

PATTERNS OF DOMESTIC VIOLENCE AND ITS RELATION TO SUICIDAL POISONING ATTEMPTS: AN OBSERVATIONAL STUDY AT TANTA UNIVERSITY POISON CONTROL CENTRE

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ABSTRACT

Background: Violence is a worldwide phenomenon resulting in 1.6 million deaths per year, making it one of the top causes of mortality in the world. **Aim of the work:** the present study aimed to assess the incidence of domestic violence, its patterns, and its relation to suicidal poisoning attempts in patients admitted to Tanta University Poison Control Centre (TUPCC). **Patients and methods:** The present study was carried out on 202 suicidal attempt cases admitted to TUPCC in the period from 1st of May 2022 to 31st of October 2022. The patients' data including their sociodemographic, toxicological, suicidal and clinical evaluation were recorded in a special sheet. In addition, poison severity, investigation results, management and poisoning outcome were also recorded. Data about exposure to domestic violence and data about perpetrators were additionally recorded in a special questionnaire. **Results:** Most suicidal attempt patients were exposed to domestic violence. Patients exposed to domestic violence were mainly females, middle-aged, lower educated, from rural areas, and had lower socioeconomic status. Aluminum and zinc phosphides were the most common suicidal ingested poisons by patients exposed to domestic violence. Emotional violence was the most reported form of violence followed by physical, neglect and financial violence. **Conclusions and Recommendations:** exposure to domestic violence increases the risk of suicidal poisoning. Surveying any admitted suicidal case to identify their exposure to domestic violence is highly recommended.

Keywords: Abuse, self-poisoning, morbidity, mortality, high risk.

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INTRODUCTION

Violence is the intentional use of physical force or power, against oneself, another person, or against a group or community (WHO, 2021). There are dozens of hospitalizations and hundreds of emergency department visits due to violence. Also, violence has lifelong consequences on physical, and mental health, social functioning, and drawbacks to economic development (Habibal, 2019). Domestic violence (DV) is violence or abuse that occurs in a domestic setting such as in cohabitation or marriage. Domestic violence includes partner, child, elder, and other family member abuse (Zamba et al., 2022). Domestic violence is the net result of different factors (individual, family, community, and societal factors) Some are associated with being a perpetrator of violence, some are associated with experiencing violence while others are associated with both (Timshel et

al., 2017). Among the risk factors of violence are lack of a religious preacher, previous exposure to child maltreatment, childhood abuse and witnessing family violence. Antisocial personality disorder, use of alcohol or other drugs of abuse, unemployment, low socioeconomic status and lower educational level are also well-known risk factors of violence (Jahromi et al., 2016). Violence may be physical, emotional, financial, or sexual. Even neglect is considered a type of violence (Zamba et al., 2022). Physical abuse is the intentional use of physical force with the potential to cause harm, injury, disability, or death. It includes scratching, pushing, shoving, throwing, grabbing, biting, or strangulating. Beating, stabbing, dragging, shaking, slapping, punching, or burning are additional examples of physical abuse. It may also include using a weapon, restraints, or strength against another person. Physical abuse varies in frequency and severity,

ranging from one hit to chronic severe battering (*Huecker et al., 2023*). Physical abuse can cause injuries characterized by multiple types at multiple body sites with different healing ages such as skin injuries which are a common type of injuries (including abrasions, bruises, bite marks, scalds, cigarette burns and burns from appliances) (*Sege and Stephens, 2022*). Physical abuse can also cause skeletal fractures such as spiral fractures of long bones, broken teeth, joint dislocation, and sprains (*Campbell et al., 2022*), and visceral injuries such as ruptured spleen, liver laceration, different injuries in the pancreas and intestine, and ruptured bladder. In addition, physical abuse may lead to a ruptured uterus, placental separation, intra-uterine fetal death, and preterm labor in pregnant females (*Russell et al., 2022*). Other injuries such as black eye, dislocated lens, retinal and vitreous hemorrhage, and detached retina may be found in some cases of physical abuse. (*Suzanne Ching, 2022*). Psychological/emotional abuse is defined as the intentional use of words and body language to emotionally hurt another person. It may include humiliation, bullying, and control over what a person acts. In addition, isolating the victim from friends and family, intimidation, threats of harm, or taking away children and repeated threats of abandonment and divorce are also considered forms of psychological abuse (*Engel, 2023*). Sexual abuse refers to sexual behaviors toward another person that are forced, unwanted, or not consented to (*Lee et al., 2023*). It includes acts such as rape, sodomy, verbal or behavioral sexual harassment, and other abnormal sexual acts (*Augusti et al., 2023*). Financial abuse refers to nonconsensual appropriation and restriction of access to resources such as bank accounts, spending money, stealing, or deprivation (*Mohideen and Khokhlova, 2022*). Neglect is the failure of a caregiver to protect another person from harm or provide for essential needs in food, clothes, health, and shelter (*Weissberger et al., 2022*). Severe loss of weight, dehydration, or malnutrition, poor personal cleanliness, hair lice, lack of proper clothing, bed sores, stealing food, or poor record of school

attendance are warning indicators of neglect (*Bywaters et al., 2022*). Domestic violence victims are at a higher risk of developing physical injuries, permanent infirmities and psychiatric illnesses, including major depressive disorder and anxiety (*Chandan et al., 2020*). In addition, substance use, post-traumatic stress disorder, sleep disorders, low self-esteem, and suicidal attempts are highly associated with exposure to violence (*Cirici Amell et al., 2023*).

THE AIM OF THE WORK

This study aimed to assess the incidence of domestic violence, its patterns, and its relation to suicidal poisoning attempts in patients admitted to Tanta University Poison Control Centre.

PATIENTS AND METHODS

A cross-sectional study was conducted on 202 suicidal attempt cases admitted to the Tanta University Poison Control Centre (TUPCC) from the 1st of May 2022 to the 31st of October 2022 following approval of the research ethical committee of the Faculty of Medicine, Tanta University. Code of ethical approval (22/5/35489). A written informed consent was taken from each patient or his/her guardians (if the patient was below 18 years old). Confidentiality of the data was maintained by making a code number for each patient.

Inclusion criteria:

- Suicidal patients of both genders (male and female).
- Age >12 years old.
- Conscious patients.
- Competent patients (without mental retardation or disorders).

Exclusion criteria:

- Non-suicidal patients.
- Age <12 years old. Below 12 years old, the child may not be able to be interviewed; some questionnaire items may not fit the intellectual abilities of this age category. In addition, child may be frightened from family members or may give imaginary answers.
- Unconscious patients and patients with mental retardation, disorders, or psychosis (incompetent patients).
- Patients or guardians' refusal to share in the study.
- Patients with incomplete or missed data.

Data were collected using a toxicological sheet from patient and patient records and a

questionnaire pretested via face-to-face interview. All interviews were conducted in a private setting to ensure responses would not be influenced by another person and for patient safety.

Toxicological sheet data included: sociodemographic data of the patient, toxicological history, medical and family history of the patient, clinical examination, data of investigations, poison severity score, data of received treatment and outcome of poisoning.

Violence data included: Data about abuse including type (physical, emotional, sexual, and financial or neglect). In case of physical violence: form of violence (hitting, burn, biting, etc.), site and type of injuries (burn, bruises, abrasions, etc.), and photographing injuries whenever it was possible after obtaining the patient's consent. In cases of emotional violence, the form of abuse was asked whether humiliation, bullying, intimidation ...etc. Patients who reported financial violence were asked about the type or form. In cases who had reported neglect, they were asked about the form of it and whether it was neglect to food, health, clothes, or other type of neglect.

Data about the perpetrators including his sociodemographic data (age, gender, occupation, education, socioeconomic status, special habits and any chronic medical disease including psychiatric and mental disorders). In addition, his social relation to the victim and the history of his exposure to or witnessing any type of violence during his life were also recorded. Items of violence sheet were collected from multiple previous studies (*El Kelany and Saad; 2012, Fouad et al., 2019; Bandara et al., 2022; Ibrahim et al., 2021*).

Validation of the questionnaire was carried out on 10% of sample size patients and this was not included in the final analysis.

Statistical Analysis:

The collected data were organized and entered on an Excel sheet and statistically analyzed using the statistical package for the social sciences (SPSS) software statistical computer package for Windows, version 25 (IBM Corp., Armonk, N.Y., USA). The results were tabulated, grouped and statistically analyzed using the following tests: *Independent t Test (t)*: for comparison between 2 independent groups regarding parametric quantitative variables; *Mann Whitney U Test (U)*: for comparison between 2 independent groups regarding nonparametric quantitative variables;

Pearson Chi Square Test (χ^2): to detect whether there is a significant association between different categorical variables and when it was inappropriate, it was replaced by *Fischer Exact or Monte Carlo Exact test.*; *Binary logistic regression by Wald test*: to study the relation between variables as predictors for violence. P value: Used to indicate the level of significance:

RESULTS

The current study showed that suicidal attempt by self-poisoning was reported in 328 patients representing (76%) of all patients admitted to TUPCC during the study period. Only 202 patients were included in the study and the remaining were excluded, of which 62 reported accidental poisoning. Of the included patients, 82 patients weren't exposed to domestic violence (group 1) and 120 patients were exposed to domestic violence (group 2).

Table (1) illustrates the comparison between group 1 and group 2 as regards the socio-demographic characteristics of the patients:

In group 2, female patients represented more than (75%) of the patients who were exposed to domestic violence. There was no significant difference between both groups regarding age, sex, and residence. Single patients were higher in group 1 than in group 2 (67.1% and 51.7% respectively) while married patients were higher in group 2 than in group 1 (44.2% and 30.5% respectively). Widow patients were exclusively presented in group 1 while divorced patients were presented only in group 2 with a statistically significant difference between both groups as regards marital status ($p=0.008$). There was no statistically significant difference between both groups as regards socioeconomic status, and special habits.

Figure (1) illustrates the comparison between group 1 and group 2 as regards occupation: most patients in group 1 and group 2 were students however housewives' percentages were higher in group 2 than in group 1 (31.7% and 14.6% respectively) with a statistically significant difference between both groups as regards occupation type ($p=0.001$).

Table (2) illustrates a comparison between group 1 and group 2 regarding the toxicological data of the patients:

In group (1), pesticide poisoning was the most commonly ingested suicidal poison (45.1%) followed by antipsychotics (19.5%). In group 2, pesticides also were the commonest (60%) followed by analgesics (11.7%) and antiepileptics (10%) with statistically significant differences between both groups as regards poison category ($p=0.015$). It is observed that the median delay time between poison administration and hospital admission was statistically higher in group 2 than in group 1 (4 and 3 hours respectively) ($p<0.001$).

Figure (2) demonstrates a comparison between group 1 and group 2 as regards the method of first aid interference before hospital admission:

About half of the patients in group 1 received oral paraffin oil while the remaining received medical management in the form of activated charcoal, gastric lavage, intravenous fluid, or medical injection for symptomatic manifestation and no patients received salted water orally in this group. However, in group 2, about a third of the cases received oral paraffin oil and about 20% of the patients received salted water orally at home. Gastric lavage was done in a relatively small percentage of patients in group 2 (8.1%) and none of them received activated charcoal before hospital admission. There was a statistically significant difference between both groups as regards the method of first aid interference before hospital admission ($p=0.032$).

Figure (3) illustrates the percentage and type of violence in the participating patients:

Of 120 patients exposed to violence (about 60% of all patients), 112 were exposed to a single type of violence while 8 patients were exposed to multiple types of violence.

Emotional violence was the most reported form of violence followed by physical, neglect, and financial violence (26.7%, 22.3%, 3.5% and 3%) of the total number of participating patients respectively. Sexual violence was denied in all patients in the current study (0% of all patients).

Table (3) illustrates different data about physical violence:

Physical violence was reported in about 43% of patients in group 2. Analyzing physical

violence revealed that manual hitting and slapping were the most common forms of physical violence (86.6% of patients). No evidential injuries were found at time of patient examination in about 70% of them. The remaining patients reported either abrasions, bruises, contused wounds, fractured bones, scalds, and black eye. The face was the commonest site of physical injuries especially the cheeks (40% of patients). No weapon was used in the majority of patients (about 80%).

Table (4) demonstrates different data about emotional violence:

About 52% of patients in group 2 were exposed to emotional violence. Humiliation, threat, and bullying were the most common forms of emotional abuse (37.1%, 29% and 17.7% respectively).

Table (5) illustrates different data about financial violence and neglect:

Financial violence was reported in 5% of patients in group 2 mainly in the form of stealing victim's money and other properties. Neglect was reported in about 8 patients, 75% of them reported neglect of health issues only while 25% reported all items neglected (food, clothes, health, housing, and learning).

Table (6) shows the socio-demographic characteristics of the perpetrators in group 2 (patients exposed to violence):

The age of the perpetrators ranged from 13-60 years with a median age of 40 years. The majority of the perpetrators were male (69.2%) and from rural areas (65.8%).

Most of the perpetrators were unemployed (27.5%), farmers (23.3%), and housewives (22.5%) who were medium, low-educated, or even non educated (35%, 28.3% and 30% respectively). While highly educated represented only about 6.7% of the perpetrators.

In more than half the number of patients, the perpetrator was either the husband or the father of the victim (26.7% and 25% respectively).

Perpetrators with low to medium socioeconomic status represented about two-thirds of the perpetrators in this study. 40% of them were chronic cigarette smokers and 6.7% were alcoholics.

Table (1) Comparison between group 1 and group 2 as regards socio-demographic characteristics of the patients (n=202).

	No violence (n=82)	Violence (n=120)	Test of sig.	P
Age			U	0.927
Mean \pm SD.	26.6 \pm 12.36	26.6 \pm 11.66	4882.5	
Min. – Max.	13.0 – 75.0	13.0 – 66.0		
Median (IQR)	22.5 (18.0 – 33.5)	22.5 (18.0 – 32.75)		
Gender			χ^2	0.172
Female	55 67.1%	91 75.8%	1.866	
Male	27 32.9%	29 24.2%		
Residence			χ^2	0.671
Rural	57 69.5%	80 66.7%	0.181	
Urban	25 30.5%	40 33.3%		
Marital status			MC	0.008*
Single	55 67.1%	62 51.7%		
Married	25 30.5%	53 44.2%		
Divorced	0 0.0%	5 4.2%		
Widow	2 2.4%	0 0.0%		
Socioeconomic status			χ^2	0.387
Low	40 48.8%	60 50.0%	1.898	
Medium	27 32.9%	46 38.3%		
High	15 18.3%	14 11.7%		
Special habits			MC	0.119
No	64 78.0%	104 86.7%		
Smoking	17 20.7%	15 12.5%		
Hashish	1 1.2%	0 0.0%		
Tramadol	0 0.0%	1 0.8%		

U: Mann Whitney U test, χ^2 : Chi-square test, MC: Monte Carlo Exact test, Min: minimum, Max: maximum, SD: standard deviation, IQR: Interquartile range, $p \leq 0.05$ (Statistically significant), N: number, %: percentage, yrs.: years, sig: significance.

Table (2) Comparison between group 1 and group 2 as regards toxicological data of the patients (n=202).

	No violence (n=82)	Violence (n=120)	Test of sig.	p
Poison category			MC	0.015*
Pesticide	37 45.1%	72 60.0%		
Antipsychotic	16 19.5%	10 8.3%		
Analgesic	6 7.3%	14 11.7%		
Antiepileptic	7 8.5%	12 10.0%		
Oral hypoglycemic	4 4.9%	4 3.3%		
Beta agonist	3 3.7%	2 1.7%		

Antiarrhythmic drugs	1 1.2%	3 2.5%		
Mixed tablets	4 4.9%	0 0.0%		
Beta-blocker	1 1.2%	3 2.5%		
Skeletal muscle relaxant	2 2.4%	0 0.0%		
Sedative hypnotics	1 1.2%	0 0.0%		
Delay time (hours)			U	<0.001*
Mean \pm SD.	3.9 \pm 4.74	4.6 \pm 3.29	3206.5	
Min. – Max.	0.5 – 24.0	0.5 – 20.0		
Median (IQR)	3.0 (1.0 – 4.0)	4.0 (3.0 – 5.0)		
Pre-hospitalization Medical or non-medical interference			χ^2	0.232
No	63 76.8%	83 69.2%	1.427	
Yes	19 23.2%	37 30.8%		

U: Mann Whitney U test, χ^2 : Chi-square test, MC: Monte Carlo Exact test, FE: Fischer Exact test, SD: standard deviation, min: minimum, max: maximum, IQR: interquartile range, $P \leq 0.05$ (Statistically significant), n: number, %: percentage, sig: Significance

Table (3): Data about physical violence among patients in group 2 (n=120).

	N.	%
Physical violence		
No	68	56.7
Yes	52 (45 single + 7 multiple types of violence)	43.3
Form of physical violence (n=52)		
Hits	29	55.8
Slap	16	30.8
Burn	4	7.7
Bites	2	3.8
Kick	1	1.9
Form of injury (n=52)		
No injuries	36	69.2
Bruises	5	9.6
Abrasion	4	7.7
Scalds	3	5.8
Bruise and abrasion	1	1.9
Bruise and black eye	1	1.9
Fracture bone	1	1.9
Black eye	1	1.9
Number of injuries (n=15)		
Multiple	8	53.3
Single	7	46.7
Site of injuries (n=15)		
Cheeks	6	40.0
left eye	2	13.3
Face and arms	2	13.3
Face and chest wall	1	6.7
Face and neck	1	6.7
Face	1	6.7
Nose	1	6.7
Right eye	1	6.7
Weapon used or not (n=49)		
No (hands only)	39	79.6
Yes	10	20.4

N: number, %: percentage

Table (4): Data about emotional violence among patients in group 2 (n=120).

	N.	%
Emotional violence		
Yes	62 (54 single + 8 multiple)	51.7
No	58	48.3
Forms of emotional violence (n=62)		
Humiliation	23	37.1
Threat	18	29.0
Bullying	11	17.7
Deprivation	6	9.7
Grovelingly	3	4.8
Threat and humiliation	1	1.6

N: number, %: percentage

Table (5): Data about financial violence and neglect among patients in group 2 (n=120).

	N.	%
Financial violence		
No	114	95.0
Yes	6	5.0
Form of financial violence (n=6)		
Stealing	5	83.3
Financial abandonment	1	16.7
Neglect		
No	112	93.3
Yes	8 (7 single + 1 multiple)	6.7
Form of neglect (n=8)		
Health issue only	6	75.0
All forms of neglect	2	25.0

N: number, %: percentage

Table (6): Socio-demographic characteristics of the perpetrator in violence cases (n=120)

	N.	%
Age (yrs.)		
Mean \pm SD	38.9 \pm 10.08	
Min. – Max.	13.0 – 60.0	
Median (IQR)	40.0 (33.5 – 45.0)	
Gender		
Male	83	69.2
Female	37	30.8
Residence		
Rural	79	65.8
Urban	41	34.2
Occupation		
Unemployed	33	27.5
Farmer	28	23.3
Housewife	27	22.5
Driver	16	13.3
Teacher	8	6.7
Nurse	5	4.2
Carpenter	3	2.5
Educational level		
Medium	42	35.0
Not educated	36	30.0
Low	34	28.3
High level	8	6.7
Relationship to victim		
Husband	32	26.7
Father	30	25.0
Mother	19	15.8
Cousin	18	15.0
Brother	6	5.0
Daughter	4	3.3
Wife	4	3.3

Son	3	2.5
Sister	2	1.7
Grandfather	2	1.7
Socioeconomic status		
Low- medium	75	62.5
High	45	37.5
Special habits		
No	63	52.5
Smoking	48	40.0
Alcoholism	8	6.7
Hashish	1	0.8

IQR: Interquartile range, N: number, %: percentage, yrs.: years, SD: standard deviation, min: minimum, max: maximum

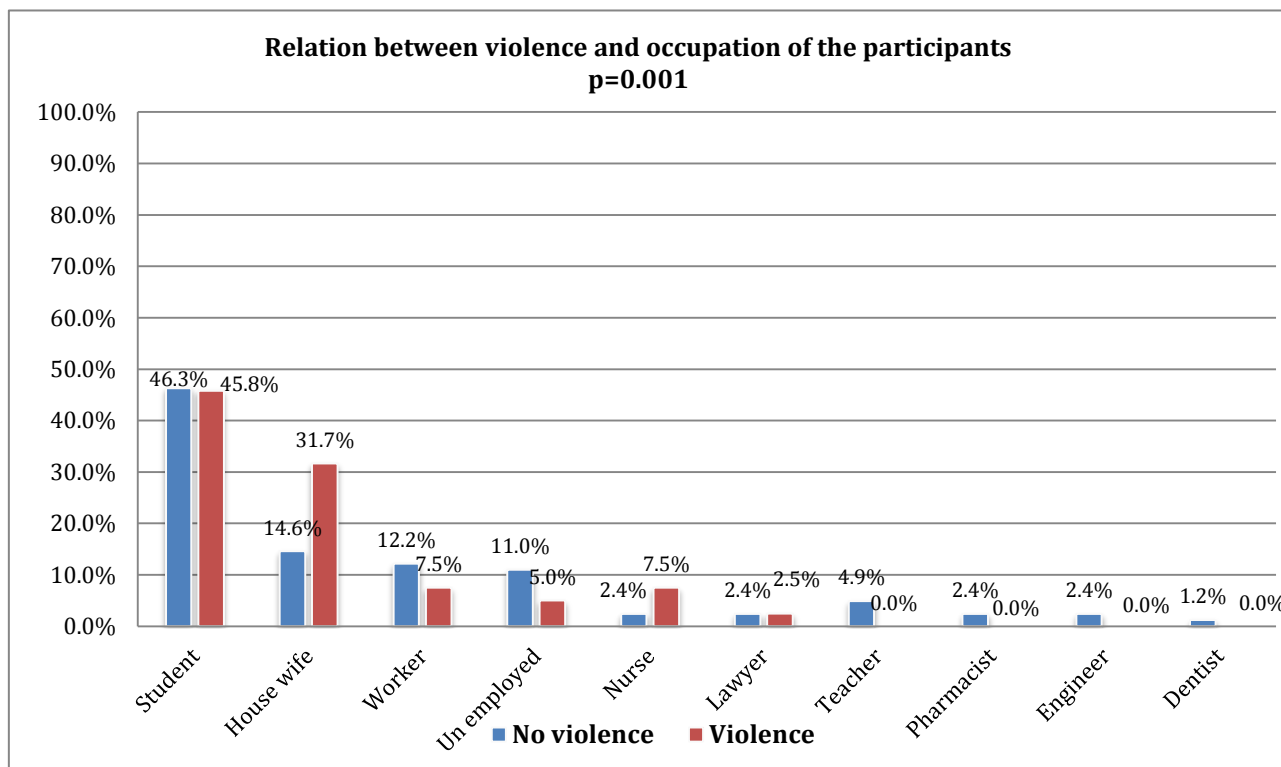


Figure (1): Comparison between group 1 and group 2 as regards occupation.

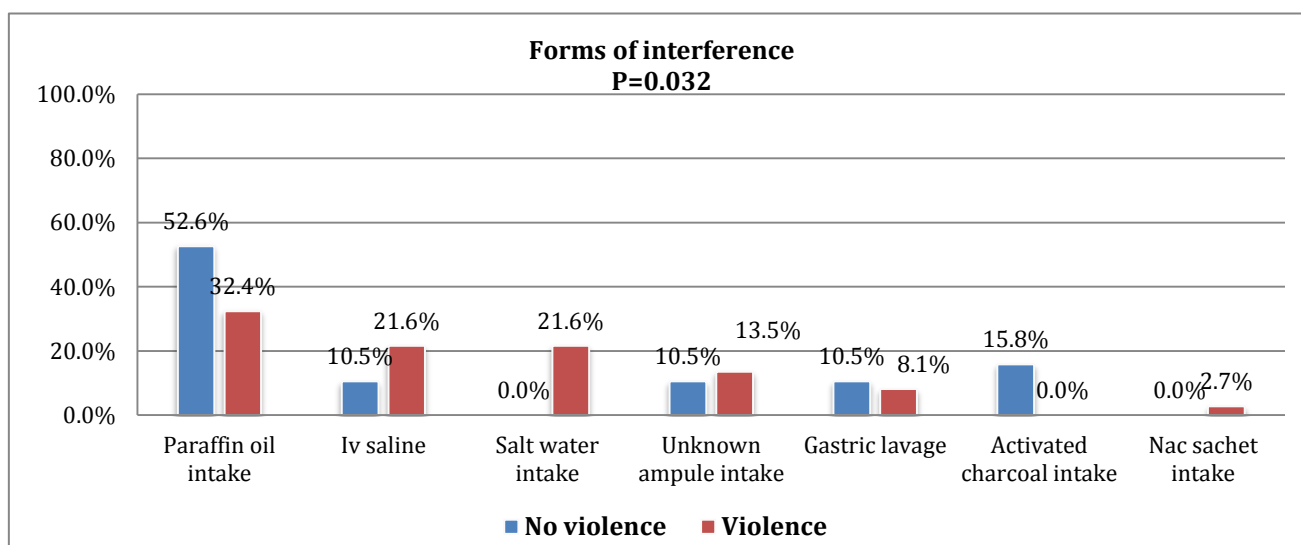


Figure (2): Comparison between group 1 and group 2 as regards the method of first aid interference before hospital admission.

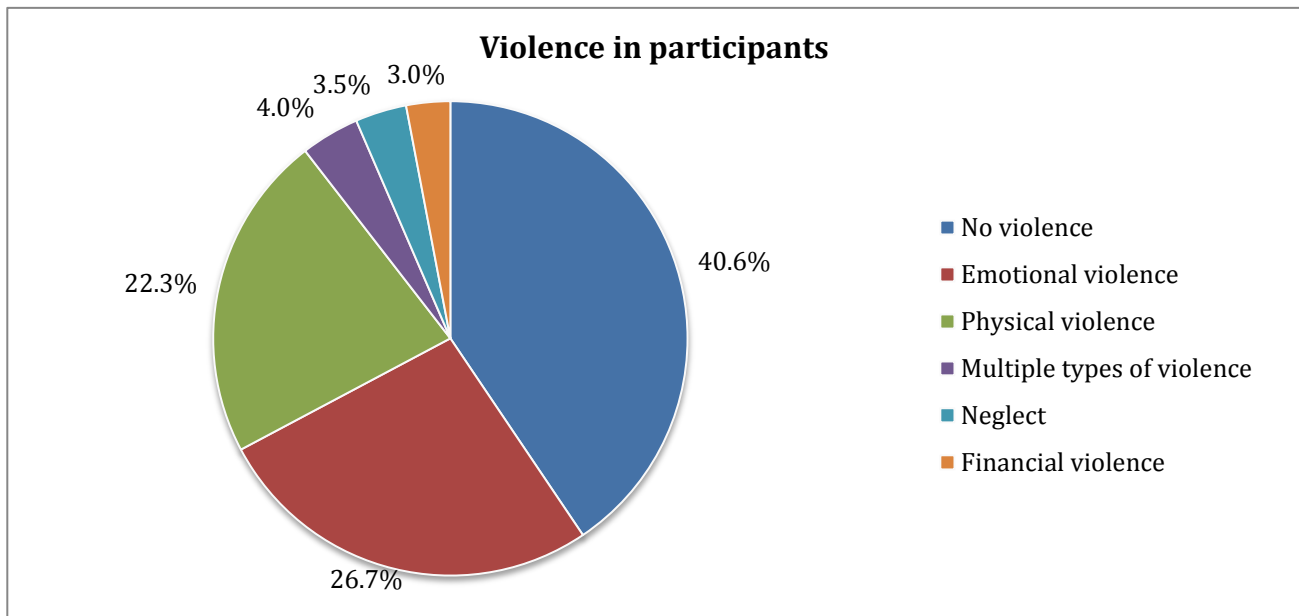


Figure (3): Percentage and type of violence in participating patients.

DISCUSSION

Violence represents a fundamental violation of human rights (Storey, 2020). Domestic violence is a significant public health issue that causes worsened psychological and physical health, decreased quality of life, decreased productivity, and in some cases, mortality (Houseman and Semien, 2023). Exposure to violence increases the risk of suicidal thoughts and attempts (Zamba et al., 2022). Our study aimed to assess the incidence of domestic violence, its patterns, and its relation to suicidal poisoning attempts in patients admitted to Tanta University Poison Control Centre.

The present study demonstrated that of the included suicidal attempt patients (202), 40.6% weren't exposed to domestic violence (group 1) and 59.5% were exposed to domestic violence (group 2).

Female patients represented more than (75%) of the patients who were exposed to domestic violence with a median age of 22.5 with no significant difference between both groups as regards age and sex. This result coincides with Fouad et al. (2019), who reported that females (82%) were significantly exposed to violence more than males in the age group (20-30) years. Additionally, Alrasheed et al., (2022) found that the percentage of females who were exposed to violence was significantly higher when compared with

males which was only 4%. Added to these, Abbas et al. (2023) reported that most of the participants in their study were women aged between 29 and 39 years, who got married for 18–23 years.

Exposure of females to violence can be explained by the lack of female power, especially in a society where more control and power have been allocated to men and a lack of fairness (Ibrahim et al., 2021). Females' dependence on males, laws regarding divorce, child custody, maintenance and inheritance are principal factors for violence victimization (Mojahed et al., 2022).

Our study demonstrated that 80% of patients who were exposed to domestic violence were from rural areas. This coincides with Zamba et al. (2022), who found that most of the studied patients who were exposed to violence were from rural areas. This may be explained by a lack of awareness about human rights and widespread gender norms in rural areas. In the present study, married patients with low socioeconomic status were significantly higher in group 2 who were exposed to violence than group 1. This coincides with result of Fouad et al. (2019) and Mojahed et al. (2022). This may be explained by increasing responsibilities, stress facing people, and economic instability

which lead to more family problems and increased violence.

In the current study, most patients in group 2 who were exposed to domestic violence were students followed by housewives. This coincides with *Hassanian-Moghaddam et al. (2016)*, who found that most of the patients exposed to violence were college students. This may be explained by the dependency of students on their families, socioeconomic requirements and social relationships. Failure in education may play an additional role (*North, 2022*).

On the other hand, *Bandara et al. (2022)* and *Schrubbe et al. (2023)*, reported that housewives percentage was higher in patients who were exposed to violence. Housewives spend a lot of time at their husbands' homes and their economic dependence on them increases the risk of stress and exposure to violence (*Çelebi et al., 2022*).

Our study revealed that pesticide poisoning as aluminum and zinc phosphides was the most common suicidal ingested poison (60%) taken by patients who were exposed to domestic violence followed by analgesics and antiepileptics. This result coincides with *Kasemy et al. (2021)*. Pesticides are available and low-cost household products. Aluminum phosphide is a poison of choice for suicide as it demonstrates a high fatality rate, has no effective antidote, is cheap, and is freely available (*Astaraki et al., 2022*).

It is observed that the median delay time between poison administration and hospital admission was statistically higher in group 2 who were exposed to domestic violence. In cases of violence, it is well observed that there is a delay from both the perpetrator and victim in seeking medical advice for fear of legal and social issues. This delay explains why gastric lavage was done in a relatively small percentage of patients in group 2. Additionally, the majority of patients who were exposed to violence received first aid for poisoning mainly at home. Oral paraffin oil and salted water were the preferred methods for decontaminating poison rather than seeking medical advice.

Of 120 patients exposed to violence, 112 were exposed to a single type of violence while 8 patients were exposed to multiple

types of violence. *Ibrahim et al. (2021)* demonstrated that about 19.5% of the participants experienced different types of domestic violence.

From patients exposed to violence (group 2), emotional violence was the most reported followed by physical, neglect, and financial violence (51.7%, 43.3%, 6.7% and 5%) respectively. This coincides with *Abbas et al. (2023)*, who reported that 79% of the participants in his study had experienced emotional violence. However, this result contradicts *Fouad et al. (2019)*, who revealed that the prevalence of physical violence was 75% in their study. Also, *Hassanian-Moghaddam et al. (2016)* found that physical abuse was the commonest type that led the participants to commit suicide.

El Kelany and Saad (2012) revealed that physical violence is the most common type of violence (88.46%), followed by sexual violence (7.6%), and psychological violence (3.8%). This variation in the prevalence rate of violence forms might be due to cultural and ethnic factors as well as the variation in the definition and magnitude of the problem among different populations (*Mojahed et al., 2022*).

Dastjerdehei et al. (2020) found a close relationship and integration between physical and psychological violence. They reported that even physical punishment which is considered "mild" or "acceptable", such as "hitting" or "smacking," appears to have long-term negative effects on psychological and even physical health. The victim may feel helpless, powerless, and guilty. Victims are more likely to have depression, posttraumatic stress disorder, suicidality, and substance abuse (*Kong and Goldberg, 2022*). Sexual violence was denied in all patients in the current study. This may be explained by cultural, ethnic factors and blame which may be placed on the victims instead of the abuser. On the other hand, *Milroy et al. (2022)* reported that the prevalence of sexual violence in the participants was 17%.

El Kelany and Saad (2012) in addition reported that the frequency of sexual violence was 4.7%. In most of these cases, the husband was the perpetrator.

Analyzing physical violence revealed that manual hitting and slapping were the most common forms of physical violence in the present study. This result goes hand in hand with a study achieved by *Bandara et al. (2022)*, who reported that the most common violent act was slapping. *Ibrahim et al. (2021)* on Saudi Arabian females from thirteen governorates reported (45.6%) of slaps/push and (4.3%) of burns and scalds as minor incidents.

The present study revealed that no evidential injuries were found in about 70% of patients. The remaining patients reported abrasions, bruises, contused wounds, fractured bones, scalds and a black eye. *El Kelany and Saad (2012)* reported that fractures were the most common findings (26.92%), followed by incised wounds (21.15%), stab wounds (19.23%), bruises (17.3%) and finally lacerations (9.6%).

The face was the commonest site of physical injuries especially the cheeks in the present study. *Fouad et al. (2019)*, found that the most commonly encountered anatomical site that culminates trauma in their study was the head (45.27%) followed by the chest (28.83%). However, *Ibrahim et al. (2021)* reported that the chest and abdomen were the most common sites of physical injuries.

Zamba et al. (2022) reported an increased incidence of extremities injuries more than those of the chest. This topographic difference may be due to variations in the pattern of trauma and the surrounding circumstances. Additionally, the face is the most common site for slapping which is a common violent act at violent events (*Gilbar et al., 2023*).

No weapon was used in the majority of patients in this study. In cases of domestic violence, most perpetrators prefer to use their hands or feet instead of using any instrument to avoid causing observed injuries (*Kong and Goldberg, 2022*).

In the present study, financial violence was reported in 5% of violence exposed group mainly in the form of stealing victim's money and other properties. *Postmus et al. (2020)* reported that financial violence was the second most common type of violence in their study and is considered a frequently

hidden or invisible form of violence as part of the perpetrators' strategy to control their partners. Neglect was reported in about 6.7% of patients in group 2. In Turkey, neglect was found to be the second most frequent form of mistreatment after psychological abuse (*Yalçın Gürsoy and Tanriverdi, 2023*). In Spain, neglect is the predominant form of elder abuse reaching up to 31.1% in 2021 (*Stodolska et al., 2024*). Neglect is usually reported in two extremities of age who are usually dependent on perpetrators for their vital needs.

The present study demonstrated that the age of the perpetrators ranged from 13-60 years with a median age of 40 years. *Abbas et al. (2023)* demonstrated the same results. This middle age is the age of work together with its stress. Family burdens, unemployment, socioeconomic burdens and other stressful life factors may trigger violent behavior (*Zamba et al., 2022*).

Our study found that the majority of the perpetrators were male (69.2%) and were either the husband or the father of the victim (26.7%- 25% respectively). *Kyle (2023)* and *El Kelany and Saad (2012)* also demonstrated that 74% & 80.76% of the abusers were males. *Ibrahim et al. (2021)* reported that the most common perpetrator of violence was the father followed by the partner of the victim.

El Kelany and Saad (2012) reported the highest percentage of perpetrators was found among husbands and brothers (25% each). This high incidence may be explained by the lack of females' power especially in societies where more control and power have been allocated to men.

Most of the perpetrators in our study were either medium, low-educated or even non-educated with low to medium socioeconomic status and unemployed. *Sahar et al. (2020)* and *Ibrahim et al. (2021)* reported that poverty, lack of parental education and a history of unemployment are risk factors for domestic violence.

In the present study, 40% of the perpetrators were chronic cigarette smokers and 6.7% were alcoholics. There is an established relationship between smoking and drug abuse and increased risk of violent or aggressive

behavior. This relationship is likely multi-factorial, involving factors like impaired judgment, increased impulsivity, mental health conditions, and using violence to obtain money (Cuthbertson et al., 2023).

CONCLUSION

Most suicidal attempt patients were exposed to domestic violence. Patients exposed to domestic violence were mainly females, middle-aged, lower educated, from rural areas and had lower socioeconomic status. Most patients exposed to domestic violence were students and housewives. Aluminum and zinc phosphides were the most common suicidal ingested poisons by patients exposed to domestic violence. Emotional violence was the most reported form of violence followed by physical, neglect, and financial violence. Most of the perpetrators were middle-aged males either the husband or the father of the victim. Most of the perpetrators were either medium, low-educated or even non-educated with low to medium socioeconomic status.

RECOMMENDATIONS

- Surveying and consulting safe women and safe child clinics for any admitted suicidal case including suicidal poisoning cases to identify their exposure to domestic violence.
- Regulating legal punishment laws against the perpetrators to decrease the risk of domestic violence and subsequently the rate of suicidal attempts.
- Increasing media awareness about domestic violence clinics hotlines (1919), the Safe Women's Clinics hotline (15115) and the Safe Child Clinics hotline (16000).
- Improvement of the educational level and socioeconomic standard and increasing the religious and moral scruple of individuals may be beneficial in decreasing violence and suicidal rates.

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أنماط العنف الأسري وارتباطه بمحاولات التسمم الإنتحاري: دراسة رصدية بمركز علاج حالات التسمم بمستشفيات طنطا الجامعي

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الملخص العربي

المقدمة: يعتبر العنف انتهاكا لحقوق الإنسان. ويعد ظاهرة عالمية تؤدي إلى وفاة ١.٦ مليون شخص سنويًا، مما يجعله أحد الأسباب الرئيسية للوفيات في العالم.

الهدف من الدراسة: كان الهدف من هذه الدراسة هو تحديد نسبة حالات العنف الأسري وأنماطه ومدى ارتباطه بمحاولات التسمم الانتحاري بمركز علاج حالات التسمم بمستشفيات طنطا الجامعي

المرضى وطرق البحث: تم اجراء هذه الدراسة على ٢٠٢ حالة محاولة انتحار تم إدخالها إلى مركز مكافحة السموم بمستشفيات طنطا الجامعي في الفترة من ١ مايو ٢٠٢٢ إلى ٣١ أكتوبر ٢٠٢٢. وتم جمع بيانات المرضى في استبيان خاص تضمن البيانات الشخصية للمرضى وتاريخ التسمم والتاريخ المرضي ونتائج الفحص الاكلينيكي والمعملي والعلاج الذي تم اعطاؤه للمرضى هذا بالإضافة الى نواتج هذا التسمم الانتحاري. ولقد تم تسجيل البيانات المتعلقة بالتعرض للعنف الأسرى والبيانات المتعلقة بالجناة في استبيان خاص لذلك أيضا.

النتائج: أغلب حالات التسمم الانتحاري يتعرضون للعنف الأسري. معظم المرضى الذين تعرضوا للعنف الاسري كانوا من الإناث، في منتصف العمر، من المناطق الريفية وذوى وضع تعليمي و اجتماعي واقتصادي منخفض. التسمم الانتحاري بفوسفيدات الألومنيوم والزنك هو الأكثر شيوعًا لدى المرضى الذين تعرضوا للعنف الاسري. العنف العاطفي هو أكثر أشكال العنف التي تعرض لها معظم ضحايا العنف الاسري يليه العنف الجسدي، والإهمال، و العنف المالي.

الخلاصة والتوصيات: التعرض للعنف الاسري يزيد من نسب حالات التسمم الانتحاري. يوصى بفحص أي حالة انتحار بما في ذلك حالات التسمم الانتحاري لبيان تعرضها للعنف الأسري من عدمه.