

Assault Related Limb Injuries Seen In A Tertiary Institution In Nigeria

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ABSTRACT

Interpersonal violence seems to be on the increase worldwide. This is known to cause significant morbidity and mortality. The aim of this study is to evaluate limb injuries that are related to assault seen in ESUT Teaching Hospital Parklane, Enugu, Nigeria. The limbs are very important in economic survival and its loss or dysfunction could create serious disability and jeopardize survival. This was a prospective study carried out between March 2012 and February 2013 in the Forensic Clinic of ESUT Teaching Hospital Parklane, Enugu. Interviewer administered structured questionnaire was used to collect data from the victims of assault visiting the Forensic Clinic of the Hospital. Data was analysed using simple statistical methods. A total of 1928 individuals visited the Forensic Clinic during the study period. 233 of them sustained one form of injury or the other. Limb injuries occurred in 88 (37.7%) of injured victims. Upper limb and lower limb injuries occurred in 71.6% (n = 63) and 18.2% (n = 16) respectively and 10.2% (n = 9) had injuries involving both upper and lower limbs. Male to female ratio is 1.6:1. The commonest weapon of assault was knife 22.7% followed by wood 18.1% and teeth 16.0%. Workman's tools and bottle accounted for 13.6% and 11.4% respectively. The youngest victim was 15 years and the oldest 65 years. The modal age range of victims was 21 – 30 years 43.1% (n = 38) and mean age is 34.1 years. Laceration 44.3% (n = 39) was the commonest soft tissue injury seen and bone fracture was seen in 3.4% (n = 3) of cases. Most of the injuries occurred in business or work place 37.5% (N = 33), closely followed by attacks in the living quarters 36.4% (n = 32). The upper limb is a common site of injury during assault probably because most individuals would attempt to protect themselves using their hands. Weapons used in assault are those commonly found at the point of assault and active young people are easily involved.

Keywords: limb injuries, assault, young people.

INTRODUCTION

Judging from reports from all over the world, violence is becoming quite common that it is gradually assuming pandemic proportion. Violence however has been with us for ages. One of the earliest mentions of it can be seen in the Holy Bible when Cain killed his own brother Abel due to jealousy when apparently his sacrifice was rejected by God. (Good News Bible. 1979).

In our environment, there is no comprehensive documentation of cases of violence but they are seen in the Accident and Emergency Units, General Out Patient Clinics and Specialist Clinics.

Several terminologies are used by different authors to describe violent attacks. Some call it “interpersonal assault”

“interpersonal violence”,

“Intentional injuries”, and if partners are involved “intimate partner violence” can be used. All these intend to describe “assault related injuries” and could be used interchangeably.

Injuries generally can be classified based on intent into “intentional” and “unintentional” injuries. Traffic injuries, injuries due to natural disasters, industrial accidents etc are classified most often as unintentional injuries while injuries due to assault, self inflicted violence like suicide, are intentional injuries or violence.

Though any part of the body can be injured, injuries to the limb can cause serious economic disability as the limbs are important in achieving set tasks that impact

on economic productivity and help peoples selfesteem.

This has increased awareness of governments and public and private partners worldwide on the strain that violence place on societies, leading to strengthening of data collection and improving services to victims²

This study therefore is intended to highlight the limb injuries suffered by assault victims seen in the Forensic Clinic of ESUT Teaching Hospital Parklane Enugu, South East Nigeria. It will help to establish pattern of limb injuries and assist clinicians /health care providers to know what to expect when on duty. It could also provide a platform for policy makers to kick – start a prevention programme for vulnerable group.

MATERIALS AND METHOD

This was a prospective study carried out between March 2012 and February 2013. It covered assault victims attending the Forensic Clinic of ESUT Teaching Hospital, Parklane Enugu. The hospital is located in the heart of the city and is designated by the Police/law enforcement authorities as the referral centre for assault victims in the city. The patients visit the clinic with police extract and a report is made available to the Police after the patient is treated.

Interviewer administered structured questionnaire was used to collect data from the assault victims Bio data and information relating to weapon of assault, place of assault, site of injury, relationship with assailant etc were collected.

Assault victims without limb injuries and victims of child abuse were excluded.

RESULTS

A total of 1928 individuals visited the Forensic Clinic during the study period. 233 (12%) of them sustained one form of injury or the other. Limb injuries occurred in 88 (37.7%) of injured victims. Site distribution of injuries by sex is displayed in table 1. Upper limb and lower limb injuries occurred in 71.6% (n=63) and 18.2% (n=16) respectively and 10.2% (n=9) involved both upper and

lower limbs. Male to Female ratio is 1.6:1.

Various Weapons were used in the assault as shown in table 2, the commonest weapon of assault was Knife 22.7%, followed by wood, 18.1% and teeth, 16.0%. Workman's tools and bottles accounted for 13.6% and 11.4% respectively. Other weapons of assault includes Fist and Hot materials (kettle, water, Electric iron)4.5%, Stone 2.3%, Shovel , Police boot and elephant tusk 1.1 % each.

Age distribution of victims is represented in figure1. The youngest victim was 15 years old and the oldest 65years. The modal age range of victims was 21-30years 43.1% (n=38) and the mean age is 34.1 years.

In Table 3, the nature or types of injuries sustained by the assault victims are shown. The total is over 100%. This shows that some of the victims suffered more than one injury, which is in keeping with events when there is a scuffle 78.4% (n=69) persons had more than one injury. The commonest injury suffered was laceration 44.3% (n=39), followed by abrasions and puncture in joint second place at 26.0% (n=23) each. Bites occurred in 19. % (n=17), while haematoma, fracture, burns and avulsion were seen 4.5% (n= 4), 3.4% (n=3),and 1.1% (n=1) of times respectively.

Place of assault is displayed in Table 4. Most of the attacks occurred in business or work places 37:5%, living quarters had 36.4%, domestic related attacks 10.2%, while attacks in the drinking salon and streets occurred 6.8% and 5.7% of individuals respectively. 54.5% (n=30) of men assaulted was in business or work related environment, while 63.6% of Women were assaulted in the living quarters. Only 9.1% (n=3) of w omen were assaulted in the business or work environment. Same number of men and women were attacked in social or drinking places.

Table 5 shows relationship between victims and their assailants, attack by neighbours occurred in 43.2% (n=38), strangers, 20.5% (n=18), acquaintances /friends 13.6% (n=12). Intimate partner

TABLE 1. SITE OF INJURY BY SEX

SEX	UPPER LIMB	LOWER LIMB	UPPER & LOWER LIMB	TOTAL	%
MALE	39	9	7	55	62.5
FEMALE	24	7	2	33	37.5
	63(71.6%)	16(18.2%)	9(10.2%)	88	100

TABLE 2. WEAPONS OF ASSAULT

WEAPON	FREQUENCY OF USE	%
WORKMAN'S TOOL	12	13.6
BOTTLE	10	11.4
KNIFE	20	22.7
FIST	4	4.5
SHOVEL	1	1.1
WOOD	16	18.1
HOT WATER/ KETTLE/E.IRON	4	4.5
POLICE BOOT	1	1.1
TEETH	14	16.0
ELEPHANT TUSK	1	1.1
STONE	2	2.3
NOT STATED	3	3.4

TABLE 3. NATURE OF INJURY

NATURE OF INJURY	NO.	% OF VICTIMS
ABRAISON/BRUISE	23	26.0%
BITES	17	19.3%
LACERATION	39	44.3%
PUNCTURE	23	26.0%
AVULSION	1	1.1%
BURNS	3	3.4%
FRACTURE	3	3.4%
HAEMATOMA	4	4.5%

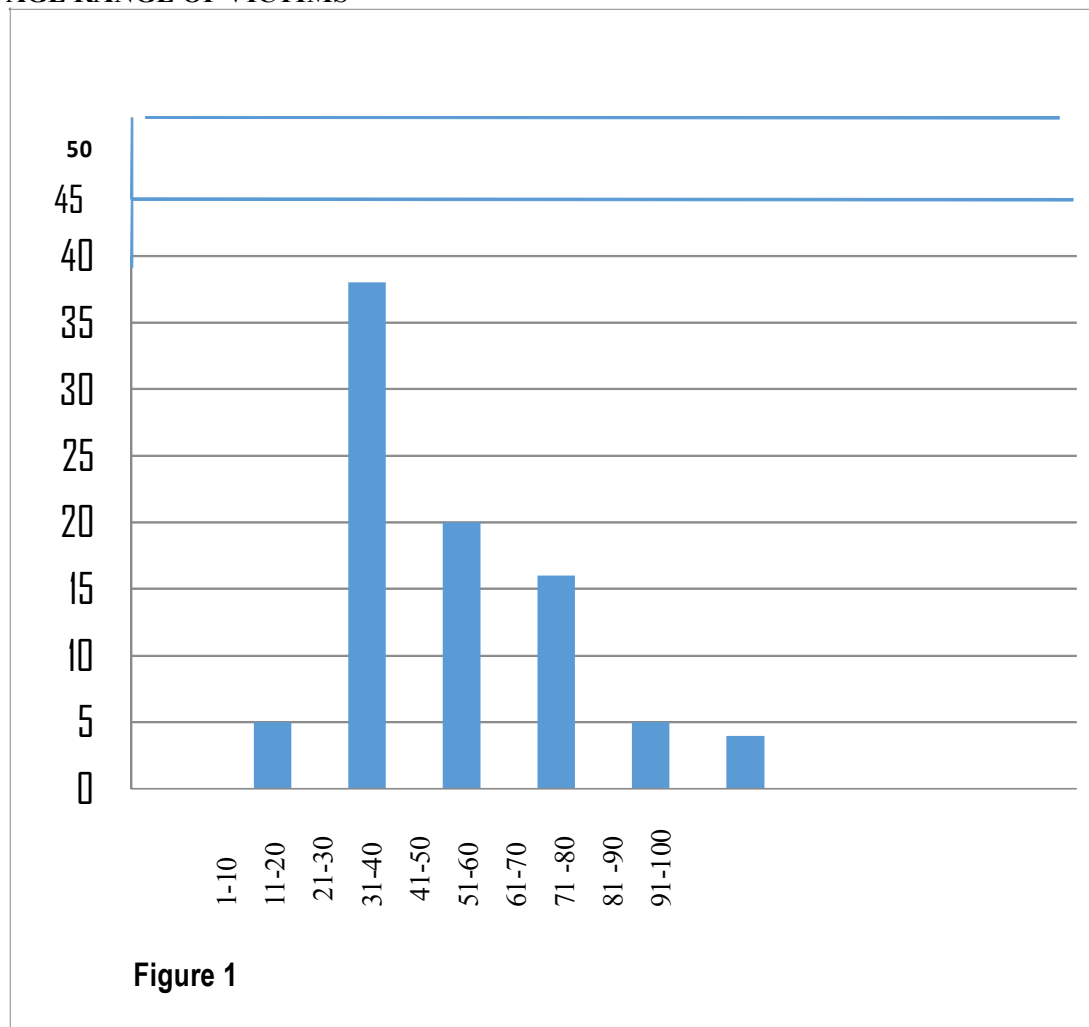
TABLE 4.: PLACES OF ASSAULT

CIRCUMSTANCE	NO.	SEX		%
		M	F	
BUSINESS/WORK PLACE	33	30(34.1%)	3(3.4%)	37.5
LIVING QUARTERS	32	11(12.5%)	21(23.9%)	36.4
DOMESTIC	9	5(5.7%)	4(4.5%)	10.2
SOCIAL-DRINKING SALON	6	3(3.4%)	3 (3.4%)	6.8
STREET	5	4(4.6%)	1(1.1%)	5.7
NOT STATED	3	2(2.3%)	1(1.1%)	3.4
TOTAL	88	55(62.5%)	33(37.5%)	100

TABLE 5. RELATIONSHIP BETWEEN VICTIM AND ASSAILANT

RELATIONSHIP	NO	%
NEIGHBOUR	38	43.2
ACQUAINTANCE / FRIEND	12	13.6
STRANGER	18	20.5
NUCLEAR FAMILY	4	4.5
RELATION-COUSIN / INLAW	8	9.1
BUSINESS ASSOCIATE	7	8.0
UNSTATED	1	1.1
TOTAL	88	100

AGE RANGE OF VICTIMS



DISCUSSION

The incidence of limb injuries in our series is striking. Our study shows 37.7% of assault injuries being to the limbs. This contrasts with other studies which recorded between 14% and 25% of injuries affecting the limbs (Nkombua; 2007; Shephard et al (1990), and Hocking (1997) in their works ranked the limbs 2nd and 3rd commonest sites to be injured in assault thus making the limbs one of the top 3 sites likely to be involved when there is assault. There is also unanimity by Shephard et al, (1990) Hocking (1997) and KS Coomaraswamy (2003), that the upper limb is more commonly injured in assault than the lower limb. This agrees very well with our study where there is preponderance of upper limb injuries 71% (n=63) when compared to lower limb 18.2% (n=16). This could be attributed to attempt by the individuals assailed to protect themselves or to fight back in a given situation.

In our study, males were assailed more than females (1.6:1) giving 62.5% (n=55) and 37.5% (n=33). Similar finding was reported by Nkombua (2007) working in South Africa and Fothergill et al; (1997), Hocking (1997) and Shepherd et al (1990) working in the UK, though our study comparatively has more women involved than what these authors found.

It is clear from table 4 that a greater percentage of limb injuries in assault occurred in the work place or around business set up. 9% (n=30) of such assault involved males and only 91% (n=3) involved females. This reflects a society whose economy is still largely driven by males, highlighting low participation of females in several economic activities. This is further buttressed by the fact that assault injuries in living quarters involved mostly women 63.6% (n=31) as against males 34.4% (n=11). Overall, 36.4% of the attacks being domestic in our study is higher than 26% reported by Fothergill et al.⁷

In most living quarters, the basic necessities of life, like water, fuel, food and space (for clothes line) are lacking. This makes it necessary for the women to try to in

outwit each other in the struggle for survival thereby creating tension and tendency for assault.

Furthermore, 6.8% (n=6) of the limb assault occurred in pubs as against 26% of men and 13% of women reported in Thorton Heath, Surrey.⁷ It could therefore be inferred that limb assault injures in our environment are rather more related to economic issues than psychosocial issues as men try to jostle for vantage position to make financial break through.

Among the 88 individuals who had limb injuries following assault, a total of 113 different injuries were recorded. This means that some of the victims sustained more than one injury. From table majority of the injuries are minor injuries. This agrees very much with several other studies that found minor injuries like abrasion, contusion, lacerations and bruises as common injuries in assault (Nkombua; 2007, Shepherd et al; 1990). Hedeboe et al; (1985) in their study found a similar pattern where injuries classified as minor injuries were preponderant. In their study, Hutchinson et al⁸ came up with the finding of 59% and 49% for bruises and lacerations or abrasions respectively amongst assault victims. Hocking (1997) however in his work noted that lacerations was commonest, followed by other minor injuries like contusion and abrasions. Our work agrees with Hocking's (1997) where laceration 44.3% is commonest. This was followed by abrasions and punctures giving 26.0% each. An injury not recorded by many authors but was significant in our work is human bite, which accounted for as much as 19.3% of injuries seen in the assault victims. Our work did not record any fatality which is in agreement with the report of Wladis et al (1999), which noted that fatal injuries are rare in unarmed assault injures. Norton et al (1997) working in Britain also observed that death is a rare occurrence in interpersonal violence.

This study found that assorted types of weapons were used by the assailants. Weapons as weird as police boot and elephant tusk were used. Teeth as a weapon of assault

were third commonest to be used (16.0%) laying credence to the relative high level of human bite injuries noted in the types of injuries found.

The commonest weapon used in this study was knife 22.7% followed by wood 18.1% and in 3rd place is the use of teeth 16.0%. Nkombua (2007) working in South Africa found fist 25.6% as the commonest weapon used, followed by knives 20.4% and bottles 14.2%.³ Percentage uses of knives and bottles in South Africa resembles our finding but use of fist differs very much with ours of 4.5%. There is however a huge contrast in our findings with that reported by Shepherd J. et al (1990) which recorded 72% use of fist, kicking 42%, knives 6%, bottles 11%. The difference in the studies can be attributed to the different background of the societies where they were conducted. Firearms are not easily accessible in Nigeria and these accounts for no record of its use in our study.

Consideration of the age of the victims of assault in this study show that the age group 21-30 years is the most attacked. There is also significant reduction in the number of people injured as age increased. This finding has a good resemblance to the finding of Fothergill et al (1990). It is pertinent to note that this modal age group is the group is the group involved in economic activities and they are indeed the ones driving the economy. Limb injuries were seen in only less than 10 persons between 61-70 years old. Home office statistical bulletin had noted that the elderly fear personal violence (HMSO: 1988). This can be linked to the fact that the elderly having passed through several life experiences prefer to use wisdom in sorting out issues instead of engaging in activities that may breed violence. Experience, surely is the best teacher.

CONCLUSION

This study has revealed that limb injuries in assault victims are relatively common. These assaults tend to occur more with respect to economic issues and around living quarters. Instruments and materials that are readily available in the vicinity of quarrel

is the choice weapon.

There is need for counseling, training and retraining of individuals in conflict management and resolution. This no doubt will create a less tense atmosphere in the areas where people are prone to attack and thereby reduce injuries and economic loss thereof.

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