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STATISTICAL ANALYSIS ON CHILD INJURY ADMISSIONS: A CASE STUDY

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Limited studies have been conducted in Sri Lanka on child injuries with respect to different types of injuries. The main objective of this study was to analyse the patterns in all types of injuries among newborn to 18-year-old children. The dataset was obtained from Sirimavo Bandaranayake Specialized Children's Hospital, Peradeniya, Sri Lanka for the period 2019-2023. Records of 10,317 on child injury admission along with 18 variables including date of admission and discharge, age, gender, mode of discharge and information about the time, place and mechanism of injury. The preliminary analysis revealed that the average stay per admission is 1.52 days. The maximum length of stay during the period was 62 days. A time series plot revealed that the number of child injury admissions was at its lowest during the COVID-19 pandemic lockdowns. The highest number of daily injury admissions were reported on Saturdays, while during the pandemic period, it was on Fridays. Head injuries are the most common, and 79% of them were superficial injuries. Upper limbs were the second most injured body part, and more than half of them were fractures. The average length of stay in the hospital due to head injury (1.30 days) was significantly different from the average length of stay in hospital due to upper limb injuries (1.53 days). Association analysis indicated that there are statistically significant associations among the mechanism of injury, place of occurrence of injury, activity done at the time of injury, affected body region, nature of injury and age category. It was identified that age, time of injury, mechanism of injury, activity done at the time of injury, affected body region and nature of injury are significant in determining length of stay. The findings of this study lead healthcare professionals to look at specific injury types and associated variables, which will lead to the development of more efficient treatment practices.

Keywords: Child care, Hospitalisation, Paediatric injuries