



Parental Knowledge and Attitude as Associated Factors for Injury Prevention Practice in Preschool Children

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A B S T R A C T

Children who like to explore the environment potentially cause injury, so injury prevention is essential. Parental knowledge and attitude influence the incidence of injury in children. This paper analyzes the correlation between parental knowledge and attitude toward injury prevention practice in preschool children. This research was a cross-sectional study. The population was parents who have children schooling in AI - Masithoh 04 Kindergarten. In addition, there were 40 samples with a total sampling method. The independent variables were parental knowledge and attitude, while the dependent variable was injury prevention practice. The instrument utilized questionnaires. A questionnaire for parental knowledge consisted of 24 multiple-choice questions. In addition, there were 14 questions for the parental attitude variable. Injury prevention practices were evaluated using the recall method with 14 questions. The statistical test used the Sommers correlation and the Lambda with a 95% confidence level. Respondents with less parental knowledge had less injury prevention practice (25%). The Sommers D test obtained $p=0.001$ $r=0.447$, indicating a positive and moderate correlation between parental knowledge and injury prevention practices. In addition, respondents with negative parental attitudes had poor injury prevention practices (47.5%). The Lambda test obtained $p=0.000$ $r=0.650$, meaning a positive and strong association between parental attitude and injury prevention practice. Parental knowledge and attitude correlate with injury prevention practice in preschool children. There should be an effort to improve parental knowledge, especially about the dangers of injury and its prevention.

INTRODUCTION

Injury is the impact of an external agent causing physical and mental damage (Jamil, 2020). It is one of the leading causes of child morbidity and mortality worldwide. It includes traffic injuries, falls, burning, drowning, poisoning, and animal bites (Atak *et al.*, 2010). A prior study showed that environmental factor or unsafe place where children live was the most crucial element in the incidence of injury to children, followed by low maternal monitoring (Rahma *et al.*, 2020). In addition, the research found that mothers with less injury prevention had more frequent children experiencing injuries (Widyaningsih, 2014).

According to the World Health Organization (WHO), injuries resulted in 5.8 million deaths worldwide, and more than 3 million occurred in developing countries. In addition, the organization stated that no less than 875,000 children under 18 years old die annually due to intentional and unintentional injuries (Atak *et al.*, 2010). Unfortunately, the number of injuries has increased every year. Based on a survey by Basic Health Research, injury prevalence in 2007 was 7.5 percent to 8.2 percent in 2013. 5.4% of injuries occurred at school, and 36.5% at home.

A preliminary study in Al-Masithoh 04 Kindergarten, Sukodadi Village, Malang Regency, among 20 parents showed that all of their children had suffered an injury. The interview with those parents found that the most frequent injuries in children were falling (65%), followed by burn injuries (25%), choking on marbles (5%), and drowning (5%).

In addition, the interview revealed that parents allowed and did not forbid children when playing on the stairs. They also often did not wear helmets for various reasons when children participated in motorbike driving. Furthermore, they were often negligent in keeping a lighter far from children. It is because there was a game for children by burning paper and imitating a magician on TV. Moreover, a child nearly drowned because the parent did not put on a life vest. The child suddenly came into the adult pool because he followed his brother. A parent also locked the fence when the child was at home because of the house near the highway.

Several studies indicated that parental attitudes ignoring their children would impact children's safety (Indarwati, 2011; Jamil, 2020). An attitude is feelings and potential tendencies to react. It results from cognitive, affective, and conative components responding to each other in understanding, feeling, and behaving towards an object (Indarwati, 2011; Jamil, 2020). A previous study also found that lack of parental monitoring increased the risk of injury in children (Kusbiantoro, 2014). Injury is the impact of an external agent causing physical and mental damage (Indarwati, 2011). The risk factors for injury are host factors (parent and child factors that cause injury) and environmental factors (Kuschithawati, S., Magetsari, R., & Ng, 2007). Parents with less injury prevention practice impacted more frequent injuries in children (Widyaningsih, 2014). Injury is one of the leading causes of child morbidity and mortality worldwide.

Providing information to improve parental knowledge and skills is a prevention effort in household injury (Ikhlusal, Istadi and Wijayanti, 2015). It is vital for parents, especially mothers, to increase their understanding of changes in children's growth and development in each stage. So, there is injury prevention in children. Good parental knowledge could improve injury prevention (Indarwati, 2011). This paper aims to analyze the correlation between parental knowledge and attitude toward injury prevention practice in preschool children in Al-Masithoh Kindergarten, Wagir Malang.

METHOD

This research was a correlational study with the cross-sectional approach. The population was parents who have children schooling in AL - Masithoh 04 kindergarten. In addition, there were 40 samples in this research with a total sampling method. The independent variables were parental knowledge and attitude, while the dependent variable was injury prevention practice. Furthermore, the statistical test used Sommers correlation to analyze the correlation between paternal knowledge and injury prevention

practice. Meanwhile, Lambda with a 95% confidence level to determine the association between parental attitude and injury prevention practice (Nursalam, 2016). The instrument utilized questionnaires. A questionnaire for parental knowledge consisted of 24 multiple-choice questions. In addition, there were 14 questions with a range of answer choices from 'very agree' to 'very disagree' for parental attitude. Injury prevention practices were evaluated using the recall method with a questionnaire consisting of 14 questions with 'yes' and 'no' choices.

RESULT

Al - Masithoh Kindergarten is located in Sukodadi Village, Wagir District, Malang Regency. It has two teachers with 40 students in 2 classes. In the north, it is bordered by rice fields; in the south by a mosque. In addition, the west and the east were bordered by houses. Almost half of the respondents were 26-5 years old (45%), graduated from Senior High School (38%), and were housewives (43%). They also never had information about injury prevention (40%). In addition, most of the respondent's children were five years old (72.5%), girls (52.5%), and first children (40%). Falls were the most injury causes in respondents' children (82.5%) (Table 1).

Table 1. Characteristics of respondent and respondent's child

Characteristics of respondent	(f)	%	Characteristics of respondent's child	(f)	%
Age			Age		
17-25 years old	15	37.5%	Six years old	8	20%
26-35 years old	18	45%	Five years old	29	72.5%
46-55 years old	7	17.5%	Four years old	3	7.5%
Total	40	100%	Total	40	100%
Education			Gender		
Elementary	14	35%	Boy	19	47.5%
Junior High School	11	27%	Girl	21	52.5%
Senior High School	15	38%	Total	40	100%
Total	40	100%			
Occupation			Child order		
Private worker	15	37%	First	20	50%
Businessman	2	5%	Second	16	40%
Labor	6	15%	Third	2	5%
Unemployment /housewife	17	43%	> 3	2	5%
Total	40	100%	Total	40	100%
Source of information about injury prevention			Cause of injuries		
Never	16	40%	Motor Vehicle Crash	1	2,5%
Health Worker	10	25%	Burn	2	5%
Friend/other parents	6	15%	Fall	33	82.5%
Mass media	6	15%	Poisonous	2	5%
Other	2	5%	Chocking	1	2,5%
Total	40	100%	Household injuries	1	2.5%
			Total	40	100%

Most respondents had moderate parental knowledge (60%) and negative parental attitude (60%). In addition, almost half of them had less injury prevention practice (45%) (Table 2).

Table 2. Parental knowledge, parental attitude, and injury prevention practices

Variable	(f)	%
Parental Knowledge		
1. Good	3	7%
2. Moderate	24	60%
3. Less	13	33%
Total	40	100%
Parental Attitude		
1. Positive	16	40%
2. Negative	24	60%
Total	40	100%
Injury prevention practices		
1. Good	13	32%
2. Moderate	9	23%
3. Less	18	45%
Total	40	100%

Respondents with less parental knowledge had less injury prevention practice (25%). The Sommers D test obtained $p=0.001$. It means there was a correlation between parental knowledge and injury prevention practices in preschool children. In addition, the Gamma coefficient in the Somers D test was (+) 0.447, indicating that the correlation was positive and moderate strength. A Positive Gamma coefficient means that the higher the parental knowledge in respondents, the higher the injury prevention practice or vice versa (Table 3).

Table 3. Cross-tabulation between parental knowledge and injury prevention practice also statistical test result

Parental Knowledge	Injury Prevention Practice						Total		Statistical test Result
	Good		Moderate		Less		F	%	
	F	%	F	%	f	%			
Good	3	7.5	0	0	0	0	3	7.5	Sommers D $p=0.001$ $R = 0.447$
Moderate	8	20	8	20	8	20	24	60	
Less	2	5	1	2.5	10	25	13	32.5	
Total	13	32.5	9	22.5	18	45	40	100	

Respondents with negative parental attitudes had poor injury prevention practices (47.5%). In addition, the Lambda test obtained $p=0.000$, meaning there was a positive association between parental attitude and injury prevention practice in preschool children. Lamda correlation value (r) was (+) 0.650, indicating positive and strong correlation (Table 4).

Table 4. Cross-tabulation between parental attitude and injury prevention practice also statistical test result

Parental Attitude	Injury Prevention Practice						Total		Statistical Result
	Good		Moderate		Less		F	%	
	F	%	F	%	F	%			
Positive	14	35	1	2.5	1	2.5	16	40	Lambda $p=0.000$ $R=0.650$
Negative	0	0	5	12.5	19	47.5	24	60	
Total	14	35	6	15	20	50	40	100	

DISCUSSION

The correlation between parental knowledge and injury prevention practice in preschool children

Our findings found that respondents with less parental knowledge had less injury prevention practice (Table 3). One of the factors that influence knowledge is the source of information. Almost half of the respondents never got information about injury prevention, and a small number got information from the mass media (magazines, newspapers, and tv) (Table 1).

In addition, this paper showed a positive and moderate correlation between parental knowledge about injury prevention and injury prevention practices in preschool children (Table 3). The better one's knowledge, the better the practice. Knowledge results from humans sensing or knowing about objects through their senses such as eyes, nose, and ears (Notoatmodjo, 2010). A study by (Atak *et al.*, 2010) revealed that knowledge was an associated factor for injury prevention practice in children. In addition, mothers with the highest incidence of child injury had low levels of education. Thus, high maternal education resulted in good knowledge.

Sources of knowledge can obtain from information someone receives (Hidayat, 2007). Providing information can be in the form of health education about the danger of injury and its prevention. This statement is supported by Widyaningsih research (2014), stating that one effort in injury prevention was improving knowledge.

The correlation between parental attitude and injury prevention practice in preschool children

This research revealed a positive and strong association between parental attitude and injury prevention practice in preschool children (Table.4). It is in line with a study by (Kusbiantoro, 2014). That study indicated a relationship between attitude and anticipation of injury to children. The parental attitude becomes a determinant of injury prevention practice in preschool children. Parents must have a positive or supportive attitude about injury prevention. One example is a parent who establishes the habit of wearing a helmet when riding a motorcycle to be a good role model to the children. Furthermore, age, personal experience, mass media, and education can affect attitudes (Nursalam, 2019).

Furthermore, a prior study also found a correlation between injury prevention practice and the incidence of injury (Indarwati, 2011). Thus, injury prevention practice in children is one of the essential factors in minimizing the incidence of injuries so that children can grow up healthy according to their growth and development stages. According to (Kusbiantoro, 2014), injury prevention practice was started with good parental knowledge, followed by positive attitudes.

Half of the respondent's children were the first children in the family (Table.1). It means half of the respondents did not have adequate experience. Individuals who lack experience tend to form a negative attitude towards that object (Wong *et al.*, 2009). Personal experience will leave a solid impression to create and influence appreciation. So a person must have experience related to the object of psychology

(Kuschithawati, S., Magetsari, R., & Ng, 2007). Thus, parents without experience in injury prevention in children tend to form a negative attitude. Meanwhile, parents with more than one child will have more experience creating positive attitudes.

Factors influencing practice include education, information sources, and attitudes. Thus, attitude is one of the essential factors that influence practice. In this study, respondents with negative parental attitudes had poor injury prevention practices (Table.4). Attitudes will determine how parents will protect their children from injury. Good parental monitoring can prevent the incidence of injury (Widyaningsih, 2014; Jamil, 2020). In addition, Kusbiantoro (2014) concluded that attitude was the most significant factor in injury prevention practice. Attitude is an action or practice that has not been implemented. Thus, negative parental attitudes will lead to less injury prevention practice in toddlers and vice versa.

In addition, information can affect practice. Almost half of the respondents in this paper never had information about injury prevention (Table.1). Knowledge from various sources and experiences from themselves or others are a stimulus to form an attitude before taking action (Atak *et al.*, 2010; Indarwati, 2011).

CONCLUSION

Parental knowledge and attitude correlate with injury prevention practice in preschool children. There should be an effort to improve parental knowledge, especially about the dangers of injury and its prevention. Further research could use the observation method to evaluate injury prevention practice in parents.

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