

CHILDREN'S UNDERSTANDING OF OTHER ROAD USERS' BEHAVIOR

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1 Introduction

The aim of this study is to reveal what children see in the road and what they think of road traffic. Children participate in traffic as pedestrians or cyclists in everyday life. They have already obtained various kinds of knowledge and experience about road traffic besides what they learn in traffic education at school. However, few studies have ever tried to focus on how road traffic is reflected in children's eyes.

Most Japanese children have only two classes for traffic safety during 6 years of primary school. In most cases, they learn basic traffic rules and basic safety behavior, e.g., how to cross the road, how to ride a bicycle. It is while they attend driving school that they obtain knowledge about traffic safety again. There are few opportunities for children to learn about traffic safety if we consider that they are exposed to accident risks in everyday life. It is desired in Japan to establish traffic educational programs which provide children with more knowledge and skills for accident prevention. For this purpose, it is important to examine what children understand about road traffic and what they don't understand.

Two types of survey were conducted in order to discover what children recognize in traffic environment. One was to ask children to draw what they see in traffic situations. The other was to ask children to express what they think of traffic problems. The findings could contribute to the development of traffic educational programs.

2 Methods

2.1 Survey 1 : Drawing traffic situations

The sample consists of 53 boys and 57 girls. They were all 3rd-graders (8-9 years old) at a primary school in Osaka, Japan. Children were asked to draw traffic scenes they see daily on their way to/from school or their friends' houses. They were instructed to draw the traffic scenes with color pencils on white drawing paper within 45 minutes.

2.2 Survey 2 : Expressing opinions about traffic problems

55 boys and 64 girls (10-11 years old) were asked to write their own opinions or essays about traffic problems. They were all 5th-graders at the same school as the above-mentioned 3rd-graders. In order to help them express their opinions, four questions were listed on the answer sheet in advance. The questions were as follows;

Question 1 : What do you think of cars you see in the road ?

Question 2 : What do you think of adult pedestrians and adult cyclists you see in the road ?

Question 3 : Why are a lot of people involved in traffic accidents ?

Question 4 : Imagine that you are a police officer for one day. What do you see in the road ?

Children were told to choose two of the questions and write freely what they think. They were also asked to write down their opinions on the answer sheet by pencil within 45 minutes.

3 Results

3.1 Results of drawing traffic situations

The method used in this study is the same method that Papp & Ogawa (1990) used. They found that Japanese children drew fewer drivers in the cars than Hungarian children did. One possible explanation is that Japanese children don't care about interpersonal communication, i.e., eye contact, with drivers much. In the present sample, it was again found that many children drew pictures of cars without a driver's face.

In addition, there were drawings which indicate that children are surrounded by dangerous and uncomfortable traffic environments. Some children drew cars running at high speed. Others drew many cars in the narrow road near their houses. There was a girl who expressed uncomfortable feelings at the sounds made by ambulances and police patrol cars.

3.2 Results of expressing opinions about traffic problems

Many children answered the question concerning the causes of traffic accidents. 95 of 119 children (79.8%) selected Question 3. It follows from this result that children are greatly interested in traffic accidents. The number of children who selected the remaining

questions is 62 children for Question 1 (52.1%), 38 children for Question 2 (31.9%), and 41 children for Question 4 (34.5%), respectively. The following are some samples of children's opinions ;

Question 1 : What do you think of cars you see in the road ?

- I think that there are a lot of people who don't wear seat-belts... When there is no policeman standing, drivers don't wear seat-belts. But when drivers find a policeman, they scramble to put on seat-belts. It is better to wear seat-belts from the beginning, I think. (11 yr.-old girl)
- As cars run at too high a speed, and are parked in the no-parking areas, we must walk carefully...I can't go ahead, because cars are parked in the narrow road. I can't sleep well at night because of noise from cars. (10 yr.-old girl)
- Adults driving cars sometimes disregard traffic lights. I wonder what they would do if they hit a person ? (11 yr.-old girl)

Question 2 : What do you think of adult pedestrians and adult cyclists you see in the road ?

- When I saw a high school student riding a bicycle at a surprisingly high speed and disregarding the red light, I thought it wrong...I saw young adults not obeying traffic signals and rules... (11 yr.-old boy)
- I sometimes think something wrong. The reasons are that when I was waiting at a traffic signal, an adult cyclist crossed against a red light, and that I saw an adult pedestrian crossing even if a green light started blinking... (11 yr.-old girl)
- Even at night, adults and young people ride bicycles with the lights turned off. So, I can't see their bicycles and I am likely to collide with them... (11 yr.-old girl)

Question 3 : Why are a lot of people involved in traffic accidents ?

- When I glanced at cars, I many times found drivers who grasped the wheel one-handed, drivers who were looking this way and that, and drivers who ate and drank something. So, traffic accidents happen and sorrowing people increase, I think. (10 yr.-old girl)
- They drive playfully. They drive with a portable phone, when they drop it at their feet and try to pick it up, accidents happen... (11 yr.-old girl)
- ... Behind the parked car, we don't see whether a car is approaching or not. But we think , "Well, it may be all right." And then we cross and collide with a car... (10 yr.-old girl)
- There are people who disregard traffic lights, violate speed limits, drink and drive... (10

yr.-old boy)

Question 4 : Imagine that you are a police officer for one day. What do you see in the road ?

- I think that I can see a lot of accidents... I think that there are people who hit and run. I don't want to see such an accident even for one day... (11 yr.-old girl)
- I want to caution persons who don't obey the traffic rules...I want to guide young children who don't understand the traffic rules. (11 yr.-old boy)
- I think that I see people who drive in a risky way, ...people who drive while holding a baby... (10 yr.-old boy)
- I see whether drivers are wearing seat-belts or not, whether children are playing at the construction site or not, ..., and whether people with a stick are walking at a long pedestrian crossing or not. (10 yr.-old boy)

We can summarize their essays and opinions as follows : Firstly, children see other road users' behavior with a critical eye, especially, adults' behavior, which seems illegal, risky, and irresponsible to children. Secondly, children have much knowledge about the kind of behavior that could lead to accidents. Many children thought that driver behavior against traffic rules could be an important factor of accidents, e.g., disregarding traffic lights, drinking and driving, running at a high speed. There were also children who pointed out careless behavior of road users, e.g., crossing without looking, believing that no cars would come before crossing, driving while watching TV, driving while holding a baby. Furthermore, some children tried to describe the process of human error in a concrete way, e.g., how drivers make driving errors while using a mobile phone.

4 Conclusion

What can we learn from these data ? The sample of 10-11 year- old children suggests that children have the ability to observe the traffic behavior of other road users with an objective eye. They have already obtained much general knowledge about dangerous situations, risky behavior, and basic factors of traffic accidents from their parents, mass media, and their own experience. The important thing is to produce well-planned educational programs so that children can obtain more concrete information which can be utilized in real traffic situations, for example, showing children a map which indicates

dangerous intersections and roads in the neighborhoods of their houses and school.

The results also show the possibility of changing adults' attitude. As mentioned before, many children pointed out that adults' behavior is risky and illegal. If these findings are shown to parents and other people in the community through the Parent-Teacher Association or other local community networks, it could raise their awareness of traffic safety.

References

Papp,I.& Ogawa,K. 1990 Comparison of Hungarian and Japanese children's view of road traffic, based on drawings. 22nd International Congress of Applied Psychology, July 22-27, in Kyoto, Japan.