increase the probability of future attacks (Mayhew 2000).

The taxi industry usually provides a 24-hour-a-day, seven day-a week service, with most drivers working 12-hour shifts. Employee drivers can be hired on a permanent, casual or irregular basis. The job tasks are the same for all (Mayhew, 2000).

Taxi driving is one of the highest risk jobs; taxi drivers have up to 15 times the average exposure to occupational violence. The high incidence of assaults on taxi drivers compared with other workers is consistent over time (Chappell, 2000).

Night driving is inevitable which involves disruption to the normal body circadian rhythm and results in decreased concentration capacities at low biological points that are between 2am and 4am. Inevitably the ability to perform complicated tasks or recognize warning signs of impending violence, are compromised at these low points of the circadian rhythm (Mayhew, 2000).

In Scotland taxi firms were found to suffer disproportionately from violent attacks, firearms, threats, fraud and thefts (Burrows et. al., 1998).

The severity of incidents appears to be increasing over time and to vary marginally from one region to another. Fare evasion, verbal abuse, damage to vehicle, assault, hijacking and robbery are examples of violence among taxi drivers. Another risk for male drivers is female passengers who threaten allegations of sexual advances unless a fare-free journey is provided (Farley, 1999)

Patterns of injury following assaults were upper-body lacerations, open wounds and fractures, cuts, bruises, head injuries and gunshot wounds (Cassell and Reid, 2013).,

Recent study revealed that work place violence was associated with burnout

syndrome because it is considered to be work stressor and this is buffered by social support (Couto and lawoko, 2011).

Objectives of the study:

The objectives of our project were to:

- 1) To identify risk factors faced by taxi drivers for workplace violence.
- 2) To identify current prevention measures.

Subjects and methods:

Study design and setting:

A cross sectional study was conducted in zagazig city Sharkia by random systematic sampling. Interview with the drivers done during their annual renewal of their car license in the traffic office during the period from April to May 2012

Study sample and procedure:

Sample size was estimated in 1000 taxi drivers obtained from traffic registration at Zagazig city for prevalence of violence 48.6% among taxi drivers in previous studies (Couto et.al.,2011), 95% confidence level, and power of test 80% through Epi-Info (Epidemiological information package) software version 6.1.

Total sample size of 95 male drivers was selected by systematic random techniques when they renew their car license

Accordingly, eligible participants for the present study were the drivers who have licensed taxi to work on and who had one or more years of work experience

Thus, six workers were excluded from the study and 89 male drivers were interviewed personally and invited to participate in the study; out of them, 85 workers agreed to participate. Since 22 % of the participants were illiterate or semi-illiterate, we preferred all the interviews to be face to face, performed by the research team and filled in the questionnaire on their own.

Ethical issues:

Before interview, the taxi workers were informed of the general aim of the survey and their participation in the study was fully voluntary. Confidentiality of collected data was guaranteed to participants.

Data collection and measures:

Questionnaire data:

A specific pre-constructed questionnaire was designed for taxi drivers

on the light of pilot study to clarify the questions, asking for information on personal and socio-demographic data, occupational history including duration of work in driving industry, number of shifts per week, working hours/shift, past history of the occupational violence during the past 12 months. Type of violence, based on their experiences of being verbally or physically threatened or assaulted while on duty and the resulted injuries were described by the injury mechanism, injury outcome, and duration of treatment. Also, ask about expected cause and time of violence and different safety measures that drivers need in their taxi to protect them. The questions focused on the workers' views.

Logistic regression was done; we found that working at night shift was the most independent factor which affects the outcome (violence).

All study groups were male, No one receive training course in how to avoid violence and no one use any protective measures to protect himself during work.

Table 1: Some socio demographic characteristics of the study group

Socio demographic characteristics	Taxi Drivers N=85	
	N	%
Age Groups		
< 45 y	65	76.4
=>45y	20	33.6
Years of experience		
1-5 years	29	34.1
>5-10 years	20	23.5
>10-15 years	19	22.3
>15 years	17	20
Level of Education		
Illiterate	19	22.4
Read and write	20	23.5
Technical diploma	29	34.1
Bachelor degree	17	20
Work in Night shift		
Yes	55	64.7
no	30	35.3

Table 2 incidence of exposure to workplace violence

Work place violence	Taxi Drivers N=85	
	N	%
Exposure to Violence		
Yes	40	47.1
NO	45	52.9
Physical assault		
yes	26	30.6
No	59	69.4
Verbal assault		
Yes	14	16.5
NO	71	83.5

Table 3: Respondents characteristics associated with physical and verbal violence.

	Physical violence N=26		Verbal Violence N=14		X ²	P value
	N	%	N	%		
Age						
< 45 years	20	76.9	8	57.1	1.6	NS
>= 45 years	6	23.1	6	42.9		
Education						
< High school diploma	24	92.3	7	50	9.3	HS
> High school diploma	2	7.7	7	50		
Years Of experience						
≤ 10 years	19	73	10	71.4	0.012	NS
>10 years	7	27	4	28.6		
Work shift at night						
Yes	21	80.7	5	35.7	8.1	HS
No	5	19.3	9	64.3		

N S : Non significant

HS : High significant

Table 4 : Perpetrators characteristics associated with physical and verbal violence.

	Physical violence N=26		Verbal Violence N=14		X ²	P value
	N	%	N	%		
Gender						
Male	26	100	9	64.2	10.6	HS
Female	0	0	5	35.8		
Age Group						
≤ 18	6	23.1	2	14.3	0.5	NS
19-35	14	53.8	9	64.3		
36-60	6	23.1	3	21.4		
Perpetrators						
Under influence of drugs or alcohol	5	19.2	1	7.1	1.8	NS
Not under influence of drugs or alcohol	14	53.9	12	85.8		
Not sure	7	26.9	1	7.1		
Relationship with perpetrators/ sources of violence						
Clients	21	80.7	12	85.7	0.15	NS
Co-workers	5	19.3	2	14.3		

N S : Non significant

HS : High significant

Table 5: Characteristics and consequences of violent assault.

Violent assault	violence Victim N=40	
	N	%
Symptoms		
Anger	39	97.5
Depression	10	25
Fear/Stress	30	75
Frustration	39	97.5
Difficulty of sleeping	8	20
None	1	2.5
Types of physical injury		
-Stab wound injury	4	10
- Hit and beat	2	5
-fractures	1	2.5
Treatment by who		
No Treatment	20	50
Doctor	7	17.5
Myself	12	30
Psychiatrist	1	2.5
Persistent problems as a result		
yes	7	17.5
NO	33	82.5
Work changes as a result		
No changes	10	25
Transfer to another location	5	12.5
Restrictions for trip outside the city	30	75
Stop night shift	28	70

Discussion

The present study included 85 male taxi drivers 34.1% of them have a high school technical diploma and 64.7% worked at night shift work.

In our study we found that (47 %) of taxi drivers were exposed to work place violence in the past 12 months. The study results are comparable with previous regional and international studies despite some differences in the definition of violence and methodology used. This was nearly consistent with (Couto, 2011) who reported that prevalence of work place violence for taxi drivers were 48.6% and relatively higher than (McDonough and Stewart, 2011) who settled that 34.6 % of taxi drivers had been assaulted during their entire time of work. Taxi drivers have higher level of exposure to violence in Egypt which can be explained as a result of the dominant political instability and fragile economic conditions of the country. Difficult living conditions, frustration and stress in the daily life of Egyptian life probably increase the aggressive behavior against taxi drivers. Moreover Taxi drivers never receive any kind of training against violence prevention and communication skills with customers

In Zagazig city (30.6%) of taxi drivers were exposed to physical assault and (16.4%) of them were exposed to verbal assault and this wasn't consistent with (Mayhew, 2000) who reported that assault-related injuries in Australia are often "emotional" rather than physical in nature. This can be explained by the difference in perpetrators and places of work in two researches.

In this study 92.3% of physically assaulted drivers were less than bachelor degree of education in comparison with those had bachelor degree (7.7%) with high statistically significant difference. This was consisted with (couto et al., 2009) who revealed that illiterate participants reported higher exposure to physical violence than their literate peers with statistically significant difference ($P < 0.05$).

As well as, 80.7% of physically assaulted drivers occurred among those with night work shift in relation to 19.3% that occurred among those with day work shift with high statistically significant difference. This was in consistence with (McDonough and Stewart, 2010) who reported that working late at night was important risk factors of violence at New

York Taxi Workers Alliance (NYTWA) because of unsafe outdoor working of taxi drivers and dealing with different types of perpetrators during night.

On the other hand, the frequency of physical (76.9%) and verbal assaults (57.1%) were higher among drivers less than 45 years old than that among drivers more than and equal to 45 years old, although, there was no statistically significant difference. This was in accordance with (Couto et al., 2009) who stated that exposure to workplace violence in the road passenger transport sector was more prevalent among age group 50-59 years than that among other age groups with no significant difference which could be explained with rush and enthusiasm of young drivers and less life experience among them. Also, we found that 73% of physically assaulted drivers and 71.4% of verbally assaulted ones were more prevalent among workers with experience less than and equal to 10 years than that among workers more than ten years of experience with no statistically significant difference. This was in consistence with (Couto et al., 2009) who revealed that short occupational experience (0-5years)

reduced the likelihood of abuse when contrasted with those of long occupational experience. This could be explained by more work experience led to more respect from customer and more prediction of drivers to deal with repeated and similar situations and how to avoid violence.

100% of physically assaulted drivers and 64.2% of verbally assaulted were due to male perpetrators in comparison to 0% and 35.8% consequently related to female perpetrators with high statistically significant difference. This was in agreement with (Gillespie et al., 2010) who stated that men are more likely and physically capable of enacting physical violence than women who are more likely to enact verbal violence.

There was no statistically significant difference between physical and verbal violence relative to the age of perpetrators, drug or alcohol intake and the relationship with perpetrators (coworkers or client). But young perpetrators less than or equal to 35 years old (≤ 18 and 19-35) were more associated with relatively high frequency of physical (76.9%) and verbal (78.6%) assaults for both age group. This was consistent with (Roberts and Indermaur,

2005) who stated that driving-related violence were typically perpetrated by young males against other male drivers.

It was found that (53.9 %) of physical violence and (85.8 %) of verbal violence were assaulted by normal perpetrators not under influence of drugs or alcohol intake. This was in accordance with (McDonough and Stewart, 2010) who said that 6.2% only of taxi drivers at New York Taxi Workers Alliance (NYTWA) were victims of assaults because of a drunken passenger but not consistent with (Couto et.al., 2011) who mentioned that perpetrators of violence against taxi drivers were using alcohol or drugs in Maputo city in the road transport sector which could be related to different traditions and cultures of Egyptian population toward alcohol and drug abuse.

Also, clients were responsible for 80.7% and 85.7% of physical and verbal violence consequently comparable to coworkers. Similar to the previous study performed by (Couto et al., 2009) who reported that most of perpetrators were consisted of passenger (clients) followed by co-workers.

The most prominent consequences of violence among victims were anger (97.5%)

and frustration (97.5%) followed by fear/stress (75%). (Chappell and Di Martino, 2006) stated that most of workplace violence can lead to anger, depression, stress, frustration, anxiety and burnout.

It was not surprising that 50% of driver's victims had no treatment after violence and 30% of them had self-treatment and about 7% of the drivers received treatment by doctors which was consistent with (Couto, 2011) who said that most of assaulted drivers did not receive any kind of medical treatment or counseling after violence.

In our Study, the different types of physical assault was stab wound injury (10%), drivers had been beaten (5%), and fractures (1%). This is in agreement with study by (Couto, 2011) in which victims of violence who have stab wound were (16%), driver had been beaten (15.3%) and kicking (6.3%).

As well as, most of assaulted drivers (82.5%) didn't have persistent problem after violence this was contradictory to (Chappell and Di Martino, 2006) who settled the evidence that work related violence usually results in persistent psychosomatic disorders, and deterioration

of professional performance of violated workers. This could be clarified by the Egyptian nature to cope with hard stressors by simplest methods like smile and funny comments.

Also, 75% of them didn't made trip outside the city and 70% stopped work at night shifts and 25% only made organizational changes. This wasn't in accordance with (Couto et. al., 2009) who reported that those who experienced physical or non-physical violence showed subsequent changes in their work status including absence or subsequent transfer to another location. This could be explained by the fact that taxi drivers at Egypt believed that their jobs were not dangerous enough to change it but work modifications were more important to protect themselves like stop travelling outside the city and not taking night shift work rather than work change. Also, attention should be given to violence policies as well as enforcement of the legal system after such events.

Logistic regression analysis was done; we found that working at night shift was the most independent factor which affects the work place violence which was consistent with (Gilbert , 2011) who found that

violence against taxicab drivers were most likely to happen due to driving in late night shifts (11pm -6am) when they worked alone . This could be attributed to scarce presence of police officers in the streets and shortening of client and coworkers during late night shifts that would require personnel to work alone.

Surveys of taxi drivers are unlikely to provide a total picture of the incidence and severity of violence because only workers who are well remain in the job and those who are ill or injured leave (Mayhew, 2000).

Indeed there is no base line data regarding taxi drivers in Egypt. Most taxi drivers hire on casual or irregular basis not belongs to company. In Zagazig city, most drivers are without even professional driver license, their work hours are hectic and almost not receiving any training in communication skill, customer satisfaction and measures to avoid violence , there is greater probability that occupational violence is more frequent in developing countries today especially after Arab revolutions , chaos and political unrest.

Limitations of the study

As with all research, there are limitations to the present study

- It used a retrospective self-reporting approach in data collection. This method depends on the ability of the participants to recall events in last 12 months previous to study, which might have potential biases
- Moreover, the lack of researches in the same field (taxi drivers) so we use the nearest ones related to us to add to this study.
- One of the obvious limitations of the current research is the time-related limit of the study because it is cross sectional study .It cannot measure causation between Taxi drivers and violence.
- A key concern is that used tools of the study was measured solely based on self-report (questionnaire) but an externally assessed or objective measure of workplace violence might strengthen the evidence.
- The sample of the study was obtained from one geographic area (Zagazig).

Any attempt to generalize the results of this study to another geographic areas must recognize the geographic limitations

- The difficulty in interviewed some participants because all interviews were done in the taxi while the participant were working, was no available place to sit with them and answer the questionnaire in comfortable way.

Conclusion

This study employed an approach to identify the incidence, magnitude, consequences and potential risk factors for workplace violence against Taxi drivers. The Interior Ministry needs to introduce policy and strategies for prevention and management of Taxi drivers' violence, enhancement of incident reporting and follow up on reported events as well as providing adequate physical and psychological support to victims of Taxi drivers' workplace violence. The results of the study can serve the development of appropriate policy and strategies on workplace violence against Taxi drivers and also can serve as the basis for future studies in the country.

We recommend the following

Taxi driver initiatives have to be implemented to reducing night time assaults on drivers, increasing the perception of safety among drivers, reducing conflict over fares and reducing fare evasion.

- Also, there are several types of safety equipment can be available to taxi drivers to prevent violence , such as security cameras, partitions, deadlocks, GPS devices, and alert systems which can reduce crime rate targeted this dangerous occupation.

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