

## Research Article



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## THE RISK OF UNINTENDED CHILDHOOD INJURIES -AN OBSERVATIONAL STUDY

Dr. Subhashish Paul,<sup>1</sup> Dr. Sukanta Nandi<sup>2</sup>

<sup>1</sup>Assistant Professor, Department of Paediatrics, Gouri Devi Institute of Medical Sciences & Hospital, Durgapur, West Bengal

<sup>2</sup>\*Assistant Professor, Department of Paediatrics, ICARE Institute of Medical Science and Research & Dr. Bidhan Chandra Roy Hospital, Haldia, West Bengal

### Corresponding Address

Email id: [sukantanandi23@gmail.com](mailto:sukantanandi23@gmail.com)

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### ABSTRACT

**Background:** Children and families afflicted by unintentional childhood injuries experience both immediate and long-term effects. Children frequently stumble and have accidents because they are naturally curious about their surroundings. The primary caretakers in charge of their physical security are their parents.

**Aim:** The purpose of this study was to assess parents' attitudes, knowledge, and views regarding the likelihood of unintended childhood injuries.

**Methods:** 680 participants, including 298 dads and 382 mothers, were evaluated in this study. A standardized questionnaire that gathered all the required information, such as demographics and percentage analysis, was distributed to each participant. In order to formulate the results, the collected data underwent statistical analysis.

**Results:** The study's findings demonstrated that most participants, including fathers and mothers, shared comparable attitudes and levels of awareness about unintentional childhood injuries. The study's findings, however, indicated a statistically significant variation in the perception of risk and hazard for the severity of unintentional pediatric injuries.

**Conclusion:** the results serve as the foundation for developing the framework of tailored programs that will enable parents to support their children's safety. The results of this study have domestic, societal, and healthcare policy consequences.

**Keywords:** attitude, children, childhood injuries, knowledge, unintentional injuries

### INTRODUCTION

The prevalence of unintentional injuries in children is rising, which is a major global public health and healthcare concern. According to the data collected, unintentional incidents claim the lives of about 8,30,000 young individuals. Nearly 95% of all infant fatalities from external causes occur in underdeveloped and impoverished countries, according to WHO (World Health Organization) data from 2008. Over 600,000 children under the age of 14 have perished globally as a result of unintentional childhood injuries, with Southeast Asia and Africa bearing the brunt of these injuries, according to current WHO research.<sup>1</sup>

The most frequent injury types that impact children in middle- and low-income nations are burns, poisoning, drowning, falls, and traffic accidents. According to data from current Indian literature, the rate of unintentional childhood injuries ranges from 7% to 34%. Unintentional childhood injuries affect children's long-term functional and mental impairment in addition to their physical health.<sup>2</sup>

Unintentional childhood injuries place a significant financial strain on families and child participants, depriving them of vital healthcare system resources, especially in environments with little resources. Poisoning, drowning, burns, traffic accidents, and falls are among the unintentional kid injuries that are frequently observed throughout the childhood period, particularly in child subjects who are 10 years of age or less.

Child subjects are particularly vulnerable to harm because of their inquisitive and adventurous nature. Children are more likely to suffer unintended childhood injuries because of their propensity for risky activity and their underestimation of the dangers around them. Additionally, small children frequently have accidents at home.<sup>3</sup>

Parents are the primary caretakers for children under five years old, who spend most of their time at home. Parents are in charge of keeping an eye on their children and making sure they are in a safe environment. This alerts parents to several risks that raise the possibility of inadvertent childhood injuries. Additionally, parents' attitudes and perceptions regarding unintended childhood injuries can influence the level of care they take to avoid injuries and the perception of parents for injuries can help in developing a comprehensive approach or program to improve the safety measures of children.<sup>4</sup> Hence, the present study aimed to assess the perception, attitude, and knowledge of parents concerning the risks of unintentional childhood injuries.

## **MATERIALS AND METHODS**

The purpose of the current study was to evaluate parents' attitudes, perceptions, and knowledge regarding the dangers of unintentional childhood injuries. The Institute's Department of Paediatrics provided the study participants. Prior to their involvement in the study, all subjects gave their written and verbal informed consent.

The current study evaluated patients who visited the Institute's pediatric department's inpatient department (IPD) and outpatient department (OPD). 680 individuals of both sexes and children from households with children ages 1 to 5 were involved in the study. Participants who worked as paediatricians, child counsellors, or public health specialists were excluded from the study.

Following the study subjects' final inclusion, the families of the kid subjects received counselling, a rapport-building process was established, and they were informed of the study's design and aim. After then, the participants were given a pre-made, structured questionnaire to complete in order to evaluate their responses. Individual questionnaires were distributed to each individual in situations where more than one parent wished to complete the survey. Out of the 1076 participants who completed the survey, 680 participants—298 dads and 382 mothers—completed the answers and were ultimately added to the study.

A tool created using the Delphi technique, in which experts provided concurrence in the questionnaire's components, was used to assess each participant's knowledge of the various risk factors that could inadvertently cause injuries in child subjects. The questionnaire was divided into three sections. The IAQ (Injuries Attitude Questionnaire from 2004.5) was used to gauge participants' attitudes on unintentional childhood injuries. It included two subscales: learning and toughening. Parents' perceptions of the severity and danger of different childhood injuries were evaluated using the Glik test, which was first developed in 19916 and then adapted for the South Indian environment in 2017.

The collected data was statistically evaluated using the Chi-square test, multiple logistic regression, Kaplan-Meier survival analysis, and descriptive measures assessment using SPSS software version 20.0.

## **RESULTS**

The purpose of the current study was to evaluate parents' attitudes, perceptions, and knowledge regarding the risks of unintentional kid injuries. In the current study, 680 subjects—298 fathers and 382 mothers—were evaluated. The study included 298 dads and 382 moms as subjects. In terms of academic status, 12 study participants were uneducated, 454 were below graduation, and 214 were graduate students or higher. As for income, 190 and 144 study participants reported incomes of less than or more than \$50000, respectively (Table 1).

According to the research participants' knowledge, 23.6% of mothers and 25.5% of fathers were aware that locking the door may injure the kid, and 23% of mothers and 16.1% of men were aware that tubs or buckets filled with water could do the same choking by nuts and popcorns in toddlers and babies by 29.3% mothers and 27.5% fathers, suffocation by heavy blankets by 41.4% mothers and 48.3% fathers, using crib/beds with fixed sides are best management by 31.9% mothers and 26.2% fathers, raw sprouts causing food poisoning by 63.9% mothers and 68.5% fathers, avoiding honey in babies aged <1 year by 60.7% mothers and 56.4% fathers, selecting non-toxic material in baby toys by 28.8% mothers and 24.8% fathers, and ointments, cosmetics, and toilet cleaner can cause poisoning by 17.3% mothers and 18.8% fathers.

Regarding attitude, it was evaluated on two subscales: learning and toughening. The results of the toughening subscale indicated that a child can develop character by taking reasonable risks that may result in some minor injuries, as reported by 43.5% of mothers and 35.6% of fathers; minor injuries can help their child develop stamina, according to 46.6% of mothers and 39.6% of fathers; injuries can help the child better handle physical pain, according to 39.8% of mothers and 45% of fathers; after an injury, their child typically learns that they should not do the same thing again, according to 49.2% of mothers and 40.3% of fathers; and a few minor injuries could benefit their child by teaching him or her to be more cautious, as reported by 47.1% of mothers and 49% of fathers.

For learning, 51.3% of mothers and 39.6% of fathers felt that it is sometimes better to let their child learn on their own, even if it means getting hurt a little. They also felt that when their child gets hurt, he learns the consequences of risky behavior, which was felt by 51.3% of mothers and 38.3% of fathers. They also felt that getting hurt will help their child learn the limits of their abilities, which was felt by 35.1% of mothers and 38.9% of fathers.

Choking from food, burns, falling from stairs, poisoning from cleaning agents, suffocating from soft toys, and poisoning from overdosing on medications or from improper administration are among the scenarios that were mentioned. Of these, 51.8% of mothers viewed the risk of falling from stairs as a serious injury, 46.1% of mothers viewed the risk of poisoning from cleaning agents as a very serious injury, 46.3% of fathers viewed the risk of burns as a serious injury, and 47.7% of fathers viewed the risk of poisoning from overdosing. Perception of hazard scenarios included injuries from playground equipment (metal or sharp-edged toys), drowning at home or in a pool, car accidents, becoming trapped in cabinets or refrigerators, and suffocation from a heavy blanket.

Suffocation from a heavy blanket was regarded as a serious harm by 45.5% of mothers, a car accident hazard as a very serious injury by 50.8% of mothers, a drowning at home as a serious injury by 41.6% of dads, and a motor accident hazard as a very serious injury by 52.3% of fathers.

## DISCUSSION

Twelve study participants were ignorant, 454 were below graduation, and 214 were graduate or higher educated. As for wealth, 190 and 144 study participants reported incomes of less than or more than \$500,000. These findings were similar to those of studies by Johnston BD et al.<sup>8</sup> and Paul S et al.<sup>9</sup>, in which the authors evaluated participants using demographic information similar to the current study in order to gauge parents' awareness, attitudes, and perceptions regarding unintentional pediatric injuries.

Locking the door is one way that 23.6% of mothers and 25.5% of fathers are aware of the possibility of harm to their children; tubs or buckets filled with water are another; 23% of mothers and 16.1% of fathers are aware of this; 29.3% of mothers and 27.5% of fathers are aware of this; 63.9% of mothers and 26.2% of fathers are aware that raw sprouts can cause food poisoning; 60.7% of mothers and 56.4% of fathers are aware of this; choosing non-toxic materials for baby toys is another; and 17.3% of mothers and 18.8% of fathers are aware of the dangers of ointments, cosmetics, and toilet cleaner.

These findings were in line with research by Prafulla S et al. (2010) and İnce T et al. (2011), whose knowledge components matched the knowledge levels measured in this study. Regarding attitude, it was evaluated on two subscales: learning and toughening. The results of the toughening subscale indicated that children can develop character by taking reasonable risks that may result in minor injuries, which were experienced by 43.5% of mothers and 35.6% of fathers; minor injuries can help their child develop stamina by 46.6% of mothers and 39.6% of fathers; injuries can help their child better handle physical pain by 39.8% of mothers and 45% of fathers; and after an injury, 49.2% of mothers and 40.3% of fathers said their child typically learns not to do the same thing again and few minor injuries could be good for their child because they will help him/her learn to be more cautious by 47.1% mothers and 49% fathers.

For learning, sometimes it is better to let their child learn on their own, even if it means getting hurt a little was felt by 51.3% of mothers and 39.6% of fathers, when a child experiences an injury, he learns the consequences of risky behavior was felt by 51.3% mothers and 38.3% fathers, being injured will help their child toughen up physically was felt by 42.4% mothers and 37.6% fathers and mental toughening by 37.7% mothers and 38.3% fathers, and getting injured will help their child learn limits of their abilities by 35.1% mothers and 38.9% fathers. These results were consistent with those of Ma X et al. (2012) and Ramdhan SN et al. (2014), who found that the attitude responses in the current study were similar to the records cited by the authors in their respective investigations.

In terms of risk perception, of all the scenarios given—suffocation from soft toys, poisoning from improperly administered medications, poisoning from cleaning agents, choking from food, burns, and falling from stairs—51.8% of mothers consider

the risk of falling from stairs to be a serious injury, 46.1% consider the risk of poisoning from cleaning agents to be very serious, 46.3% consider the risk of burns to be a serious injury, and 47.7% consider the risk of poisoning from improper administration or overdose of medications as very serious.

The scenarios that were presented in terms of hazard perception included injuries from playground equipment, sharp-edged or metal toys, drowning at home or in a pool, motor accidents, becoming trapped in cabinets or refrigerators, and suffocation from a heavy blanket. Of these, 45.5% of mothers viewed drowning from a heavy blanket as a serious injury, 50.8% of mothers viewed motor accident hazards as very serious injuries, 41.6% of fathers viewed drowning at home as a serious injury, and 52.3% of fathers viewed motor accident hazards as very serious injuries. These findings were consistent with research by Mathur A et al. (2014) and Hemalatha K et al. (2015), where the authors' reported perceptions of risk and hazards were connected with the findings of the current study.

## CONCLUSIONS

Taking into account its limitations, the current study comes to the conclusion that its findings serve as the foundation for developing the framework of tailored programs that will enable parents to help with their kid subjects' safety. The results of this study have domestic, societal, and healthcare policy consequences. Creating educational and instructional activities for families with children ages 0–5 could assist raise awareness.

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| Characteristics |                       | Number |
|-----------------|-----------------------|--------|
| Relationship    | Mothers               | 382    |
|                 | Fathers               | 298    |
| Income          | <500000               | 190    |
|                 | >500000               | 144    |
|                 | No response           | 346    |
| Education       | Uneducated            | 12     |
|                 | Below graduation      | 454    |
|                 | Graduation and higher | 214    |

Table 1: Demographic data of study subjects