

Original Article

Knowledge, Attitude, and Perceptions (KAP) Of Parents Regarding Risks For Unintentional Childhood Injuries

Sushma Gopalan¹, Apoorva Deshpande², Chetan Ginigeri³

From, ¹Child Life Specialist, Department of Paediatric, ²Psychologist, Department of Paediatric Neurology, ³Program Director & Lead Consultant - Paediatrics & Paediatric Intensive Care, Department of Paediatrics & Paediatric Intensive Care Unit, Aster CMI Hospital, Bengaluru, Karnataka, India.

ABSTRACT

Background: Unintentional Injuries in childhood can have long-term and short-term impacts on the child and family. As their nature is to be curious about their environment, children tend to have falls and accidents. Parents, being the main caregivers, are responsible for their physical safety. From a research point of view, in a low economic setting such as India, there is knowledge of the prevalence and type of injuries but not the parental perspective. This study attempts to understand the knowledge, perception, and attitude of parents toward the risks of unintentional injuries. **Methodology:** 191 mothers and 149 fathers completed a survey questionnaire; followed by a demographic and percentage analysis. **Results:** The current study found that the majority of fathers and mothers agree on similar components of Knowledge and Attitude. However, there was a significant difference in the perception of risk and hazard concerning the severity. **Conclusion:** This forms the basis for outlining customized programs to equip parents in assisting with the safety aspect of their children. The strengths and limitations are mentioned. The findings have domestic, social, and healthcare policy-level implications.

Keywords: Unintentional injuries, children, knowledge, attitude, perception and parents

Unintentional injuries among children are emerging as a serious public health concern around the world since they constitute a major global public health problem. Every year around 8,30,000 children die due to unintentional injuries [1]. According to the World Health Organization, more than 95% of all deaths from external causes among children occurred in the poorest countries World Report on Child Injury Prevention 2008 [2]. A later study by the World Health Organization (WHO, 2013) [3], mentions that the burden of unintentional childhood injuries is the highest in Southeast Asia and Africa. In 2016, over 600,000 children aged 14 years and below died due to unintentional injuries worldwide [4].

In low and middle-income countries, the most common forms of injuries affecting children are falls, road traffic accidents, burns, poisoning, and drowning [5]. According to recent literature from India, the incidence of unintentional injuries in children ranges from 7 to 34% [6-8]. Unintentional injuries have an impact not only on the child's physical health but also in cases of long-term mental and functional impairment.

Childhood injuries impose a substantial economic burden on families and drain essential resources from healthcare systems, especially in limited-resource settings [9, 10]. Unintentional injuries such as falls, road traffic injuries, burns, drowning, and poisoning, are common during childhood, particularly for children aged 10 years and younger. Due to their curious and exploratory nature, children are more prone to injuries. Children's tendency to engage in risky behaviors and underestimation of their surrounding hazards, place them at an increased risk of sustaining unintentional injuries. Home accidents are more common among young children. Children under the age of five spend the majority of their time at home. Parents are usually the primary caregivers. They are responsible for supervising and providing a safe environment for their children. This means that parents should be aware of the different threats that can increase the risk of injuries. In addition, a parent's attitude and perception of injuries are likely to determine the level of care they take to prevent, and perception of parents' injuries can further aid in developing a comprehensive program or approach to improve child safety measures.

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Correspondence to: Sushma Gopalan, Department of Pediatrics, Aster CMI Hospital, Bengaluru, Karnataka, India.
Email: sushmagopalan@gmail.com

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The aim is, thus, to understand the Knowledge, Attitude, and Perceptions (KAP) of Parents regarding Risks for Unintentional Child Injuries.

METHODOLOGY

The survey was conducted in the Out-Patient Department (OPD) and In-Patient Department (IPD) of the Paediatric Unit in a Corporate Hospital. The ethical clearance provided permission for researchers to collect data. The inclusion criteria were that the family must have at least one child aged between 1 to 5 years, must be residing in urban Bangalore, and should know the English language to answer the self-administered questionnaire. Individuals who work in areas related to child safety such as – pediatricians, child counselors, and public health specialists were excluded from the study.

The researchers along with the student-interns met with families waiting in the waiting areas of the OPD as well as in the IPD. A quick rapport was built with them by stating the purpose of the study. Thereafter, the ones who showed an inclination to respond were given a tab to fill out the questionnaires. In situations where multiple parents were to answer at the same time, a link to the survey was shared with the parents on their devices. Parents first provided informed consent and then answered items from the KAP Questionnaire containing three parts:

1. Knowledge about different risk factors that may unintentionally cause injuries to the child: a tool developed by the researchers using the Delphi technique where a panel of 5 experts provided concurrence in the components of the questionnaire.
2. Attitude of the parents towards childhood injuries: Injuries Attitude Questionnaire (IAQ) (Terri et al., 2004) [11]. The tool has two subscales: Toughening and Learning.
3. Perceived risk and perceived seriousness of the parents regarding different childhood injuries: tool developed by (Glik et al 1991) [12] which was modified to a South Indian setting by Inbaraj et al (2017) [13]. The tool assesses two constructs – perception of risk and perception of hazard. Out of the 538 parents who took the survey (269 mothers and 269 fathers), 340 parents provided answers that were complete (191 mothers and 149 fathers) and these were subsequently used for the analysis.

Statistical Analysis: The survey responses were analyzed for demographic profiling. Three main indicators were reported-relationship, education, and income. A preliminary percentage analysis was conducted to understand the knowledge, attitude, and perception of mothers and fathers towards unintentional injuries in their children.

RESULTS

The cleaned data was utilized to understand the demographic profiles of the parents who took the survey. [Table 1] shows the relationship with children, the educational background of parents, and the monthly income of parents. It indicates that more mothers answered the survey than fathers; most parents' educational level was below graduation; and the majority of the parents did not wish to disclose their yearly income. From among the parents who shared their income, it is interesting to note that parents who earned less than 50,000 rupees outnumbered those who earned over 50,000 rupees.

Table 1: Demographic information-Relation with Child, Education of Parent and Total Monthly Income of Family

RELATIONSHIP	Fathers	149
	Mothers	191
EDUCATION	No Schooling	6
	Below Graduation	227
	Graduation and above	107
INCOME	Below 50000	95
	Above 50000	72
	Do not wish to answer	173

Knowledge

The results of the study conducted are shown below.

- 26.0% had education below graduation level, 20.6% had education graduation and above and 33.3% had no formal schooling.
- 22.1% had income below 50,000 and 22.2% had income above 50,000; 26.6% preferred not to mention income.
- 25.5% of fathers and 23.6% of mothers are aware that “locking the door of the bathroom/toilet” can potentially injure their child.
- 16.1% of fathers and 23% of mothers are aware that “buckets or tubs filled with water” can potentially injure their child.
- 27.5% of fathers and 29.3% of mothers are aware that “popcorn and nuts can cause choking in babies and toddlers”.
- 48.3% of fathers and 41.4% of mothers were aware that “using a heavy blanket can cause suffocation”.
- 26.2% of fathers and 31.9% of mothers were aware that “using a bed/crib with fixed sides is the best practice for crib management”.
- 28.9% of fathers and 28.3% of mothers were aware that “appropriate car seats for children are the correct safety precaution to be taken while the child is in the car”.

- 18.8% of fathers and 17.3% of mothers were aware that “toilet cleaners, cosmetics such as lipsticks, moisturizers, lotions, syrup administered in excess and ointments can accidentally cause poisoning in a child”.
- 24.8% of fathers and 28.8% of mothers were aware that “toys should be made from non-toxic materials while selecting toys for their children”.
- 79.9% of fathers and 76.4% of mothers agree that “steam can cause burn injuries to children”.
- 56.4% of fathers and 60.7% of mothers agree that “honey should be avoided for babies under 1 year of age”.
- 68.5% of fathers and 63.9% of mothers agree that “raw sprouts can cause food poisoning, especially in children below 5 years”.

Attitude

The attitude of the parents’ was assessed using Injuries Attitude Questionnaire (IAQ) [11]. The tool has two subscales: Toughening and Learning.

Toughening

- 49% of fathers and 47.1% of mothers feel that “few minor injuries could be good for their child because they will help him/her learn to be more cautious”.
- 40.3% of fathers and 49.2% of mothers feel that “after being injured their child usually learns that they should not do the same thing again”.
- 45% of fathers and 39.8% of mothers feel that “injuries can help the child handle physical pain better”.
- 39.6% of fathers and 46.6% of mothers feel that “minor injuries can help their child build stamina”.
- 47.7% of fathers and 56.5% of mothers feel that “experiencing few minor injuries may help their child prepare better for life by teaching them how injuries occur or can be avoided”.
- 35.6% of fathers and 43.5% of mothers feel that “a child can build character by taking sensible risks that could result in some minor injuries”.

Learning

- 38.9% of fathers and 35.1% of mothers feel that “getting injured will help their child learn limits of their abilities”.
- 38.3% of fathers and 37.7% of mothers feel that “being injured will help their child toughen up mentally”.

- 37.6% of fathers and 42.4% of mothers feel that “being injured will help their child toughen up physically”.
- 38.3% of fathers and 51.3% of mothers feel that “when a child experiences an injury, he learns the consequences of risky behavior”. 39.6% of fathers and 51.3% of mothers felt that “sometimes it is better to let their child learn on their own, even if it means getting hurt a little”.

Perception

Perception Of Risk: Of all the situations provided: falling from stairs, burns, choking due to food, poisoning due to cleaning agents, poisoning due to overdose of medicines or wrong administration, and suffocation due to soft toys, 47.7% of fathers perceive the risk of “poisoning due to overdose of medicines or wrong administration” as very serious and 46.3% fathers perceive the risk of “burns” as serious injury. 46.1% of mothers perceive the risk of “poisoning due to cleaning agents” as very serious and 51.8% of mothers perceive the risk of “falling from stairs” as a serious injury to the child.

Perception Of Hazard: Of all the situations provided: suffocation due to the heavy blanket, entrapment in cupboards or refrigerator, motor accident, drowning at the pool, drowning at home, injuries due to toys (sharp edges/metal) playground equipment, 52.3% of fathers perceive the hazard of “motor accident” as very serious and 41.6% fathers perceive the hazard of “drowning at home” as serious injury. 50.8% of mothers perceive the hazard of “motor accident” as very serious and 44.5% of mothers perceive the hazard of “suffocation due to heavy blanket” as a serious injury to the child.

DISCUSSION

In any aspect of Child Safety and prevention of childhood injuries, there are some recognizable arguments and some vague controversies. Some arguments are based on the fact that some bruises, bumps, and scratches are expected in an active child and are a part of growing up. No one tries to limit these activities; however, the challenge arises when these innocent actions lead to something severe which happens in most cases as mentioned in a study by Johnston and Ebel (2013) [20]. Child safety is an important aspect of any healthcare system and involves continuous policy management. It is a reflection of the current safety practices, social and political agendas, understanding, and the approach to child safety by various systems. Hence with changing times, it is imperative to ensure there are enough programs and workshops where appropriate guidance and resources are made available to parents and caretakers to minimize or prevent unintentional childhood injuries. The findings from this study will help inform such programs.

Most of the studies work on the Knowledge, Attitude, and Perception of mothers. The current study aimed to understand the mind of both fathers and mothers. The current research found that the majority of fathers and mothers agree on similar components of Knowledge. To add on, only a small percentage of mothers were aware that locking doors is a risk for an injury which aligns with the findings of Inbaraj et al (2017) [13] and Inbaraj et al (2020) [14]. Additionally, it was found that both fathers and mothers know that using beds with fixed sides is the best practice for crib management. This finding contradicts the study done by Ramdhan et.al (2014) [15], which stated that out of the 19 safety practices, crib safety had one of the lowest responses (16.4%).

When it came to attitude towards unintentional injuries in their children, more than 50% of mothers said that having a few minor injuries toughens children for the future and they learn the consequences of their behavior. On the contrary, a very low percentage of fathers feel that injuries toughen or help the child learn about his risky behavior. There were differences between both parents in terms of perception of risk and hazard concerning the severity. More than 50% of mothers feel that falling from stairs is a serious injury; whereas more than 50% of fathers feel that a motor accident is a very serious hazard.

Most of the literature concentrates on the attitude of parents and the correlation with the prevention of the injury [16]. They also assess parental attitudes toward unintentional injury prevention by incorporating safety measures [17]. However, this study understands the toughening and learning aspect of the child post-injury, as per the parent's viewpoint. In that aspect, this is a preliminary study in considering parental stance when it comes to post-injury attitude. In the case of Perception, most fathers perceive poisoning due to overdose of medicines or wrong administration and burns as very serious and serious injuries whereas most mothers perceive poisoning due to cleaning agents and falling from stairs as very serious and serious injuries. This study confirms partly to a previous study done by Shriyan et.al (2014), and Paul et al (2019) [18, 19] where the majority of the injuries had arisen due to falls (32.4%).

This study suggests many short and long-term implications. Discovering parents' practice of unintentional injuries, related factors, and their prevention aids in customizing solution-focused Child Safety programs to educate caretakers on the various aspects. The research findings contribute to the current literature by having culture-specific assessment tools to analyze the KAP of families regarding unintentional childhood injuries. Different parental views (mother and father) shed light on the difference in rearing techniques which might help in parenting and customized child safety programs.

In the long term, the information obtained in the study can be used by health professionals to create and promote health programs at the community and public levels. Most Policies are created due to public perception and in response to a challenge. Hence adequate awareness of child safety and prevention of childhood injuries can bring about changes in Policies where programmes on Child Safety become a norm.

Child Safety is a responsibility of the Country wherein the Government, ministers, various departments, schools, and the public sectors come together to ensure the child is safe. Policies, legislation, and programs have to be strengthened to reduce child injuries in India. The study also implies that pediatricians, child psychologists, social workers, and legal teams have to work together to properly implement these child safety programs, interventions, and policies.

The study has its strengths and limitations. Knowledge, attitude, and perception of caregivers were quantitatively measured. The caregivers include not just the mother, but fathers too. The attitude of caregivers towards toughening and learning of children was considered instead of the attitude towards safety prevention. On the other hand, convenient sampling in an urban setting prevents researchers from generalizing the findings. Only English-speaking parents were considered for the study and data was collected from only one hospital.

The validation of the Knowledge Questionnaire was established by expert validation. It was not statistically established. This could be one of the drawbacks that can be better in further research. Some of the other limitations that can be considered for further research are using translated questionnaires into regional languages for a wider sample, and adopting advanced statistical techniques such as correlation and t-test to get in-depth findings. Moreover, comparing rural and urban populations in the future will provide insight into a more representative sample. Creating an intervention program based on the current findings could be worth exploring as part of a future study.

CONCLUSION

Worldwide, the number of children who die due to unintentional injuries is staggering. The need to prevent injuries and improve safety for children is a priority for healthcare professionals. Parents are the main stakeholders in the process of prevention. In the Indian scenario, data about the prevalence of childhood unintentional injuries is present, but a parent perspective is missing. The current study was undertaken to bridge this gap. Parents completed a survey about their knowledge, attitude, and perception towards unintentional injuries in their children. Data was analyzed and findings with practical implications emerged.

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