

Original article

**Domestic Violence as a Cause of Death during the First Decade of Life in Cairo Governorate.**Ayman Kamer MD¹; Maher Marzouk ² ; Inas Abdelgawad MD ^{3*}¹Forensic Medicine Department, Helwan University, Faculty of Medicine²Forensic Medicine Institute, Ministry of Justice, Egypt³Forensic Medicine Department, Faculty of Medicine, Cairo University**ABSTRACT**

Background A person who is or was in an intimate relationship with the victim defines domestic violence as deliberate controlling or violent behavior. These violent acts may include physical maltreatment, sexual assaults, emotional abuse of the victim. It is a common health problem, which most healthcare professionals are dealing with, whether to evaluate or treat one of these affected persons or victims. Aim of the study: The aim of this study to explore the role of domestic violence as a cause of death in the first decade of life in Cairo and to analyze the pattern and type of both assailant and the cause of injury. **Subjects and Method:** This work represents a descriptive-analytical study for the pattern and outcome of domestic violence, which led to the death of victims during their first decade of life with special concern to the characteristic etiologic traumatology in Cairo Governorate. All the included population was cases admitted to Zainhom morgue. **Results and conclusion:** Twenty-six cases were recorded and examined in Cairo Morgue; the Egyptian Forensic Medicine Authority. Eleven cases (about 42%) were males while fifteen were females (about 58 %). As for the relationship between the victims and the assailants, in 87.5% of the examined victims was the father, 7.7% the stepfather, 7.7% mother and 23% was the stepmother. Twenty cases (77%) were diagnosed to be due to traumatic brain injuries and 5 cases (19%) with violent asphyxia. The study magnifies the significant effect of domestic violence as a cause of death during the first decade of life, where the assailant is only a family member. It was found that younger children were more likely to be victims of fatal child abuse. The mainly cause of death was fatal head injuries. The study signified the importance to establish a medical system to fight and detect these types of violence.

Keywords: Domestic Violence, Child abuse, Traumatology in the first decade of life

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I. INTRODUCTION

A person who is or was in an intimate relationship with the victim defines domestic violence as deliberate controlling or violent behaviour. These violent acts may include physical maltreatment, sexual assaults, emotional abuse, financial control, and/or social separation of the victim. Child abuse and intimate partner abuse in family are common problems in the developing countries. It is a common health problem, where most of healthcare professionals are dealing with, whether to evaluate or treat one of these affected person or victims (Sapkota et. al., 2019; Klein et.al., 2019). It includes a range of abuse in the physical, mental, sexual, and reproductive health of woman as well as the wellbeing of their children (Campbell & Lewandowski, 1997; Fageeh, 2014). Children who survive abuse often suffer long-term physical and psychological damage that impairs their ability to learn and socialize, and makes it difficult for them to perform well in school and develop close and positive friendships. Children who grow up in a violent home are more likely to suffer abuse compared to children who have a peaceful home life. Studies from some of the largest countries in the developing world, including China, Colombia, Egypt, India, Mexico, the Philippines and South Africa, indicate a strong correlation between violence against women and violence against children (UNICEF East Asia and Pacific, 2012).

Children living in households showing high levels of conflict between parents are at risk for serious mental health problems and future psychiatric disorder (Holmes, 2013).

In Egypt, the prevalence of domestic violence and the risk factors increasing its prevalence have been examined in few studies. However, interpretation of the findings is complicated by the different methods used, including type of domestic violence examined and duration of hidden domestic violence. In addition, some types

of Domestic violence such as social and economic violence have never been examined (Curitiba Report, 2010; Al-Faris et. al., 2013).

This work representing a descriptive-analytical study for pattern and outcome of domestic violence, which led to death of victims during their first decade of life with special concern to the characteristic etiologic traumatology in Cairo governorate. All the included population was cases admitted to Zainhom morgue during these years and were proved victims of domestic violence by different investigational methods.

II. SUBJECTS AND METHODS

A descriptive and analytical study of the collected data was done. Deaths due to domestic violence from first day of life till the end of the tenth year were included in the study. Twenty-six cases of deaths that were reported and delivered to Cairo Morgue; Egyptian Forensic Medicine Authority in 36 months' duration (from 2007 to 2009) were examined. Despite the study were carried out in th period of 2007-2009, yet the crime situation in Egypt is critically unchanged so the authors saw to publish their results to allow other studies using these results in comparison with the recent researches in the same topic.

All cases were subjected to external examination, full medicolegal autopsy procedures, histopathological examination and toxicological analysis (when needed).

Detailed medico-legal report was issued for each case including the circumstantial evidences, as were informed by the investigating authorities, all examination findings and an opinion about the cause and manner of death as well as the estimated time passed since death.

The following points were investigated during the study:

- Identification and age estimation of victims
- Determination of the type of incident

- Determining the causative instrument (if any)
 - Determining cause of death
 - Identification of the death manner
- Ethical considerations
- The study protocol runs in compliance with the Helsinki Declaration and approved by Medico-Legal department of Ministry of Justice.
 - To ensure confidentiality, data was collected anonymously and a code number for linking the data from each victim was used.

Limitation of Study

The investigating authorities usually do not inform the medico-legal examiner about the progression of the investigation, so there is no enough data about the motives of the attacks and the penalty received.

Statistical analysis

Recorded data were analyzed using the statistical package for social sciences, version 23.0 (SPSS Inc., Chicago, Illinois, USA). The qualitative variables were presented as number and percentages.

The following tests were done:

- Chi-square (x²) test of significance was used in order to compare proportions between qualitative parameters.
- The confidence interval was set to 95% and the margin of error accepted was set to 5%. So, the p-value was considered significant as the following:
 - Probability (p-value)
 - p-value <0.05 was considered significant.
 - p-value <0.001 was considered as highly significant.
 - p-value >0.05 was considered insignificant.

III. RESULTS

Twenty-six cases were recorded and examined in Cairo Morgue; Egyptian Forensic Medicine Authority. Eleven cases (about 42%) were males while fifteen were females (about 58 %) (Figure: 1).

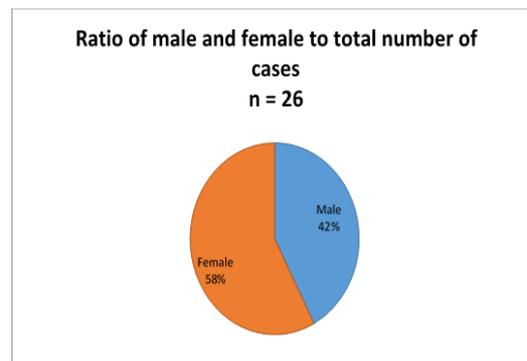


Figure (1) Percent of male to female victims of domestic violence as a cause of death in Cairo Governorate, Egypt.

The father was the assailant in eight cases (31 %) while the stepfather was found to be in another four cases (15%). On the other hand, both the mother and the stepmother were found to be the assailant in five cases respectively (19% each).

Both parents were accused to be the assailants in one case, and so was the brother, the uncle and the aunt in one case (4% each).

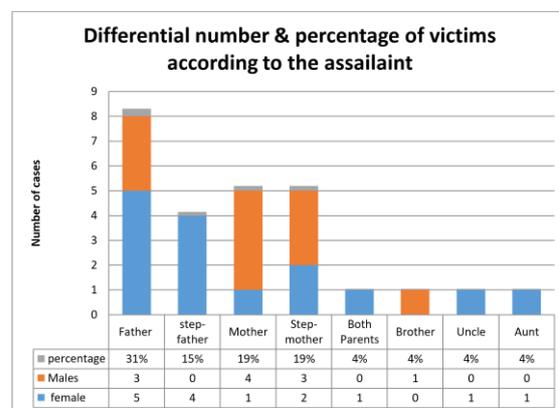


Figure (2): Relationship of the assailants to sex of victims of domestic violence in Cairo Governorate, Egypt.

As regard the cause of death Twenty cases (77%) were diagnosed to be due to traumatic brain injuries (including different brain hemorrhages, brain contusions & lacerations and brain stem herniation) and their complications. The age of victims ranges between 1 to 10 years old (Figure3) (Table 1).

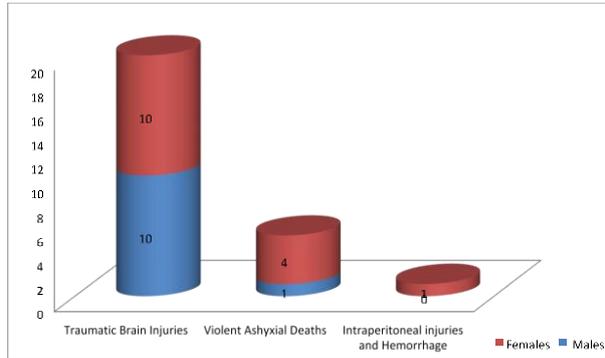


Figure (3): Cause of death in relation to the number and the gender of the victims.

Violent asphyxia was diagnosed to be the cause of death in five victims (19%), with the age range between 3 to 8 years old. They were classified as two cases were due to throttling, two cases were due to smothering and one case was due to ligature strangulation (Tables 1&2). Injury to the solid abdominal viscera with subsequent intraperitoneal haemorrhage was the cause of death in one case (4%).

According to the evaluation of the presented cases and only in suspected cases, only were toxicological analyses performed for fourteen cases using tissue samples and /or body fluids (blood, urine, CSF, bile or aqueous humor) and samples were examined for various toxins (including narcotics, benzodiazepines, cannabis, amphetamines and insecticides) and alcohol and all the results were negative in all cases.

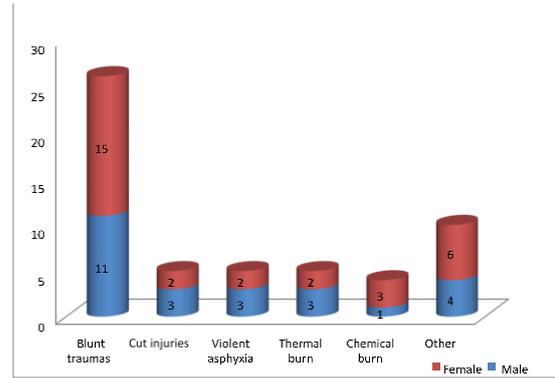


Figure (4): Type of injury in relation to the gender of the victim

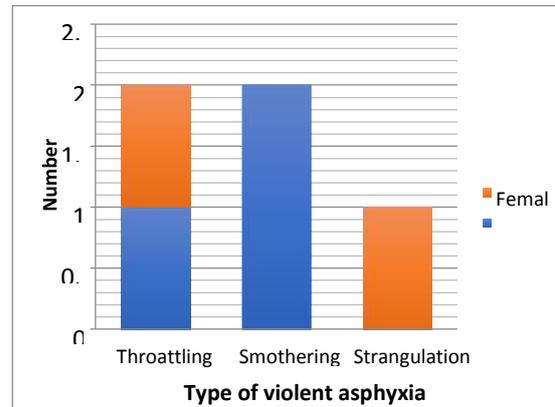


Figure (5): Ratio of violent asphyxia in females and male's victims.

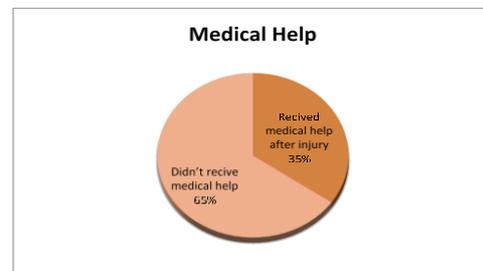


Figure (6): Distribution of domestic violence victims according to whom received medical help in Cairo Governorate, Egypt.

According to the statistical analysis carried out in (Tables 1-5) on the sociodemographic data distribution among study group shows that 57.7% of the examined victims were females in the age between 4 & 10 years old in comparison with 42.3% examined male victims in the same age group.

As for the relationship between the victims and the assailants, in 87.5% of the examined victims was the father the assailant within the age group 4-7 yrs old victims, in 7.7% of the examined cases was the stepfather the assailant, in 7.7 % was the mother and in 23% was the stepmother the assailant (Tables 1, 2a-b and 3).

According to the father's occupation about 34.6% of the fathers are worker and 26.9% are unemployed. On the other hand, 23.1% of mothers were workers and 34.6% were unemployed (Tables 1, 2a and 2b).

As for the relation between the assailant and the residence area shows that about 62.5% of the assailants' fathers were in rural area, 37.5% of the assailants' fathers were in urban area. On the other hand, about 60.0% of the assailants' mothers were in rural areas in comparison to 40.0% of the assailants' mother from urban area (Tables 1, 2a, 2b and 4).

According to the family social status about 53.8% of the victims the parents are separated or divorced, in 19.2% the parents lives together, in 11.5% of the victims the father is deceased and in 15.4 % of the victims was the family social status unknown (Tables 1, 2a,2b and 5).

Table (1): Socio-demographic data distribution among study group (n=26).

Socio-demographic data	No.	%
Age group		
<4 years	4	15.4%
4-7 years	13	50.0%
7-10 years	9	34.6%
Gender		
Female	15	57.7%
Male	11	42.3%
Residence		
Rural	14	53.8%
Urban	12	46.2%
Occupation of father		
Worker	9	34.6%
Employee	1	3.8%
Unemployed	7	26.9%
Unknown	9	34.6%
Occupation of mother		
House worker	3	11.5%
Unemployed	9	34.6%
Unknown	8	30.8%
Worker	6	23.1%
Family social status		
Father is deceased	3	11.5%
Marriage is on	5	19.2%
Split parents	14	53.8%
Unknown	4	15.4%

Table (2a): Relation between assailant and socio-Demographic data (n=26).

Socio-demographic data			Assailant								Total (N=26)	Chi-square test	
			Aunt (N=1)	Both parents (N=1)	Brother (N=1)	Father (N=8)	Mother (N=5)	Step-father (N=4)	Step-mother (N=5)	Uncle (N=1)		x ²	p-value
Age group	<4 years	Count	0	0	0	1	1	1	0	1	4	19.165	0.159
		% within Age group	0.0%	0.0%	0.0%	25.0%	25.0%	25.0%	0.0%	25.0%	100.0%		
		% within Assailant	0.0%	0.0%	0.0%	12.5%	20.0%	25.0%	0.0%	100.0%	15.4%		
	4-7 years	Count	0	1	0	7	1	1	3	0	13		
		% within Age group	0.0%	7.7%	0.0%	53.8%	7.7%	7.7%	23.1%	0.0%	100.0%		
		% within Assailant	0.0%	100.0%	0.0%	87.5%	20.0%	25.0%	60.0%	0.0%	50.0%		
	7-10 years	Count	1	0	1	0	3	2	2	0	9		
		% within Age group	11.1%	0.0%	11.1%	0.0%	33.3%	22.2%	22.2%	0.0%	100.0%		
		% within Assailant	100.0%	0.0%	100.0%	0.0%	60.0%	50.0%	40.0%	0.0%	34.6%		
Gender	Female	Count	1	1	0	5	1	4	2	1	15	10.124	0.182
		% within Gender	6.7%	6.7%	0.0%	33.3%	6.7%	26.7%	13.3%	6.7%	100.0%		
		% within Assailant	100.0%	100.0%	0.0%	62.5%	20.0%	100.0%	40.0%	100.0%	57.7%		
	Male	Count	0	0	1	3	4	0	3	0	11		
		% within Gender	0.0%	0.0%	9.1%	27.3%	36.4%	0.0%	27.3%	0.0%	100.0%		
		% within Assailant	0.0%	0.0%	100.0%	37.5%	80.0%	0.0%	60.0%	0.0%	42.3%		
Residence	Rural	Count	0	0	0	5	3	2	4	0	14	6.384	0.496
		% within Residence	0.0%	0.0%	0.0%	35.7%	21.4%	14.3%	28.6%	0.0%	100.0%		
		% within Assailant	0.0%	0.0%	0.0%	62.5%	60.0%	50.0%	80.0%	0.0%	53.8%		
	Urban	Count	1	1	1	3	2	2	1	1	12		
		% within Residence	8.3%	8.3%	8.3%	25.0%	16.7%	16.7%	8.3%	8.3%	100.0%		
		% within Assailant	100.0%	100.0%	100.0%	37.5%	40.0%	50.0%	20.0%	100.0%	46.2%		

n: total number of victims; N: number of victims
 Using: Chi-square test; p-value >0.05 non-significant

Table (2b): Relation between assailant and socio-demographic data (n=26).

Socio-demographic data		Assailant									Chi-square test		
		Aunt (N=1)	Both parents (N=1)	Brother (N=1)	Father (N=8)	Mother (N=5)	Step-father (N=4)	Step-mother (N=5)	Uncle (N=1)	Total (N=26)	x2	p-value	
Occupation of father	Employee	Count	0	0	0	0	0	1	0	0	1	18.778	0.599
		% within Occupation of father	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%		
		% within Assailant	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	0.0%	3.8%		
	Unemployed	Count	1	0	0	2	3	0	1	0	7		
		% within Occupation of father	14.3%	0.0%	0.0%	28.6%	42.9%	0.0%	14.3%	0.0%	100.0%		
		% within Assailant	100.0%	0.0%	0.0%	25.0%	60.0%	0.0%	20.0%	0.0%	26.9%		
	Unknown	Count	0	1	0	4	1	1	2	0	9		
		% within Occupation of father	0.0%	11.1%	0.0%	44.4%	11.1%	11.1%	22.2%	0.0%	100.0%		
		% within Assailant	0.0%	100.0%	0.0%	50.0%	20.0%	25.0%	40.0%	0.0%	34.6%		
	Worker	Count	0	0	1	2	1	2	2	1	9		
		% within Occupation of father	0.0%	0.0%	11.1%	22.2%	11.1%	22.2%	22.2%	11.1%	100.0%		
		% within Assailant	0.0%	0.0%	100.0%	25.0%	20.0%	50.0%	40.0%	100.0%	34.6%		
Occupation of mother	House worker	Count	0	0	0	2	1	0	0	0	3	16.801	0.723
		% within Occupation of mother	0.0%	0.0%	0.0%	66.7%	33.3%	0.0%	0.0%	0.0%	100.0%		
		% within Assailant	0.0%	0.0%	0.0%	25.0%	20.0%	0.0%	0.0%	0.0%	11.5%		
	Unemployed	Count	1	0	1	3	0	2	2	0	9		
		% within Occupation of mother	11.1%	0.0%	11.1%	33.3%	0.0%	22.2%	22.2%	0.0%	100.0%		
		% within Assailant	100.0%	0.0%	100.0%	37.5%	0.0%	50.0%	40.0%	0.0%	34.6%		
	Unknown	Count	0	1	0	1	2	2	1	1	8		
		% within Occupation of mother	0.0%	12.5%	0.0%	12.5%	25.0%	25.0%	12.5%	12.5%	100.0%		
		% within Assailant	0.0%	100.0%	0.0%	12.5%	40.0%	50.0%	20.0%	100.0%	30.8%		
	Worker	Count	0	0	0	2	2	0	2	0	6		
		% within Occupation of mother	0.0%	0.0%	0.0%	33.3%	33.3%	0.0%	33.3%	0.0%	100.0%		

		Continue with (Table 2b)											
		% within Assailaint	0.0 %	0.0%	0.0%	25.0%	40.0%	0.0%	40.0%	0.0%	23.1%		
Family social status	Father is deceased	Count	0	0	0	0	1	2	0	0	3	25.972	0.208
		% within Family social status	0.0 %	0.0%	0.0%	0.0%	33.3%	66.7%	0.0%	0.0%	100.0%		
		% within Assailaint	0.0 %	0.0%	0.0%	0.0%	20.0%	50.0%	0.0%	0.0%	11.5%		
	Marriage is on	Count	0	1	0	3	1	0	0	0	5		
		% within Family social status	0.0 %	20.0%	0.0%	60.0%	20.0%	0.0%	0.0%	0.0%	100.0%		
		% within Assailaint	0.0 %	100.0%	0.0%	37.5%	20.0%	0.0%	0.0%	0.0%	19.2%		
	Split parents	Count	1	0	0	3	2	2	5	1	14		
		% within Family social status	7.1 %	0.0%	0.0%	21.4%	14.3%	14.3%	35.7%	7.1%	100.0%		
		% within Assailaint	100.0 %	0.0%	0.0%	37.5%	40.0%	50.0%	100.0%	100.0%	53.8%		
	Unknown	Count	0	0	1	2	1	0	0	0	4		
		% within Family social status	0.0 %	0.0%	25.0%	50.0%	25.0%	0.0%	0.0%	0.0%	100.0%		
		% within Assailaint	0.0 %	0.0%	100.0%	25.0%	20.0%	0.0%	0.0%	0.0%	15.4%		

n: number of victims; N: number of victims Using: Chi-square test; p-value >0.05 non-significant

Table (3): Relation between Assailant with age group and gender (n=26).

Age group	Gender		Assailant							Total	Chi-square test		
			Aunt	Both parents	Brother	Father	Mother	Step father	Step mother		Uncle	x2	p value
<4 years	Female	Count				1	0	1		1	3	4.000	0.261
		% within Gender				33.3%	0.0%	33.3%		33.3%	100.0%		
		% within Assailant				100.0%	0.0%	100.0%		100.0%	75.0%		
	Male	Count				0	1	0		0	1		
		% within Gender				0.0%	100.0%	0.0%		0.0%	100.0%		
		% within Assailant				0.0%	100.0%	0.0%		0.0%	25.0%		
4-7 years	Female	Count		1		4	0	1	1		7	3.420	0.490
		% within Gender		14.3%		57.1%	0.0%	14.3%	14.3%		100.0%		
		% within Assailant		100.0%		57.1%	0.0%	100.0%	33.3%		53.8%		
	Male	Count		0		3	1	0	2		6		
		% within Gender		0.0%		50.0%	16.7%	0.0%	33.3%		100.0%		
		% within Assailant		0.0%		42.9%	100.0%	0.0%	66.7%		46.2%		
7-10 years	Female	Count	1		0		1	2	1		5	4.275	0.370
		% within Gender	20.0%		0.0%		20.0%	40.0%	20.0%		100.0%		
		% within Assailant	100.0%		0.0%		33.3%	100.0%	50.0%		55.6%		
	Male	Count	0		1		2	0	1		4		
		% within Gender	0.0%		25.0%		50.0%	0.0%	25.0%		100.0%		
		% within Assailant	0.0%		100.0%		66.7%	0.0%	50.0%		44.4%		
Total	Female	Count	1	1	0	5	1	4	2	1	15	10.124	0.182
		% within Gender	6.7%	6.7%	0.0%	33.3%	6.7%	26.7%	13.3%	6.7%	100.0%		
		% within Assailant	100.0%	100.0%	0.0%	62.5%	20.0%	100.0%	40.0%	100.0%	57.7%		
	Male	Count	0	0	1	3	4	0	3	0	11		
		% within Gender	0.0%	0.0%	9.1%	27.3%	36.4%	0.0%	27.3%	0.0%	100.0%		
		% within Assailant	0.0%	0.0%	100.0%	37.5%	80.0%	0.0%	60.0%	0.0%	42.3%		

n: number of victims; Using: Chi-square test; p-value >0.05 non-significant

Table (4): Relation between Assailant with residence and gender (n=26).

Residence	Gender		Assailant							Total	Chi-square test		
			Aunt	Both parents	Brother	Father	Mother	Step father	Step mother		Uncle	x2	p-value
Rural	Female	Count				3	1	2	2		8	2.294	0.514
		% within Gender				37.5%	12.5%	25.0%	25.0%		100.0%		
		% within Assailant				60.0%	33.3%	100.0%	50.0%		57.1%		
	Male	Count				2	2	0	2		6		
		% within Gender				33.3%	33.3%	0.0%	33.3%		100.0%		
		% within Assailant				40.0%	66.7%	0.0%	50.0%		42.9%		
Urban	Female	Count	1	1	0	2	0	2	0	1	7	9.257	0.235
		% within Gender	14.3%	14.3%	0.0%	28.6%	0.0%	28.6%	0.0%	14.3%	100.0%		
		% within Assailant	100.0%	100.0%	0.0%	66.7%	0.0%	100.0%	0.0%	100.0%	58.3%		
	Male	Count	0	0	1	1	2	0	1	0	5		
		% within Gender	0.0%	0.0%	20.0%	20.0%	40.0%	0.0%	20.0%	0.0%	100.0%		
		% within Assailant	0.0%	0.0%	100.0%	33.3%	100.0%	0.0%	100.0%	0.0%	41.7%		
Total	Female	Count	1	1	0	5	1	4	2	1	15	10.124	0.182
		% within Gender	6.7%	6.7%	0.0%	33.3%	6.7%	26.7%	13.3%	6.7%	100.0%		
		% within Assailant	100.0%	100.0%	0.0%	62.5%	20.0%	100.0%	40.0%	100.0%	57.7%		
	Male	Count	0	0	1	3	4	0	3	0	11		
		% within Gender	0.0%	0.0%	9.1%	27.3%	36.4%	0.0%	27.3%	0.0%	100.0%		
		% within Assailant	0.0%	0.0%	100.0%	37.5%	80.0%	0.0%	60.0%	0.0%	42.3%		

n: number of victims; Using: Chi-square test; p-value >0.05 non-significant

Table (5): Relation between Assailant with family social status and gender (n=26).

Family social status	Gender		Assailant							Total	Chi-square test		
			Aunt	Both parents	Brother	Father	Mother	Stepfather	Stepmother		Uncle	x2	pvalue
Father is deceased	Female	Count					1	2			3	0.000	1.000
		% within Gender					33.3%	66.7%			100.0%		
		% within Assailant					100.0%	100.0%			100.0%		
Marriage is on	Female	Count		1		0	0				1	5.000	0.082
		% within Gender		100.0%		0.0%	0.0%				100.0%		
		% within Assailant		100.0%		0.0%	0.0%				20.0%		
	Male	Count		0		3	1				4		
		% within Gender		0.0%		75.0%	25.0%				100.0%		
		% within Assailant		0.0%		100.0%	100.0%				80.0%		
Split parents	Female	Count	1			3	0	2	2	1	9	8.773	0.118
		% within Gender	11.1%			33.3%	0.0%	22.2%	22.2%	11.1%	100.0%		
		% within Assailant	100.0%			100.0%	0.0%	100.0%	40.0%	100.0%	64.3%		
	Male	Count	0			0	2	0	3	0	5		
		% within Gender	0.0%			0.0%	40.0%	0.0%	60.0%	0.0%	100.0%		
		% within Assailant	0.0%			0.0%	100.0%	0.0%	60.0%	0.0%	35.7%		
Unknown	Female	Count			0	2	0				2	4.000	0.135
		% within Gender			0.0%	100.0%	0.0%				100.0%		
		% within Assailant			0.0%	100.0%	0.0%				50.0%		
	Male	Count			1	0	1				2		
		% within Gender			50.0%	0.0%	50.0%				100.0%		
		% within Assailant			100.0%	0.0%	100.0%				50.0%		
Total	Female	Count	1	1	0	5	1	4	2	1	15	10.124	0.182
		% within Gender	6.7%	6.7%	0.0%	33.3%	6.7%	26.7%	13.3%	6.7%	100.0%		
		% within Assailant	100.0%	100.0%	0.0%	62.5%	20.0%	100.0%	40.0%	100.0%	57.7%		
	Male	Count	0	0	1	3	4	0	3	0	11		
		% within Gender	0.0%	0.0%	9.1%	27.3%	36.4%	0.0%	27.3%	0.0%	100.0%		
		% within Assailant	0.0%	0.0%	100.0%	37.5%	80.0%	0.0%	60.0%	0.0%	42.3%		

n: number of victims; Using: Chi-square test; p-value >0.05 non-significant

Examples of examined dead cases of domestic violence during the first decade of life in Cairo Morgue



Figure (7): trauma, he arrived to the hospital with signs suggestive cerebral compression. He was operated and died shortly after surgery then transferred for forensic examination. (a) External examination revealed the presence of big surgical incision with obvious scalp hematoma & edema besides many bruises & abrasions in face & forehead. (b) Autopsy revealed radiating left temporal bone fissure fracture, big extradural blood collection of about 350 cm³, brain contusions & brain edema. Death was due to brain stem herniation & paralysis of brain stem vital centers (traumatic brain injury).

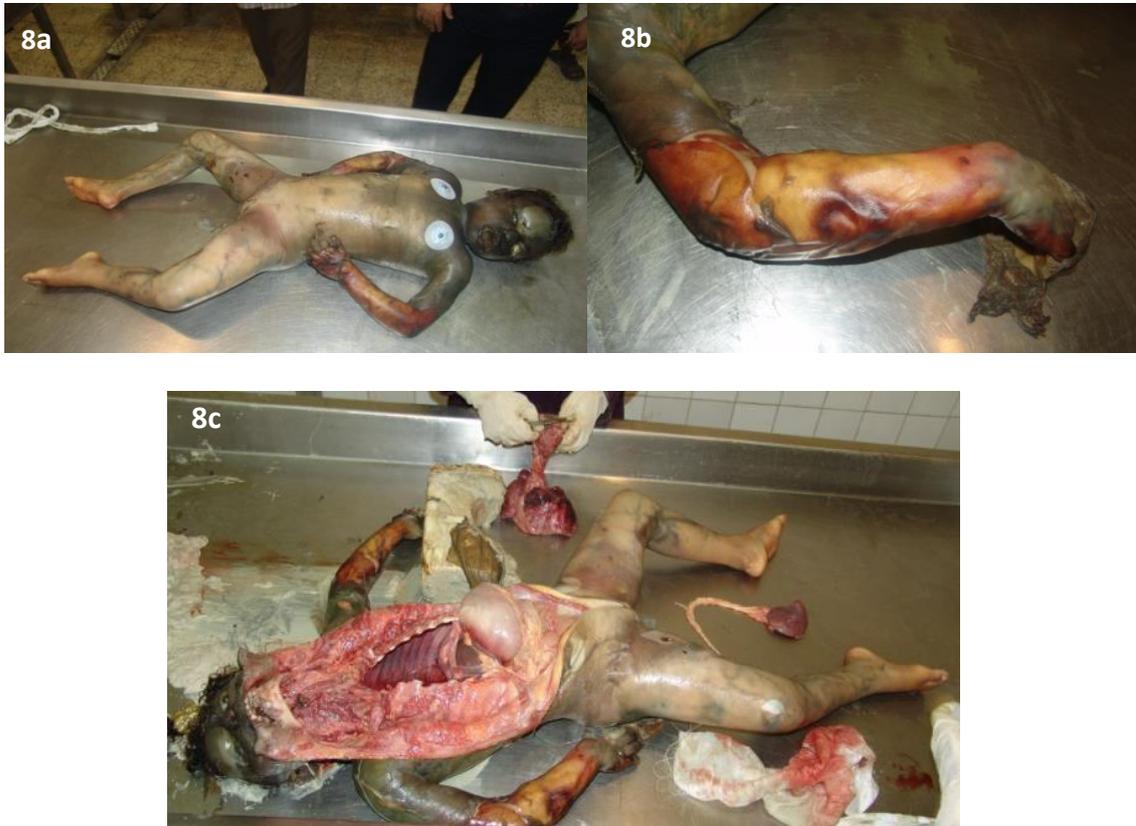


Figure (8): The picture displays a seven years old female victim; she was transferred to the morgue due to suspicion from the health care physician; while her parents didn't give a reasonable explanation about death circumstances. (a): External examination revealed a ligature mark around the neck & obvious signs of asphyxia. (b): Many injuries were detected on her body of different healing dating. (c): Autopsy revealed fracture hyoid bone & internal signs of asphyxia. Death was due to violent brain anoxia due to strangulation. The parents were the assailants.



Figure (9): The pictures display a 10 years old male victim, who exposed to multiple traumas and arrived died to the hospital and therefore was transferred for forensic examination. (a) External examination revealed the presence of many recent bruises & abrasions in face & forehead. There were also many bruises of big areas on all the extremities and the back and an obvious multiple bite marks which revealed by examination that, they were for human teeth (b) Autopsy revealed the presence of big subdural & subarachnoid hemorrhages with underlying brain contusions, brain edema & brain stem herniation. Death was due to paralysis of brain stem vital centers.



Figure (10): The picture displays an eight years old female victim; she was transferred to the morgue due to suspicion from the health care physician due to signs of head injury while her parents gave a history of fall on stairs during playing. Besides there were many injuries on her body of different healing dating and an obvious thermal burn imprint was seen on her left thigh. Autopsy revealed evidences of traumatic brain injury. The assailant was her step-mother.

IV. DISCUSSION

Family doctors and medical officers are reporting everyday all over the world about suspected cases of child abuse detected by regular examination of the children. That is why they play an important role in notifying the official agencies for children protection in order to prevent these cases from getting chronically abused or mishandled in order to prevent the permanent pathological & psychological changes in these children and to conduct an epidemiological surveillance and appropriate policies to treat these cases. In a study in Brazil were 30 % of the reported cases in 2010 involved chronic abuse (Curitiba Report, 2010).

Risk factors for domestic and family violence include individual, relationship, community, and societal issues. There is an inverse relationship between education and domestic violence. Lower education levels correlate with more likely domestic violence. Childhood abuse is commonly associated with becoming a perpetrator of domestic violence as an adult. Perpetrators of domestic violence commonly repeat acts of violence with new partners. Drug and alcohol abuse greatly increases the incidence of domestic violence (UNICEF, 2013; Hawcroft et.al., 2019).

This study confirms the reality of domestic violence in Egypt. Because of the vulnerability of children and their fear to talk about the abuse and violence practiced against them, it is too difficult to detect these children in the early stages of child abuse or domestic violence. This expresses and signifies the need of establishing a medical and educational examination system for all children during their childhood and adolescence.

Regarding the gender of the victims in this study the female gender was predominant representing 58% of the represented cases. That signifies the fact in the Arab countries that the females whether as child or adolescent are more suspected to violence

from males. Males who learn that females are not equally respected are more likely to abuse females in adulthood. This result is in agreement with Cindy et al., who study pediatric injury resulting from family violence and reported that, females who witness domestic violence as children are more likely to be victimized by their spouses (Christian et.al., 1997; UN the Global Survey on Violence against Children, 2011; Violence against children in Egypt, 2015).

The fact that the male gender plays a significant role in domestic violence in Egypt was also clear by assessment of the investigation in detecting the assailant. In this study, male assailants represented 58% of the total number of assailants; the father was the assailant in the most of the victims, followed by the mother as an assailant and these results in agreement with Christian et. al. who reported that, the father was the assailant in 50% of the cases, the mother's boyfriend in 10% of the cases and the mother was the assailant in 13% of the cases where as in about 9% of the cases was the assailant another adult relative of the family (Youssef and Atta, 1998; Moawad et.al.; 2021).

Regarding the cause of death in this study 77 % of the examined cases were diagnosed to be due to traumatic brain injuries (including different brain hemorrhages) and its complications. Violent asphyxia was diagnosed in only 19% of the cases. Neither the history nor the mechanisms of injuries provided by the parents or the relatives of the victim or abused child were inconsistent with the type of injuries caused by the assailant. This prevail the fact in the Egyptian society that many parents and caregivers consider the use of violence against children as a disciplinary and educational methods. Another form of violence is the shaken baby syndrome, if the baby forcefully shaken; his or her fragile brain moves back and forth inside the skull, this cause bruising swelling and

bleeding, this usually occurs when the parents or caregivers severely shakes the baby or toddler due to frustration or anger. That is why we are having generations of parents who are adopting violence as an educational method and inherit this method to the next generations (UNICEF, 2013; Hawcroft et.al., 2019).

The UNICEF report published at 2006, regarding the situation of women and children in Egypt, showed a study which was carried out on child abuse in deprived Egyptian urban communities and reported that, 81% of children having been corporally punished at home in the preceding year, and 91% corporally punished during the same period in schools (El-Hak et.al., 2009; UNICEF, 2013; Hawcroft et.al., 2019).

In another study of child abuse and neglect by caregivers and professionals who are in daily contact with children in Egypt, reported that, there was lack of knowledge about child maltreatment in Arab countries. The authors detected in their study of caregivers whether physicians, teachers, and social workers in Egypt, those children are subjected to physical violence in a “disciplinary context.” The authors further emphasized that the detection of child abuse depends on acceptance of the Society that this condition exists (Christian et.al., 1997; National Childhood Council says 93% of Egyptian children suffer from violence, 2019).

According to the result by Gad Elhak et.al. 2009 in Mansoura, Egypt has also showed that the children deaths between 1996 - 2005 are mostly among the age of 3 & 6 years old (39.0%), which support our results in which about (50.0%) of our

examined victims are between the age 4 & 7 years old. In further results by Gad Elhak et. Al. 2009 showed that the assailants’ father represents 75.62% while the assailants’ mothers contributes with 24.39%.

V. CONCLUSION

The study magnifies and highlights the significant effect of domestic violence on the development of children in the Egyptian society. The perpetrator or assailant is only a family member or professional person who gets used of his role as a caregiver to manipulate and abuse these children under the roof of a disciplinary educational concept. Although this study analyzed the cause of death in children (0-10 years old) due to domestic violence, gender, perpetrator and type of injuries, it has also signified the importance to establish a medical system to fight and detect these types of violence practiced against Egyptian children and to increase the awareness of other disciplinary educational methods in rising up children.

Regarding the limitations of this study, the results were only the examined children’s victims in Cairo Morgue; Egyptian Forensic Medicine Authority. There weren’t any facilities to recruit examined victims from other Egyptian cities. On the other hand, and regarding official regulations and policies the investigating authorities didn't inform the medico-legal examiner about the progression of the investigation, so there is no enough data about the motives of the attacks and the penalty received.

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الملخص العربي

العنف المنزلي كسبب للوفاة خلال العقد الأول من الحياة في محافظة القاهرة..

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يُعرف العنف المنزلي بأنه تحكم متعمد أو سلوك عنيف من قبل شخص على علاقة حميمة بالضحية أو كان على علاقة بها. قد تشمل أعمال العنف هذه سوء المعاملة الجسدية والاعتداءات الجنسية والإيذاء العاطفي للضحية. إنها مشكلة صحية شائعة ، يتعامل معها معظم المتخصصين في الرعاية الصحية ، سواء لتقييم أو علاج أحد هؤلاء الأشخاص أو الضحايا المتضررين.

الهدف من الدراسة

تهدف هذه الدراسة إلى استكشاف دور العنف الأسري كسبب للوفاة في العقد الأول من العمر في القاهرة وتحليل نمط ونوع كل من المعتدي وسبب الإصابة.

المنهجية:

يمثل هذا العمل دراسة وصفية تحليلية لنمط ونتائج العنف الأسري ، والتي أدت إلى وفاة الضحايا خلال العقد الأول من حياتهم مع الاهتمام الخاص بعلم الصدمات المسببة في محافظة القاهرة. تم قبول جميع السكان المشمولين في مشرحة زينهم.

نتائج:

تم تسجيل 26 حالة وفحصها في مشرحة القاهرة. الهيئة المصرية العامة للطب العدلي. 11 حالة (حوالي 42%) كانت من الذكور بينما كانت 15 للإناث (حوالي 58%). أما بالنسبة للعلاقة بين الضحايا والمعتدين ، فإن 87.5% من الضحايا الذين تم فحصهم هم الأب ، و 7.7% زوج الأم ، و 7.7% للأم ، و 2.3% زوجة الأب. تم تشخيص عشرين حالة (77%) نتيجة إصابات الدماغ الرضحية و 5 حالات (19%) بالاختناق العنيف.

خاتمة:

تضخم الدراسة الأثر الكبير للعنف الأسري كسبب للوفاة خلال العقد الأول من عمر الأطفال المصريين ، حيث يكون المعتدي أحد أفراد الأسرة فقط. وكان السبب الرئيسي للوفاة هو إصابات الرأس القاتلة. وأوضحت الدراسة أهمية إنشاء نظام طبي لمحاربة واكتشاف هذه الأنواع من العنف.

التوصيات:

أهمية إنشاء نظام طبي لمكافحة وكشف هذه الأنواع من العنف الممارس ضد الأطفال المصريين وزيادة الوعي بأساليب التربية التأديبية الأخرى في تنشئة الأطفال