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Children's safety behaviour at school

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Abstract

Background: Cognitive limitations and low understanding of the dangers around them make them less able to anticipate and overcome these dangers. Places that have the potential to cause accidents in children can come from anywhere, be it the highway, home and its surroundings, school and its surroundings. Accidents at school are the cause of 40% of injuries in children. Lack of understanding of risks or dangers, use of unsafe equipment, and the materials used also affect children's safety. This study aims to determine the determinants of safety behavior in children in elementary schools.
Method: This research used mixed methods and Convergent Parallel Design approaches. Researchers collected quantitative data for the safety knowledge variable, while qualitative data for safety perceptions, safety behavior and availability of safety infrastructure. The research subjects were students and teachers, at SD Muhammdiyah Guntur Geni Srandakan District. Statistical test analysis using the Chi Square Test and logistic regression test for quantitative data.
Result: there were 65.57% of respondents who had good knowledge and 75.41% of respondents had good safety behaviour. 44% of safety infrastructure is available in schools. 40 or 66% of respondents had a history of accidents at school such as falls, scratches and sprains.
Conclusion: Students who have good knowledge are 1.7 times more likely to have good safety behavior.

Keywords: Safety Behavior, Knowledge, Children at school.

INTRODUCTION

One of the areas of development in early childhood is physical motor and cognitive. Health and safety behavior is included in the criteria for physical motor development, while logical thinking is included in the cognitive criteria, in this case, children can recognize cause and effect (1). Cognitive limitations in children can make them vulnerable to potential dangers and accidents, which can cause children to be less able to anticipate dangers that arise (2)(3). Safety behavior education in early childhood is focused on recognizing traffic signs and getting used to orderly traffic so that when they grow up children understand the traffic rules on the road (4). However, based on the results of the 2018 Riskesdas, it is known that apart from disaster situations, places where accidents occur in children can also occur on roads, homes, and their surroundings, as well as schools and their surroundings. An example is the use of helmets in children, where the proportion of body parts injured is 75.5% of the lower limbs. The habit of using helmets for children aged 5 – 14 years in the DIY area is 41.8% always, 49.5% sometimes, and 8.7% never (5).

Apart from that, accidents that occur at school can also cause 40% of injuries to children. These accidents are usually caused by children falling while playing activities (6). Many of the causes of children's injuries are due to children's impatience in playing and queuing so children are less aware of the dangers around them (7) the types of injuries experienced by children also vary, from tooth

injuries to brain injuries (8). Until now, activities to reduce the risk of accidents and increase safety behavior in children have not been carried out in a specific and structured manner. Children need to have a good understanding of how to save themselves from fire, danger from strangers, danger on the playground, and danger on the road. Unfortunately, this understanding is not obtained from parents and schools, this shows that safety education has not been taught in a structured manner by schools and parents (9). A previous study stated that not understanding the risks or dangers, the use of unsafe equipment and the materials used also contribute to children's safety (10) because a person's safety behavior will be formed by activators and understanding of the consequences they have (11).

The period of development of middle school children (aged 6 – 12 years) is a stage of cognitive, moral, religious, and social-emotional development (12). At this age, children are also physically able to access play facilities either in the school environment or around their home, so there is a risk to their safety (12). Based on a preliminary survey conducted by researchers, in schools in Srandakan District as disaster-prone areas, data was obtained on schools that had implemented the child-friendly concept and disaster preparedness schools (SSB), namely SD Muhammadiyah Guntur Geni. This school was chosen with the consideration that it is a school that has implemented the "Safe School" concept. Later the results of this research can provide an overview and measurement of the implementation of safe behavior in schools with the hope that after knowing the determinants that form safe behavior in children, we can then precisely determine the steps and methods for forming behavior to create children as the next generation who are aware of being safe and capable. take protective measures in times of danger, whether danger due to a disaster or danger due to unsafe environmental conditions.

METHOD

This research uses a mixed method with a Convergent Parallel Design approach (13). In this type of approach, the researcher will collect and analyze qualitative data and quantitative data separately (side-by-side comparison) (14) to then compare the results or find correlation so that interpretation desired by the researcher is obtained. This research activity was carried out by Muhammadiyah Guntur Geni Elementary School, Srandakan District, Bantul Regency, with research subjects: 61 students (grades 1, 2, and 3), 13 teachers, and 61 parents (grades 1, 2 and 3). We used a total sampling technique. The data collection method used a questionnaire for quantitative data, and qualitative data was collected through interviews, and observation. Research implementation time is July – September 2023.

RESULTS

Muhammadiyah Guntur Geni Elementary School is located in Guntur Geni, Poncosari Village, Srandakan District, Bantul Regency. The respondents involved in this research were 61 students, 47.54% female, and 52.46% male, see figure 1. While respondents based on class groups are following Figure 2. Based on the figure 2, it is known that the largest distribution of respondents based on class group is class 3 as much as 41%, 36% of respondents come from class 2 and class 1 is 23% of the total respondents.

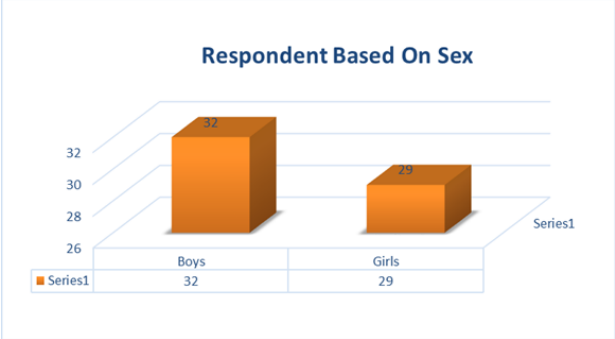

Figure 1: Respondent data based on gender

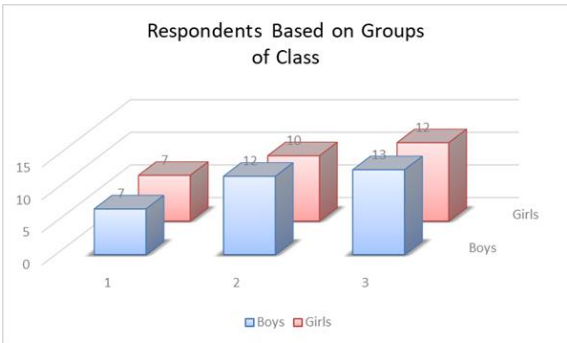

Figure 2. Respondent characteristics based on class group and gender

Based on the results of data collection, it can be seen that the level of students' knowledge about safety is 65.6% good and 34.43% poor. Data regarding safety behavior shows that 75.41% are good and 24.59% are bad. More details can be seen in Table 1.

Table 1. Data on safety knowledge and behavior

persepsi keselamatan	perilaku keselamatan buruk	baik	Total
buruk	1 14.29	6 85.71	7 100.00
baik	14 25.93	40 74.07	54 100.00
Total	15 24.59	46 75.41	61 100.00

Pearson chi2(1) = 0.4528 Pr = 0.501

Logistic regression

Number of obs = 61
LR chi2(2) = 1.20
Prob > chi2 = 0.5483
Log likelihood = -33.424037 Pseudo R2 = 0.0177

behave	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
know	1.736862	1.136774	0.84	0.399	.4815649	6.264347
persepsi	.34642	.4111749	-0.89	0.372	.033829	3.547449
_cons	5.615206	6.086231	1.59	0.111	.6710611	46.98608

Based on crosstab data in table 1, it is known that 6 respondents have bad knowledge and bad behavior, 15 respondents have bad knowledge and good behavior, meanwhile, 9 respondents have good knowledge and bad behavior, and 9 respondents have good knowledge and bad behavior. good behavior is 31 people. The results of statistical tests using chi-square show that there is no relationship between respondents' knowledge and respondents' safety behavior (p value> 0.05), but there is a positive correlation, that means if the level of knowledge is increased, the behavior will be better. A logistic regression test was carried out to determine the odds ratio value (the chance of a behavior occurring). Respondents who have good knowledge are 1.7 times more likely to have good safety behavior.

Data from confirmation of the history of accidents experienced by respondents while at school revealed that 40 (66%) respondents had a history of accidents at school such as falls, scratches, and sprains. Meanwhile, 21 (34%) respondents had no history of accidents at school. It can be seen more clearly in figure 3.

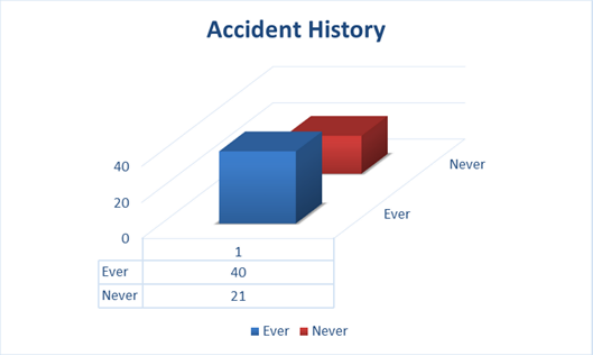

Figure 3. Accident History Data at School

Based on the results of observations made on the infrastructure at SD Muhammadiyah Guntur Geni, it can be seen that 44% of the safety infrastructure is available and 56% of the safety infrastructure is not available. It can be seen more clearly in figure 4.

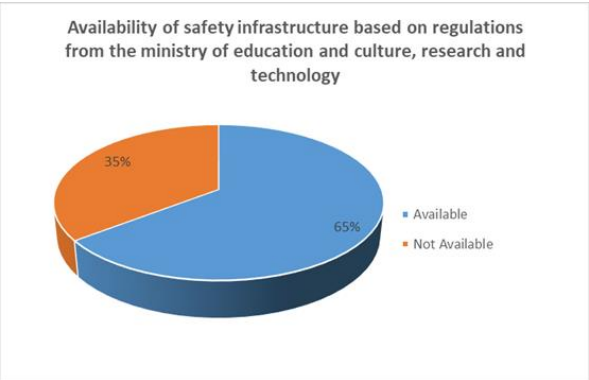

Figure 4. Availability of Safety Infrastructure in Schools

DISCUSSION

If children know about safety, they will be able to recognize potential dangers around them (15) this will influence their

attitudes and concerns (16). Increasing knowledge can be done through safety education with the aim that they can behave safely and securely (17) (18). Children gain knowledge about danger from parents, teachers, the news, bulletin boards, or experiences of contact with danger (19). Strategies to increase children's knowledge about dangers need to be carried out according to the child's age and periodically, so that safety knowledge can be understood and applied well (20).

As many as 60.4% of children are at moderate risk of experiencing injuries and accidents in the school environment because children carry out activities that pose a risk of injury (21). Based on observations made in learning, playing, and other activities at school, 57% of the behavior was unsafe and the other 43% was carried out safely.

This result similiars with Ekawati and wahyuni by their research conducted states that injuries can be experienced by students are abrasions due to falls while jogging, falls while playing football, falls while cycling, and being hit by motorbikes (19). This is following the results of the interview with the Principal who said "Yes, if you fall, it's normal sis, the important thing is that you don't bleed...hehe" Injuries that occur in children depend greatly on their nature and severity. Injuries occur in the upper extremities, neck and head, trunk, hands, and feet (22). Apart from having an impact on the child's physical condition, injury can also have an impact on the child's soul, such as trauma (21).

The availability of infrastructure in schools supports safety behavior. A safe school is a school that implements standard facilities and infrastructure that can protect school residents and the surrounding environment from the dangers of disasters (23). Research conducted by Lubis et al stated that there were 64.29% unsafe school environments that could cause injuries to school-aged children (21).

Playground at the school can also cause of accidents or injuries (24), such as playing equipment facilities with climbing, swings, sesaws, and slides (22). The design of play facilities needs to be considered so that it can still improve children's motor skills and is also safe to use (25). Apart from the materials and design used, it is also important to maintain the infrastructure (22) so that it does not cause injuries or accidents to children.

CONCLUSIONS

Based on the results of observations and data analysis, it can be concluded that students who have good safety knowledge are 1.7 times more likely to have good safety behavior. The availability of safety infrastructure will influence safety behavior and the history of accidents that occur in children.

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