

## SOCIO-DEMOGRAPHIC PROFILE AND INJURY PATTERN AMONG CASES OF DOMESTIC PHYSICAL VIOLENCE REPORTED TO A FORENSIC UNIT, EGYPT

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### ABSTRACT

**Background:** Domestic violence, or DV, remains a global issue that affects victims on social, economic, psychological, and physical levels. It can be defined as "attempting to harm someone or causing a family or household member to fear imminent bodily harm by threatening to use force." Many people in our communities choose not to report these acts of violence to the police, but others are beginning to assert their rights. The current study aimed to determine the prevalence of domestic violence-related injuries in cases referred to and evaluated in the clinical toxicology and forensic medicine departments between January 2023 and June 2024.

**Results:** 60 cases were presented to our department of forensic medicine & clinical toxicology at Cairo University for examination after exposure to domestic physical violence; 54 cases were females and 3 were males. 40 cases were aged between 18 and 45 years, 10 cases were under 18 years, and 10 cases were over 45 years old. Most cases were attacked and physically abused by their husbands (36 cases).

**Conclusion:** Physical violence against women and children, especially by their caregivers or spouses, remains a persistent problem. However, we have observed an increasing awareness among females as they try to seek reporting and documentation of the violence they have experienced.

**Key words:** pattern of injury - domestic - physical violence

### INTRODUCTION

Domestic violence, also known as DV, remains a global issue that impacts victims on social, economic, psychological, and physical levels. It involves attempting to harm someone or instilling fear of imminent bodily harm by threatening to use force (Okolie et al., 2021). Studies supported by the World Health Organization (WHO) indicate that nearly one-third of women worldwide will experience physical and/or sexual assault at some point in their lives, with their partners being the primary perpetrators of such abuse (Navarro-Mantas et al., 2021).

While there are multiple factors contributing to domestic violence, a man's youth is consistently linked to a higher likelihood of using violence against his spouse or partner. Other contributing factors include poverty, low social and economic status, exposure to or experience of abuse during childhood, substance abuse, personality disorders, tolerance of abuse (e.g.,

believing it is acceptable), lack of women's rights, particularly in divorce and marriage laws, and low levels of education (Heise et al., 2002 and Philpart et al., 2009). For the sake of their children, victims may endure the violence. Other factors influencing this decision include cultural constraints, fear of loneliness, familial pressure, religious pressure, and economic dependence. The increase in domestic violence is leading to financial and societal challenges (Sharma & Borah, 2020).

Violence is the intentional use of force that can cause harm, injury, disability, or death. It can be physical, such as when the abuser strikes, bites, slaps, batters, shoves, punches, pulls hair, burns, cuts, or pinches the victim. It can also be sexual if the abuser engages in sexual conduct with the victim without their consent (Edegbe et al., 2020). According to the 2005 Egypt Demographic and Health Survey (DHS), one-third of Egyptian women report experiencing physical abuse from their spouses. Many

individuals remain silent while seeking help to prevent or stop the violence (Helen, 2005).

Most people in Egyptian communities choose not to report these violent acts to the police, but some are beginning to assert their rights. The current study aimed to determine the prevalence of domestic violence-related injuries in cases referred to and evaluated in the clinical toxicology and forensic medicine departments between January 2023 and June 2024.

## **PARTICIPANTS AND METHODS**

### ***Study Setting and Design***

A cross-sectional epidemiological analysis was conducted from January 2023 to June 2024. Participants included cases examined in the forensic medicine and clinical toxicology department at Cairo University's Kasr Al-Ainy Faculty of Medicine.

### ***Study Population***

Cases of domestic physical abuse involving females and children were presented to the Department of Forensic Medicine and Clinical Toxicology from January 2023 to June 2024. Children were categorized as  $\leq 18$  years, adults as  $>18 - 45$  years, and older individuals as  $>45$  years, excluding cases with pathological injuries and accidental injuries.

### ***Data Collection Tool and Technique***

Each study participant had their risk of nonaccidental injury assessed. Abuse was defined as an act of commission, with physical abuse occurring when a parent or caregiver physically attacks a child. This can manifest in various forms, such as biting, scorching, shaking, and beating. Distinguishing between abuse and corporal punishment can be challenging. In our study, we defined physical abuse as aggressive actions by the assailant or caregiver resulting in soft tissue damage or fractures (Moawad et al., 2024).

### ***Statistical analysis:***

To ensure completeness and logical consistency, all gathered data was edited using Microsoft Office Excel 2019 to input pre-coded data into the computer. Afterward, the pre-coded data were transferred and loaded into version 26 of the Statistical Package for Social Science Software (SPSS) for statistical analysis. Frequency and percentage were utilized to summarize the data for qualitative factors, and the

Chi-square test was employed to compare the groups.

### ***Ethical Consideration:***

Informed consent was obtained from the legal guardians of children aged 13-18 after thoroughly explaining all relevant information. Patients ages 18 and above were required to provide formal consent to participate. The Kasr Alainy Ethical Committee at Cairo University approved this study (IRB: N237-2024).

## **RESULTS**

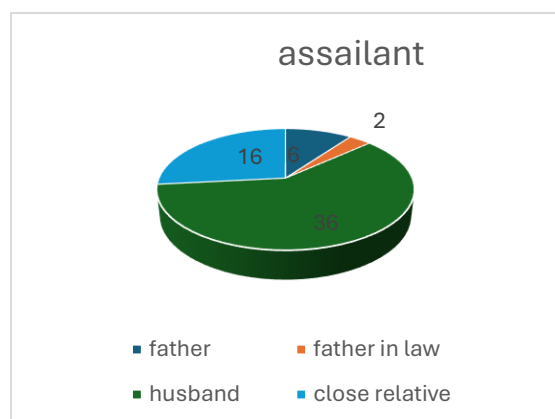
From 60 cases presented to our department of forensic medicine & clinical toxicology, Cairo University, to get examined after exposure to domestic physical violence. In Table 1, 54 cases were females and 6 were males. 40 cases were aged between 18 -45 years, 10 cases were less than 18 years, and 10 cases were more than 45 years. Most of the cases were from Giza governorate, 32 cases, 16 cases from Cairo, and 12 cases presented from different governorates. Most cases had no job, 42 cases and 18 cases had jobs. 44 cases were married, 10 cases were single, 4 divorced, and 2 cases were widows. From the presented cases, 48 cases were educated at different levels of education, basic primary-secondary education & university; 28, 20 & 4 cases respectively, 8 cases were illiterate. 36 cases were intermediate socio-economic status, 20 cases were low socio-economic status, and 4 cases were high socio-economic status.

Figure 1 shows that most of the cases were attacked and physically abused by their husbands (36 cases), in 16 cases the assailant was a close relative "uncle, grandparent, etc."), in 6 cases the father was the assailant, and in 2 cases attacked by father-in-law.

**Table 1: Demographic distribution of cases:**

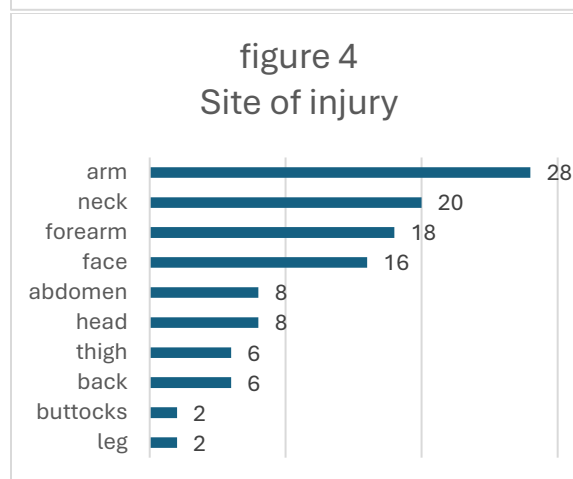
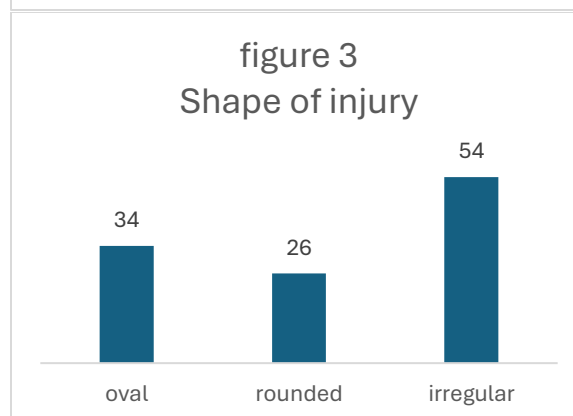
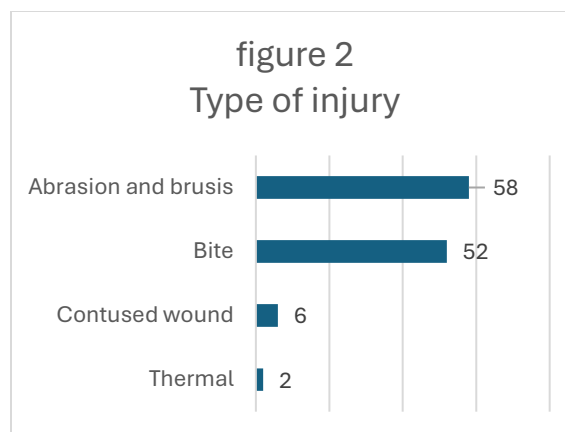
		Number	Percent %
<b>Age</b>	<18 years	10	16.7%
	18-45 years	40	66.7%
	>45 years	10	16.7%
<b>Sex</b>	Female	54	90.0%
	Male	6	10.0%
<b>Residence</b>	Cairo	16	26.7%
	Giza	32	53.3%
	Other	12	20.0%
<b>Occupation</b>	Working	18	30.0%
	Not working	42	70.0%

<b>Marital status</b>	Single	10	16.7%
	Married	44	73.3%
	Divorced	4	6.7%
	Widowed	2	3.3%
<b>Educational level</b>	Illiterate	8	13.3%
	Basic education(primary)	28	46.7%
	Basic education (secondary)	20	33.3%
	University	4	6.7%
<b>Socio-economic status</b>	Low	20	33.3%
	Intermediate	36	60.0%
	High	4	6.7%



**Figure 1:** Demonstrates the distribution of assailants.

Figures 2,3,4 demonstrate the total number of injuries detected in the presented cases (most of the cases had multiple wounds); they show that the victims were exposed to different types of physical injuries, which vary from abrasions & bruises to contusions, which were the most common type of injuries presented. Bites and burns were less than the previous types. The shape of injuries varied from irregular shape oval and rounded. According to the site of injuries, the arm, neck, forearm, and face were the most common sites for wounds in the presented cases, and to a lesser extent, wounds were present in the abdomen, head, thigh, back, buttocks & leg.



**Figure (2-3-4):** Demonstrate type, shape, and site of injuries respectively.

Photos (1,2,3) show different injuries from the presented cases.



**Photo 1:** Bruise on face” right eye” due to a blow by a fist.



**Photo 2:** Blue bruises & bite mark in right thigh



**Photo 3:** Two bruises & multiple abrasions in left arm.

Table 2 shows that 54 cases had primary reports of wounds and injuries that were presented with. According to the following complications: 16 cases were complicated by infection, 8 cases lost their pregnancy due to physical violence, one case was complicated by a fractured finger, and 10 cases had different complications such as bleeding and ulcers.

**Table 2:** Distribution of cases according to presence of primary report & complications:

		Number	Percent %
Primary reports	Yes	54	90.0%
	No	6	10.0%
Complications	No	24	40.0%
	Abortion	8	13.3%
	Fracture	2	3.3%
	Infection	16	26.7%
	Other	10	16.7%

## **DISCUSSION**

Domestic violence, or DV, remains a global social, public health, and human rights issue that impacts victims on physical, psychological, social, and economic levels (**Okolie et al., 2021**). The purpose of the current study was to evaluate the pattern of injuries resulting from domestic violence in cases referred for examination in the forensic medicine and clinical toxicology department.

Out of the 60 cases presented to our department

for examination following exposure to domestic physical violence, 54 cases involved females and 6 involved males. In our study, 40 cases were aged between 18 and 45 years. This aligns with **Abdelhalim et al. 2024**, who stated that about 92% of cases exposed to domestic violence are aged between 20 and 40 years. According to numerous other studies of a similar nature, domestic violence is one of the most serious social issues affecting people of all ages (**Yildirim & Toraman, 2023; Türk & Çimen, 2015; Koca Yavuz et al., 2021**).

It has been discovered that pregnant women may still be vulnerable to assault. Further research has shown that pregnant women may still experience abuse (**Çitil Canbay & Çitil E., 2021; Koca Yavuz et al., 2021**).

In nearly every case examined, women had been subjected to more than one form of physical abuse by their partners (36 cases). According to national statistics, between 30.4% and 62% of Turkish women have experienced physical abuse by their husbands (**Özcan et al., 2016**).

The research sample consisted of women who had applied to our department. Our study found a higher percentage of women who had experienced physical violence compared to other studies. Upon examination, the female victims primarily had blunt trauma and abrasions/bruising from their spouses or family members. Various studies conducted in Turkey show that blunt trauma is the most common type of injury among female victims of violence, with rates ranging from 59.7% to 74.7% (**Koca Yavuz et al 2021; Dönmez et al 2012; Kurt et al, 2018**).

Traces of physical violence were found in every case we examined, and forensic medical reports were prepared for most of them. This is consistent with the study by **Yildirim & Toraman 2023**.

During our examination of the tools used, the body parts targeted, and the severity of injuries inflicted, we observed that most of the physical damage was caused by bare hands and feet. This suggests that violence occurred spontaneously and in a fit of rage. One interpretation of the intense targeting of the face area is that it is an attempt to silence the victim.

The majority of instances of domestic violence resulted in minor injuries that were typically treatable with minimal medical care. Similar results were reported by **Yildirim & Toraman (2023)** and **Koca Yavuz et al. (2021)**.

We found that forensic reports emphasize the physical harm component of trauma, as detected in **Yildirim & Toraman's 2023** study. A further weakness in the system is that patients who visit the hospital to receive medical care for wounds are not frequently referred for mental evaluation, according to previous studies in the literature. These studies also highlight the inadequacy of healthcare personnel in assessing all forms of trauma in medical records (**Şenyuva & Yavuz, 2009**). The same problem applied to our study; reports failed to account for any psychological harm that may have occurred during physical assault. We assessed how the

women described the aggression they had encountered and discovered that the reasons for violence were often related to male dominance, low educational attainment, "nonworking" occupations, financial difficulties, and communication difficulties.

Pregnancy's physiological and psychological consequences were also discussed. Previous studies have highlighted various factors, such as financial difficulties and spousal alcohol and drug use, that contribute to exposure to violence. These findings align with the results of the current study (**Coutinho et al., 2015; Sakızcioğlu & Doğan, 2020**).

### **CONCLUSION & RECOMMENDATIONS**

In conclusion, physical violence against women and children, particularly from their caregivers or spouses, remains a persistent issue. However, there is hope in the increasing awareness among females who are seeking help and documenting the violence they experience. It is recommended to continue promoting this awareness by educating future generations about self-care and recognizing abnormal behavior. Additionally, more research should be conducted in hospitals to identify other forms of violence.

**Limitation of the study:** Since this was a single-center, retrospective study, some cases had insufficient data.

### **Declarations:**

- Ethics approval & consent for participants: The study received approval from the Cairo University Faculty of Medicine's ethics committee and the forensic and clinical toxicology department's ethical committee (IRB: N237-2024).

- Consent for publication: We confirm that this work is original, has not been published elsewhere, and is not currently under consideration for publication elsewhere. All authors take responsibility for the contents of the manuscript. We are aware of the journal's conflict of interest policy and that this manuscript is being submitted to the journal.

**CONFLICTS OF INTEREST** There are no conflicts of interest.

- Funding: No funding was applicable.

### **Abbreviations:**

DV: Domestic violence

WHO: World Health Organization

DHS: Demographic and Health Survey  
SPSS: Statistical Package of Social Science Software

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## الملخص العربي

### الملف الاجتماعي والديموغرافي ونمط الإصابة بين حالات العنف الجسدي المنزلي المبلغ عنها إلى وحدة الطب الشرعي، مصر

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قسم الطب الشرعي والسموم الإكلينيكية، كلية الطب، جامعة القاهرة، شارع القصر العيني، القاهرة ١١٥٦٢، مصر

إن العنف المنزلي يظل قضية عالمية واجتماعية ومتعلقة بالصحة العامة وحقوق الإنسان وهي قضية تؤثر على الضحايا على المستوى الاجتماعي والاقتصادي والنفسي والجسدي. يمكن وصفه بأنه "محاولة إيذاء شخص ما أو إثارة خوف أحد أفراد الأسرة من الأذى الجسدي الوشيك من خلال التهديد باستخدام القوة". يختار معظم الناس في مجتمعاتنا عدم الإبلاغ عن أعمال العنف هذه إلى الشرطة، لكن آخرين بدأوا في القيام بذلك من أجل الحصول على حقوقهم. سعت الدراسة الحالية إلى تحديد مدى انتشار الإصابات المرتبطة بالعنف الأسري في الحالات التي تم إحالتها وتقييمها في قسم الطب الشرعي في الفترة ما بين يناير 2023 ويونيو 2024.

**النتائج:** تم عرض 60 حالة على قسم الطب الشرعي والسموم بجامعة القاهرة لفحصها بعد التعرض للعنف الجسدي الأسري. ولخصت النتائج أن في 54 حالة إناث و6 ذكور. 40 حالة أعمارهن من 18 - 45 سنة، 10 حالات أقل من 18 سنة و10 حالات أكبر من 45 سنة، أغلب الحالات تعرضن للاعتداء والعنف الجسدي من قبل أزواجهن (36 حالة).

**الخلاصة:** يعد العنف الجسدي ضد النساء والأطفال مشكلة مستمرة خاصة من مقدم الرعاية أو الزوج ولكن لحسن الحظ لمسنا الوعي المتزايد لدى الإناث من خلال محاولتهن لطلب الإبلاغ والتوثيق عن العنف الذي تعرضن له

**الكلمات المفتاحية:** نمط الإصابة - العنف المنزلي - العنف الجسدي