

ORIGINAL RESEARCH

Socio-demographic characteristics and risk factors for childhood poisoning reported by parents at a tertiary care hospital: Cross sectional study

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ABSTRACT

Introduction: Childhood poisoning is a major health problem, especially below 6 years and in the adolescent age group. The observed association between sociodemographic factors and childhood injury rates can be used to improve aiming to prevent or reduce such incidence, types of poisoning, and causative agents; the factors vary greatly among different areas of the world, recognizing the pattern and different sociodemographic factors implicated in childhood poisoning at local and national levels might help in strategic planning for child health care services and protection programs.

Method: Method: A retrospective study was conducted, collecting data regarding sociodemographic characteristics in relation to childhood poisoning, like education of parents, awareness of the poison, brief incident history, time taken to seek medical attention, action taken, etc., using a questionnaire designed in the hospital, and results were analyzed.

Results:

In our study, out of 45 participants, 30 were female (66.6%) and 15 were male (33.3%). Out of 45, less than 5 years were 18%, 2% were 5-10 years old, and 80% were more than 10 years old. We also noted that in more than 10-year-old self-ingestion was the most common method of ingestion, accounting for 66%, followed by accidental consumption (33%). 75% of children informed their parents about the consumption of poison; 20% of children showed features of poisoning.

Conclusion: Accidental and non-intentional self-ingestion still present as a major mode of childhood home poisoning. Despite significant advancement in lifestyle among the majority of the South Indian regions, childhood poisoning remains a significant cause of mortality and morbidity. Creating health education and prevention programs might help to prevent such serious preventable problems.

Key words: Childhood poisoning, childhood injury, drug intoxication

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INTRODUCTION

Childhood poisoning is a major health problem, especially below 6 years and in the adolescent age group¹. Most of the childhood poisonings are accidental, fortunately associated with low mortality and morbidity. Children aged < 6 years are the most commonly affected age group, accounting for 60% of all the cases of childhood poisoning. The observed association between sociodemographic factors and childhood injury rates can be used to improve aiming to prevent or reduce such incidents. Types of poisoning and causative agents vary greatly among different areas of the world, and recognizing the pattern and different sociodemographic factors implicated in childhood poisoning at local and national levels might help in strategic planning for children's health care services and protection programs to reduce the morbidities and mortalities from such incidents. Several studies are available all over the world,

but such studies are less available in India, even less in South India. This study is aimed at recognizing the potential risk factors that might be associated with a higher risk of childhood home poisoning in tertiary care centers in Bengaluru.

Ali A. Alhaboob et al. at Riyadh City Khalid University Hospital studied that out of 152 randomly selected participants, 62 were boys (40%) and 90 were women. Self-ingestion was reported to be the most common mode of poisoning. 36/44 with positive family history with childhood poisoning in their family transferred their children to the hospital immediately; drugs were the most common causative agent¹. C. Chein JL Marriot et al. studied unintentional ingestion of over-the-counter medication in children less than 5 years old; it was found that a lower proportion of cases involving ingestion of over-

the-counter drugs required hospitalization (25%). Paracetamol and cough syrup were the most common agents.² Kim M. Yates et al. studied accidental poisoning in New Zealand. It was found that accidental poisoning with analgesics, antipyretics, and anti-rheumatics was a common cause of hospitalization; children under 5 years had a significant hospitalization.³ Bjarne et al. studied the influence of sociodemographic factors on the risk of unintentional childhood home injuries. It was found that risk was 1.7 times higher compared to the general population⁴

OBJECTIVES

1. To determine the sociodemographic characteristics of childhood poisoning.
2. To determine the type of poisoning in 1-18 year old children.

MATERIAL AND METHODS

SOURCE OF DATA

Patients of age 1-18 years attending IPD of Department of Paediatrics, Vani Vilas Hospital, BMCRI.

STUDY DESIGN

Cross Section Study.

STUDY DURATION: April 2024 to May 2024.

SAMPLING TECHNIQUE: Convenient Sampling.

SAMPLE SIZE: 45 Cases.

E. INCLUSION CRITERIA

1. Patient of age group 1-18 yrs.
2. Patients willing to give informed consent.

F. EXCLUSION CRITERIA

1. Those not willing to participate in the study.
2. Critically ill patients.

METHODOLOGY: After obtaining approval and clearance from the institutional ethics committee, the patients

fulfilling the inclusion criteria will be enrolled for the study after obtaining informed consent. Written Assent form for children between 12 and 18.

A structured questionnaire was created which included questions on poisoning incidence, home medication and all possible risk factors for poisoning and sociodemographic characteristics and is disseminated to individuals who visit the hospital.

SPSS (Statistical Package for Social Sciences) version 20. (IBM SPASS statistics [IBM corp. released 2011]) was used to perform the statistical analysis.

Data was entered in the excel spread sheet.

Descriptive statistics of the explanatory and outcome variables was calculated by mean, standard deviation/median and IQR (based on normalcy test- Shapiro wilk test) for quantitative variables, frequency and proportion for qualitative variables. Data was represented graphically wherever necessary using Pie diagram, Bar graph.

RESULTS

In our study out of 45 participant 30 were female (66.6%) and 15 were male (33.3%). Out of 45, less than 5 years were 18%, 2% were 5-10 year old, 80% were more than 10 year old. We also noted that in more than 10 year old self ingestion was most common method of ingestion accounting for 66% followed by accidental consumption (33%). 75% of children informed their parents about the consumption of poison, 20% children showed features of poisoning.

Mean age of ingestion was 12.5 years, most common poisons were pesticides 44% followed by drugs 23%.

71% people had an idea about first aid measures. Most of the children belongs to middle 51% and lower 49% class of socioeconomic status by modified Kuppuswamy classification. 86% of children were from urban compared to rural accounting for 14%.

15% children had an history of broken family. 42% adolescents had history of academic performance pressure. 48% of parents give history of home medication with no secure closure of pesticides and drugs.

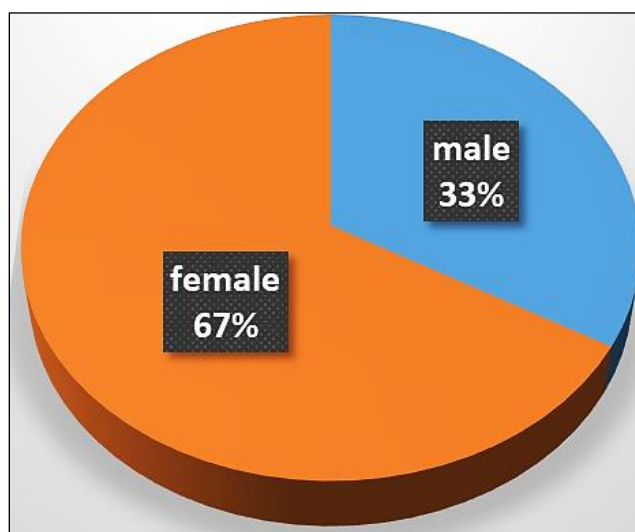


Fig 1: Sex distribution

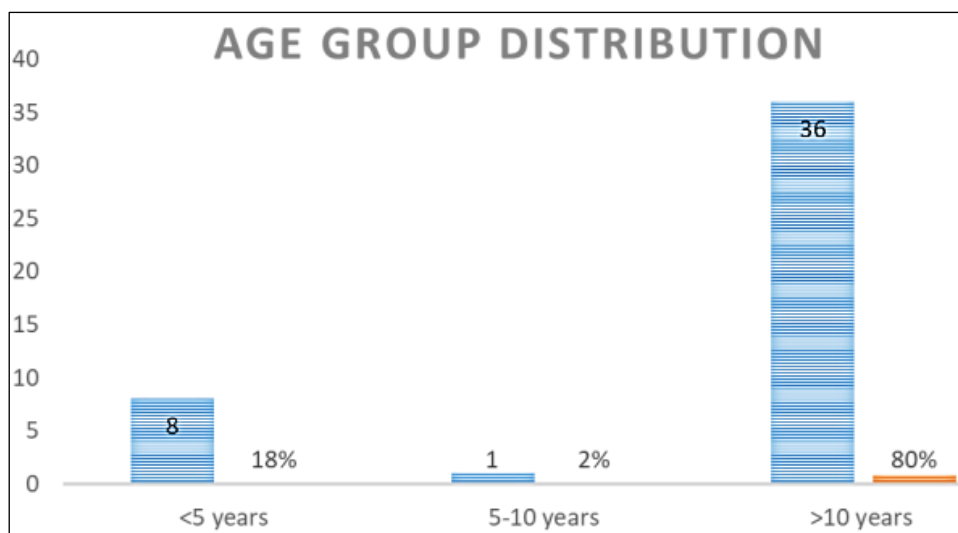


Fig 2: Age group distribution

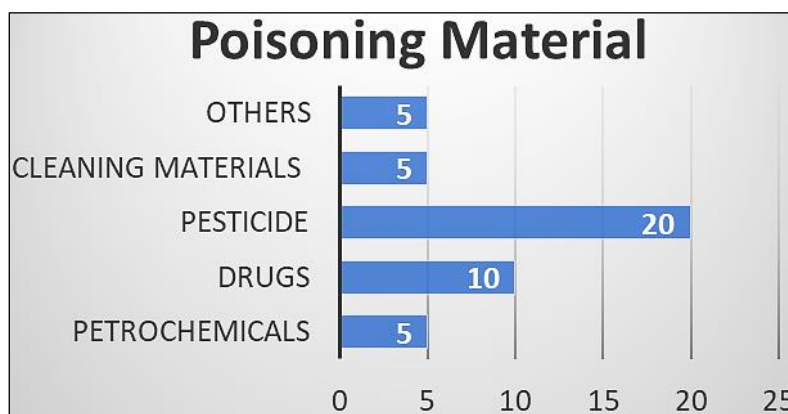


Fig 3: Poisoning material

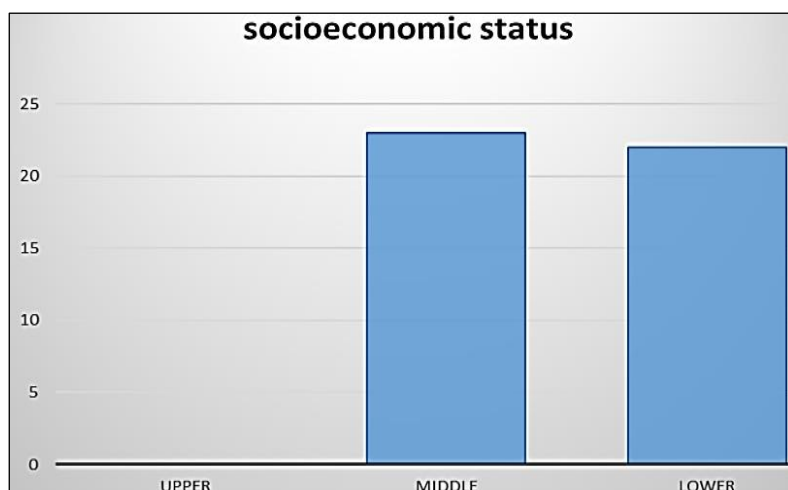


Fig 4: Socioeconomic class

DISCUSSION

Cases of poisoning vary from centre to centre and they are very common in tertiary health care centre, they are increasing as the suicidal tendency in adolescent is increasing.

AliA alhaboobet *al.* at Riyadhcity Khalid university hospital studied that out of 152 randomly selected participants 62 were boys (40%) , 90(60%) were female, self-ingestion was

reported to be most common mode of poisoning,drugs were the most common causative agent¹.

NirmlaS *et al.* studied accidental household poisoning children in this study most of the children with accidental poisoning were in the age group of less than 2 years (56.8%), with female preponderance (66.7%). The commonest poisoning agent was kerosene in 45% of the children followed by detergents (9%), drugs (8.1%), paint thinner (7.1%) and ant chalk (4.5%).⁵

CONCLUSION

Our questionnaire survey revealed that accidental poisoning is more common in less than 5 year old whereas self-ingestion was more common in adolescent age group. Childhood poisoning is still a significant cause of morbidity and possible mortality. Creating health education and prevention programs might help prevent such a potentially serious preventable problem.

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