

BURDEN OF BLAST INJURY AMONG CHILDREN ATTRIBUTED TO UNEXPLODED ORDNANCES (UXO) IN NORTH WESTERN TIGRAY ETHIOPIA, 2023

B.F. Teklehaimanot¹, Y. Filina¹, P. Keating², A.M. Morales³, B. Sahelie³, S. Hintsu⁴, S. Diab³, K. McNally⁵, K. Velivela⁵, A. Tsehaye⁶, A.D.L. Pereira³

¹MSF, Amsterdam, Shire, Ethiopia, ²MSF, Amsterdam, London, United Kingdom, ³MSF, Amsterdam, Addis Ababa, Ethiopia, ⁴Aksum university, Aksum, Ethiopia, ⁵MSF, Amsterdam, Nairobi, Kenya, ⁶Suhul Hospital, Shire, Ethiopia

BACKGROUND

In 2020, armed hostilities broke out between the Tigray region and the central government in Ethiopia. A peace agreement in 2022 brought an end to the armed hostilities, but the Tigrayan population remains at risk from explosive remnants of war including unexploded ordnances (UXO). Children are at higher risk of contact with UXOs because their playful nature may result in unwittingly touching UXOs, increasing the risk of death and injury. The objective of this study was to assess the burden of blast injuries in paediatrics attributed to UXOs in North West Tigray Ethiopia 2023 (Figure 1).

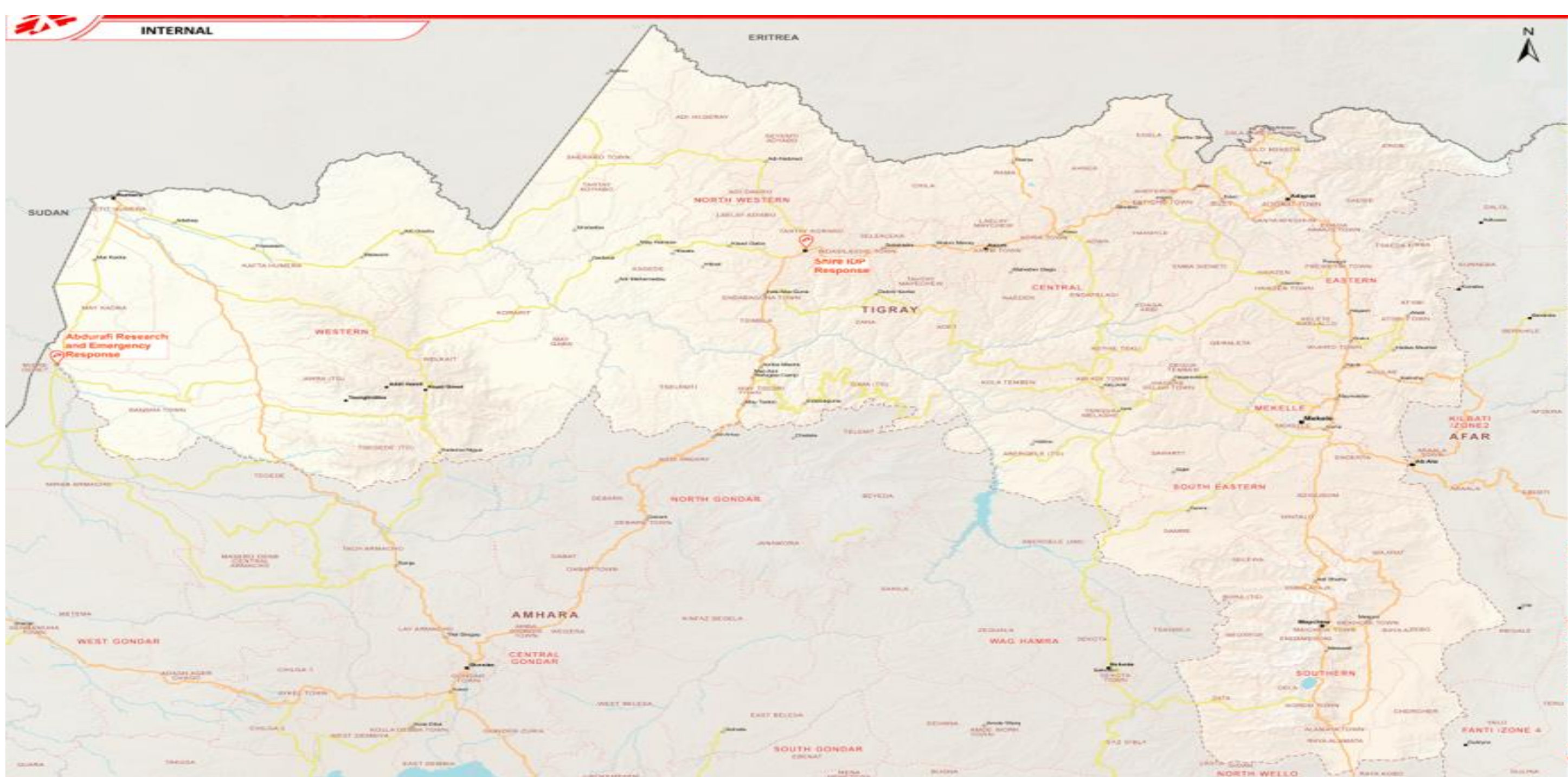


Figure 1: Map of Tigray region, Ethiopia, 2023

METHODS

Individual-level data from all patients presenting or admitted to Suhul hospital or Sheraro health centre (HC) for blast-related injuries attributed to UXOs between February and October 2023 were analysed retrospectively. Descriptive analyses including frequencies and proportions were calculated.

RESULTS

Distribution of blast injury by age and health facility

Eighty-one blast injuries were recorded in both health facilities during the study period, of which 24 (29.6%) were among those below 15 years of age (Table 1). Three deaths were recorded, of which two were <15 years of age. Patients came to Sheraro health centre from Tahtay adyabo woreda with the majority from Ziban gedena (7, 39%), Atsirega (6, 33%), and Mai kuhli (5, 28%) kebele.

Table 1: Distribution of blast injury by project among children under 15 years old in North West Tigray, 2023

Project	< 15 years		Total
	Male	Female	
Shire Suhul Hospital	5 (83%)	1 (17%)	6
Sheraro HC	11 (61%)	7 (39%)	18
Total	16 (67%)	8 (33%)	24

ETHICS STATEMENT

Ethical clearance were obtained from ethical review board of Aksum university found in Tigray region Ethiopia with number of IRB 058/2023 and also ethical clearance was secured from MSF research ethics committee.

Distribution of blast injury by sex

The distribution of blast injuries between male and female had different proportions both in Shire and Sheraro projects in under 15 years (Table 1). Overall there were 24 cases of blast injuries in <15 years old, of those 16 cases (67%) were male (Figure 2).

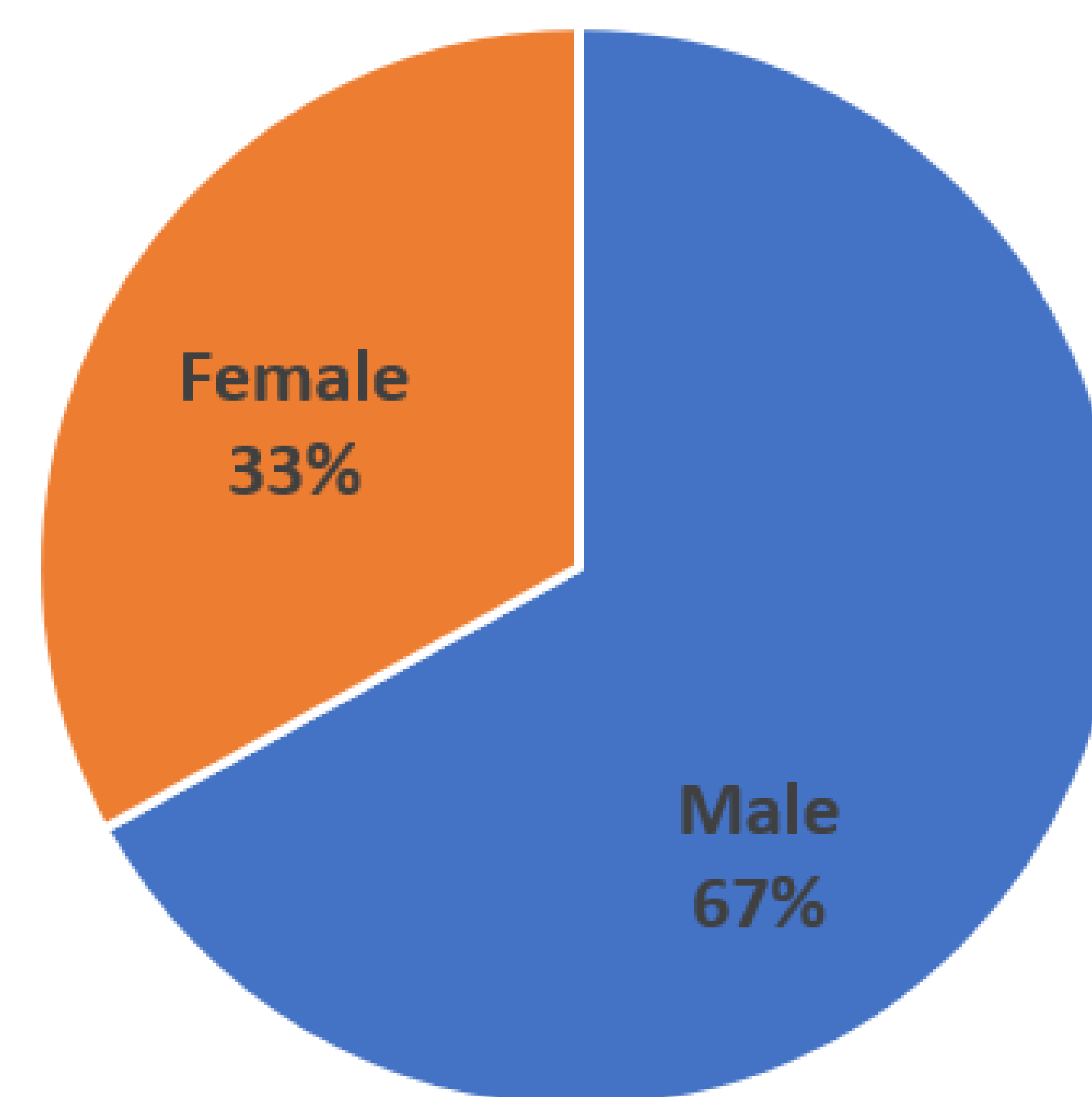


Figure 2: Pie chart showing the distribution of blast injury by sex among under 15 year children in Northwestern zone of Tigray region, Ethiopia

Trends of blast injury by month

The distribution of total blast injury was high in the month of May, especially in Suhul hospital (Figure 3). This could be because Suhul hospital was the only functional hospital in the northwest zone of Tigray region during this peak month.

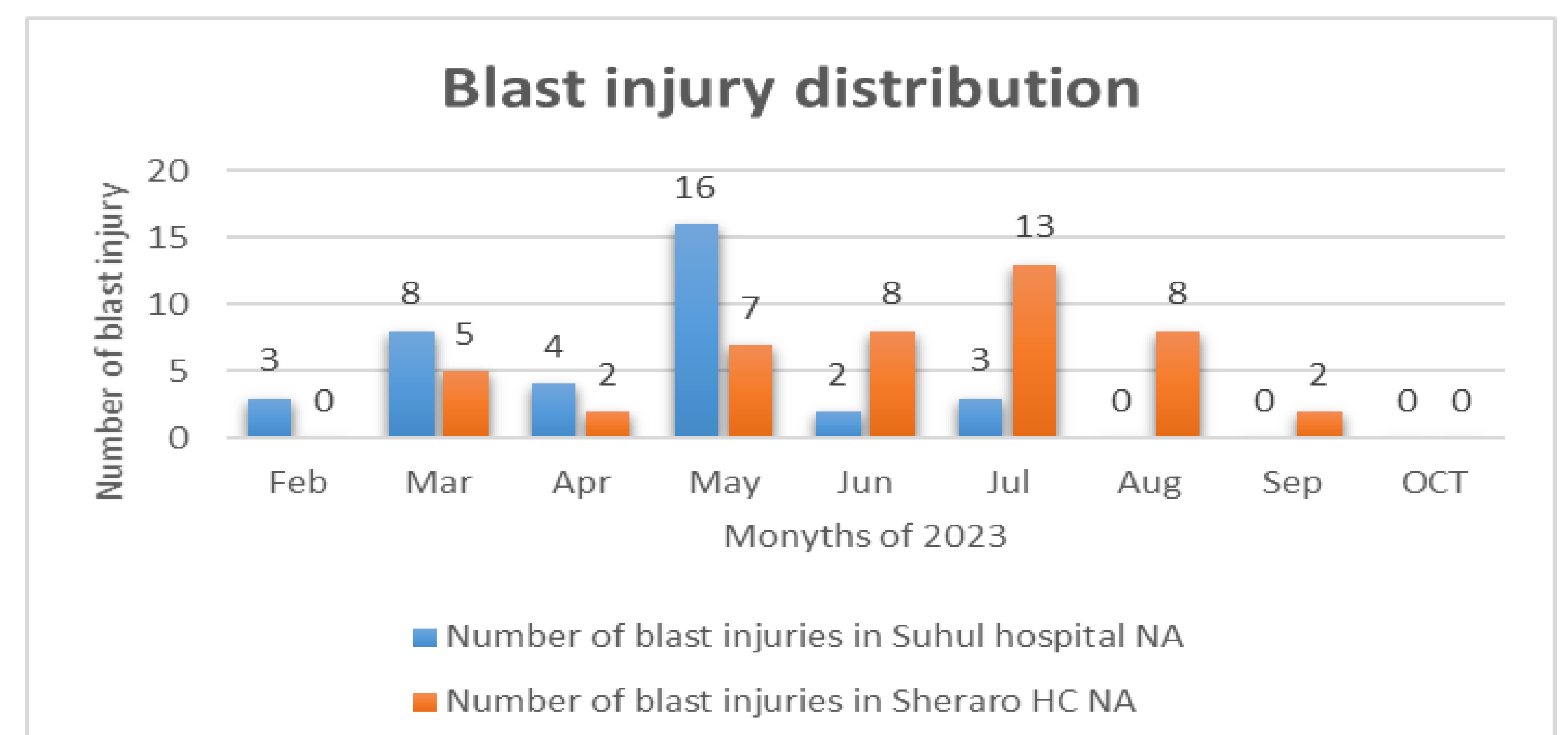


Figure 3: Comparison of blast injury in Suhul and Sheraro by months in North Western zone of Tigray region, Ethiopia

CONCLUSION

This study highlights the persisting danger UXOs pose to the population in North West Tigray. There is a need for greater awareness for children and their family on the risks they pose to children, particularly in high incidence areas using community engagement platforms. Sustained efforts in UXO clearance are needed.