



Prevalence of traumatic injuries among street children in Mbuji mayi, Democratic Republic of the Congo

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ABSTRACT

Background

The street kids are facing critical issues, including violence, because of the lack of safety in their living environment. There is no known study on health conditions of street kids in Mbuji mayi. This study aims to assess the extent of traumatic injuries among street children in the city of Mbuji mayi.

Methods

It is a cross-sectional study that spanned a year, from April 2018 to March 2019. It focused on street children based in markets and public spaces in the city of Mbuji mayi. Children who completed the survey questionnaire were included in the study. Their ages were between 7 and 24 years old.

Results

Out of 408 street children encountered, 346 (84.8%) were victims of traumatic injuries, among them 89.3% were male. Traumatic lesions were more common in children whose age varied between 13 and 18 years (52%). Aggressions by adults (32.4%), fights (29.2%) and falls (28%) were the most frequent traumatic circumstances. Wounds and bruises were the most frequent lesions, with 59.5% and 27.5% respectively. The lesions were more often localized to the head (43.4%) and to the thoracic limbs (31.1%). Children resorted more often to traditional medicine (45.9%).

Conclusion

Street children in the city of Mbuji mayi live in an environment of violence and are exposed to traumatic injuries following attacks by adults and fights. They willingly resort to traditional medicine.

Keywords: *traumatic injuries, street children, traditional treatment*

INTRODUCTION

A traumatic lesion is a pathological modification of the structure of a tissue or an organ, produced by external violence as well as all of its general consequences on the organism [1]. These lesions can be osteoarticular and/or involve soft tissues. Surgical lesions are very common in children and occupy an important place in medicine [2]. Factors such as family abuse and neglect, poverty, parental death, armed conflict, natural disasters, socio-cultural beliefs [3-6] cause many children to end up on the streets where violence characterizes their way of life. [7]. This phenomenon of street children has existed since the dawn of time in several regions of the world and has become a major public health problem [2, 7, 8]. In Egypt, for example, it was estimated that around 1 million children were on the streets between 2016 and 2017 [10]. Street children are exposed to different types of violence: physical abuse, sexual abuse, drug abuse, etc. [11, 12].

Studies on the situation of street children in the Democratic Republic of Congo are almost non-existent. Nevertheless in 2019, it was estimated that approximately 12.8 million people would require assistance and protection across the country, including 12.8 million children due to armed conflict and conflict-related violence Kamwina Nsapu [14, 15].

In Mbujimayi, the precarious conditions in which the populations live and the particular socio-cultural context lead many children to end up on the street. The lifestyle on the street is characterized by daily violence [7]. However, no published scientific data on health conditions of street kids in Mbujimayi is available. Our study aimed to assess the frequency of traumatic injuries in children living on the street, the demographic characteristics of traumatized children, the circumstances in which the injuries occur, the anatomopathological data and the mode of management of these injuries.

METHODS

This was a cross-sectional prospective study conducted from April 2018 to March 2019, i.e. over one year.

The study concerned children living in the city of Mbujimayi, without guardianship and outside the family context.

We contacted all children living in markets, large public spaces and main streets in Mbujimayi that were accessible. We included, in our study, any child who experienced a traumatic injury and who responded completely to our survey questionnaire. Thus our sample was made up of 346 cases out of a total study population of 408 street children who were accessible, including 383 (93.9%) boys

and 25 (6.1%) girls. The average age of the children was 18 years old with the extremes of 12 and 24 years old.

The data were collected using pre-established questionnaire that was addressed to street children who consented to step in the study. Data were then encoded on Microsoft Excell and then imported to Epi Info softward for analysis. The percentage and the arithmetic mean were calculated.

RESULTS

Demographics and Trauma Circumstances

Traumatic lesions were frequent among street children in the city of Mbujimayi, ie 346/408 cases (84.8%). Aggression by adults and fights between the children themselves were the most frequent traumatic circumstances, respectively 32.4% and 29.2% (Table 1).

Table 1. Distribution of patients by demographic characteristics and trauma circumstances

Characteristics	Frequence	%
Sex		
Male	342	98.9
Female	4	1.1
Age (years)		
7-12	100	28.9
13-18	180	52.0
>18	66	19.1
Trauma circumstances		
Aggression by adults	112	32.4
Fight between children	101	29.2
Accidental falls	97	28.0
Traffic accidents	36	10.4

Clinical features of lesions

Wounds and bruises were the most observed lesions with respectively 206/346 cases (59.5%) and 95/346 cases (27.5%). The head was the region of the body that was most affected in 150 cases out of 346, or 43.4% (Table 2).

Table 2. Location and types of traumatic lesions

Traumatic injuries	Frequence (n=346)	%
Location of lesions		
Head	150	43.4
Upper limb	108	31.1
Lower limb	71	20.5
Neck	16	4.7
Abdomen	1	0.3
Types of lesions		
Wound	206	59.5
Bruise (unique ou multiple)	95	27.5
Fracture	24	4.6
Breach	16	1.2
Dislocation	4	6.9
Hemoperitoneum	1	0.3

Management of lesions

Traumatic lesions were most often treated with traditional medicine (159/346 or 45.9%); 111 traumatized children (32.1%) were treated in a modern medical structure and 76 traumatized children (22%) received no treatment. The details are shown in Table 3.

Table 3. Management of traumatic injuries

Types of lesions	Type of treatment			Total
	Traditional	Modern	None	
Plaie	92	77	37	206
Bruise	42	19	34	96
Breach	9	4	3	16
Dislocation	1	3	0	4
Fracture	15	7	2	24
Hemoperitoneum	0	1	0	1
Total	159	111	76	346
%	45.9	32.1	22.0	100.0

DISCUSSION

Traumatic injuries are common among street children (84.8%) as they have no one to protect them from any kind of abuse and aggression. This observation was made previously by Bender et al who reported a trauma rate of 78% among the street children surveyed [16].

Street children of the male sex were more affected (89.3%) than the female sex (16.0%) and the age group most affected was that of 13 to 18 years (Table 1). are similar to those found by Rezaul in Bangladesh in 2015 which reported 77.92% male street children [8]. Uwonda also came to the same conclusion in December 2015

when he reported a sex ratio of 2.3 in favor of male street children in a study carried out in Mbujimayi [8]. This can be explained by the more active character of the boys. Another study conducted in Ghana in the Greater Accra region indicated in 2011 that 37% of street children were aged 11 to 15 and 20% aged 16 to 18 [19]. These results are similar to ours and those of Uwonda who found that the most represented age group was that of 15 to 19 years with 48.5% of cases. The age of street children in Mbujimayi will naturally trend upwards over time. This will seriously pose an increase in crime in the future if these children continue to grow up without growing up without adequate supervision.

Our study revealed that traumatic injuries by adult assaults were frequent (32.4%). Adult abuse occurs when these children commit a crime. The punishments inflicted are not always proportionate to the crimes. Wounds were frequent and the lesions were mainly on the head and upper limbs, areas that are more easily reached by adults given the relatively small size of children compared to adults.

Most of the street children victims of the various lesions were taken care of by a traditional treatment (45.9%). This is the same observation made in Bangladesh where 80% of street children had been treated by unconventional means while only 9.89% were by modern medicine. According to the same study, the predominant traumatic lesions were wounds (68.70%) [8]. Cumber et al had come to similar results [18]. This corresponds to the results of our study indicating 59.5% of cases of wounds. Children who live on the street are poor and often careless about their state of health, their purchasing power does not allow them to afford the costs of modern medical care [8].

This study only concerned the traumatic lesions encountered in street children. Statistical data on the number of street children, their overall health status and their socio-economic status in the town of Mbujimayi are not available. Multidisciplinary studies are therefore possible in the future for more documentation about street children in the city of Mbujimayi.

CONCLUSION

Street children in Mbujimayi live in violence and are frequently exposed to traumatic injuries following attacks and fights. They have no medical coverage. This situation must challenge the whole of society and particularly the politico-administrative authorities for the awareness of families upstream and the supervision of these abandoned children.

ETHIC CONSIDERATIONS

This study is part of the scientific research of the Official University of Mbujimayi in order to meet the multiple challenges faced by the Congolese population in general and that of the province of Kasai Oriental and the city of Mbujimayi, in particular. Thus, it has benefited, beforehand, from the authorization of the Faculty of Medicine of this institution of university education and scientific research.

COMPETING INTERESTS

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AUTHORS' CONTRIBUTION

U.A.S. supervised study. He ensured the design of the study, data analysis and interpretation of the results.

M.T.H wrote the main part of manuscript, prepared tables. He participated into interpretation of the results.

L.N.S. ensured collection and analysis of data.

K.N.A. contributed to the drafting of the manuscript.

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