

# A cross-sectional survey of schoolchildren and their parents concerning the risk of stranger danger to children on their way to and from school

Second report: The study of developing concrete measures of the safety of child in the local community

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## 1. INTRODUCTION

Recently Japan has experienced an increase in the incidence of crimes directed at children traveling to and from school, for example, kidnapping. Two recent murders of elementary grade school children in Nara and Hiroshima Prefectures occurred when the children were making their way home from school. These incidents impacted heavily on both parents and the police, and the safety of children while traveling between home and school became an overriding concern for local Boards of Education.

The safety of children is threatened not only by bullies within school, but by the dangers present as children make their way to and from school. Since 2001 we have been carrying out an ongoing survey into attitudes towards crime prevention, focusing on the parents and children of two elementary schools located in the center of Matsuyama City<sup>1)-6)</sup>. An increase in the number of serious crimes targeted at children has seen a shift in

parents, concerns from prevention of traffic accidents to the issue of taking concrete measures against stranger danger, and brought with it a greater focus on the concept of “sense of community” .

We carried out a survey in order to look at the attitudes of parents and children towards crime prevention, and the practical measures implemented by families to deal with the issue of stranger danger. We used two separate questionnaires in our survey. The questionnaire aimed at children consisted of 10 questions while the parents' questionnaire consisted of 17 items. The responses were classified into three categories: risk perception, risk mitigation and social awareness. We compared the relationship between children's risk perception, especially in relation to stranger danger, and parental attitudes towards risk perception, risk mitigation and social awareness. The 2004 study showed a close relationship between children's risk perception and parental attitudes towards both risk perception and social awareness. The

study also shed some light on the way in which parental attitudes towards crime prevention vary depending on the sex of their child. Parents with boys in the lower grades of elementary school (1<sup>st</sup> to 3<sup>rd</sup>) and parents with girls of all grades (1<sup>st</sup> to 6<sup>th</sup>) show greater concern about stranger danger than other parents. Although the 2004 study provided no conclusive answer, we suggest that the high levels of concern in relation to girls in the upper grades could stem from worries over those girls returning late from *juku* (cram school) - an issue which does not arise with girls in grades 1 to 3<sup>rd</sup>.<sup>6)</sup>

In this study, one of the objectives was to find out whether children's previous experience of stranger danger affected parents' attitude towards crime prevention.

This survey has four objectives:

- (1) To classify the latent components in parents, attitudes towards crime prevention.
- (2) To estimate whether the sex of the child has any affect on the parents' attitude towards crime prevention.
- (3) To estimate whether children's past experience of having been approached by a stranger on their way to or from school affects their parents' attitudes (We noted that in fact few children in the 2004 study had any such experience.).
- (4) To estimate whether the fact that children attend *juku* - with the extra travel in the evening that this entails - has any effect on parents' attitude towards crime prevention.

## 2. METHODS

### (1) A survey of the attitudes of parents and children towards crime prevention in relation to stranger danger

We carried out a survey to measure the level of crime prevention awareness in children and parents. This survey was carried out in the community surrounding four public elementary schools located within a few kilometers of each other in the center of Matsuyama City, Ehime Prefecture. We distributed an one page questionnaire

(Appendix 1) to families of children in grades one through six at the four elementary schools. 11 questions were directed at the children and 22 questions were directed at the parents. We handed out the questionnaires at school and then had the students take them home to be filled out. The questionnaires were returned anonymously. The section of the questionnaire aimed at children was designed to assess potential dangers on the way to and from school, measures which children can adopt to avoid danger and other concrete measures of avoiding harm. Every question was rated on a two-point scale (1 point for "yes", and 2 points for "no"). We asked the parents and children different questions. The section of the questionnaire aimed at parents was designed to assess risk perception, risk mitigation and social awareness. To classify the parents' responses, answers were assessed on a 5-point Likert's scale as follows: 5=Always applies, 4=Often applies, 3= Sometimes applies, 2=Rarely applies and 1=Never applies.

### (2) Statistical analysis

Firstly, principal component analysis was performed to categorize latent components of the parents' answers concerning crime prevention. To clarify the classification of latent components a promax rotation was used as a method of component extraction. The initial eigenvalues for the extracted components were greater than one. The criteria for exclusion of items on a given subscale were 0.40 or lower with loading on only one subscale. We subsequently reanalyzed the remaining items. To determine the reliability of the components, internal consistency was calculated for each component using Cronbach's alpha reliability coefficient. Using principal component analysis, we derived four latent components from the parents' data and summed the Likert's scale values for the questions in each of the component categories. The values were analyzed as independent variables.

Secondly, we analyzed the relationship between the children's answers (dependent variables) and the latent components of the parents, responses (independent variables) with one-way analysis of variance. We used

SPSS 13.0J for Windows (SPSS Inc., Japan) for all analyses, with significance being set at  $p < 0.05$ . All P values were two-tailed.

### 3. RESULTS

Table 1 shows the characteristics of children.

Table 2 showed the results of principal component analyses for parents' responses.

The criteria for exclusion of items (Q21, Q23, Q31, Q32) on a given subscale were 0.40 or lower with loading on only one subscale. We subsequently reanalyzed and classified four latent components. The Cronbach's alpha reliability coefficient of 0.7 or greater meant that the parents' attitudes concerning crime prevention confirmed the four component categorization. Because the first component had a higher factor loading on Q17 ( "I take part in community policing workshops." ) we termed it the 'sense of community' component. Because the second component had a higher factor loading on Q14 ( "I am concerned about how secure my home is." ) we termed it the 'risk mitigation' component. Because the third component had a higher factor loading on Q25 ( "I am concerned about my children's safety when they are traveling to and from school." ) we termed it the 'risk perception' component. Because the fourth component had a higher factor loading on Q27 ( "I know the location

of the Neighborhood Watch houses in my local area." ) we termed it the 'risk avoidance' component.

Table 3 shows the relationship between the children's answers (measures taken against stranger danger) and the latent four components of the parents' responses (attitude towards stranger danger).

**Table1 Characteristics of children (N=1622)**

		N	%
Sex	boy	813	50.12
	girl	809	49.88
Knowledge of NWS house location	Yes	1294	79.78
	No	328	20.22
Possession of handheld alarm	Yes	1109	68.37
	No	513	31.63
Traveling to school with friends	Yes	1409	86.87
	No	213	13.13
Talking about stranger danger	Yes	1210	74.6
	No	412	25.4
Experience of stranger danger	Yes	177	10.91
	No	1445	89.09
Taking refuge in a Neighborhood Watch house	Yes	18	1.11
	No	1604	98.89
Communication of whereabouts	Yes	1417	87.36
	No	205	12.64
Attendance at <i>juku</i> (cram school)	Yes	734	45.25
	No	888	54.75

**Table2 Principal component analyses for parents' responses**

item	Factor Loading			
	Principal components			
	I Sense of community	II Risk mitigation	III Risk perception	IV Risk avoidance
17 I take part in community policing workshops.	.825	.002	-.085	-.142
18 I attend police lectures about security measures.	.803	.065	-.096	-.129
20 I assist with school safety programs, for example, volunteering for pedestrian crossing duty.	.644	-.033	.086	.174
19 I am a member of or assist the volunteer patrol group run by the PTA in my local area.	.643	-.073	.138	.197
14 I am concerned about how secure my home is.	-.020	.778	.123	-.048
16 I make sure the front and back doors are locked.	-.061	.663	-.007	-.043
12 I talk to my children about safety issues concerning traveling to and from school.	.018	.610	.044	.132
15 I have installed a security system at home.	.234	.553	-.031	-.114
13 If my children are going to finish school late I pick them up.	-.069	.541	-.046	.108
25 I am concerned about my children's safety when they are traveling to and from school.	.078	.068	.696	.059
22 I feel that my children are safe.	.070	.031	-.686	.217
26 I don't worry about my family becoming the victims of crime.	.037	-.106	-.673	.132
24 I think that Matsuyama has become less safe than it once was.	.026	-.078	.657	.209
27 I know the location of the Neighborhood Watch houses in my local area.	.074	-.138	.058	.669
28 I know where the nearest police station is.	-.082	-.030	-.025	.644
29 I am familiar with the sound of the personal handheld alarms which have been issued to my children.	.069	.110	-.094	.565
30 I am familiar with the places where my children play after school.	-.072	.326	-.088	.504
Eigenvalues	3.293	2.059	1.485	1.282
Contribution(%)	19.368	12.109	8.735	7.542
Cronbach's Alpha reliability coefficient	.710	.648	.624	.502

**Table 3** The relationship between the childrens' characteristics (dependent factor) and their parent's attitude towards crime prevention (independent factor) by one-way analysis of variance (N=1622)

Group	Sense of community					Risk mitigation				Risk perception				Risk avoidance				
	N	M	SD	F value	P	M	SD	F value	P	M	SD	F value	P	M	SD	F value	P	
Sex	boy	813	9.80	3.64	0.527	ns	19.62	3.45	9.070	**	15.24	2.72	9.887	**	17.57	2.65	0.737	ns
	girl	809	9.93	3.84			20.11	3.15			15.66	2.75			17.68	2.65		
Experience of stranger danger	Yes	177	9.68	3.83	0.469	ns	20.15	3.25	1.429	ns	16.25	2.64	17.236	***	17.92	2.68	2.473	ns
	No	1445	9.89	3.73			19.83	3.32			15.35	2.74			17.59	2.64		
Attendance at <i>juku</i> (cram school)	Yes	734	10.11	3.80	5.620	*	20.26	3.25	19.347	***	15.61	2.70	4.852	*	17.75	2.52	2.861	
	No	888	9.67	3.69			19.54	3.33			15.31	2.78			17.52	2.74		

ns: Not significant, \*: p&lt;.05, \*\*: p&lt;.01, \*\*\*: p&lt;.001

#### 4. DISCUSSION

We examined what influence a child's lifestyle and exposure to the risk of stranger danger has on parents' attitudes towards crime prevention. Based on our examination<sup>6)</sup> of parents' attitudes in relation to the sex of the child, parents of girls showed higher values for the components 'risk perception' and 'risk mitigation' than the parents of boys, which suggests that parents with girls took more concrete measures against the risk of stranger danger than the parents of boys. A recent increase in incidents in which child molesters targeted very young elementary school girls on their way to or from school is likely to produce further concern<sup>7)</sup>.

Our study showed that about 10 percent of all children who responded to our questionnaire had been approached by a stranger while traveling to or from school. Parents whose children had been approached by a stranger on their way to or from school showed higher values for the component 'risk perception'. These parents felt Matsuyama had become less safe than it once was, and we suggest that these parents are strongly concerned about the safety of children on the way to and from school.

Following the increase in crime directed against children, police and local Boards of Education have tended to publish information about suspicious characters on the internet. In Ehime Prefecture, the Matsuyama City website has, since 2005, been posting police bulletins regarding suspicious characters. Detailed information about people who approach children, including descriptions, dates, time of day, where and under what

circumstances the person was encountered, is updated daily<sup>8)</sup>. Based on a comparison of our data relating to children who have been approached by strangers with the information made public on the Matsuyama City website, we are planning a new survey looking into the methods and habits of people who approach children, with a view to reducing this danger.

Our study indicated that about half of all elementary school children in our survey attended *juku*. In Japan, preparing for private junior high school entrance exams has resulted in an increase in the number of children attending *juku*, and especially an increase in the number of children from the lower grades of elementary school<sup>9)</sup>. Parents whose children attended *juku* after school showed higher values for the component 'risk mitigation' and dealt with the issue in the simplest way possible - by picking their children up after class.

In addition to asking whether children attended *juku* or not we also inquired into what time children normally got home. Our study indicated that most children usually come home between 5 and 6 pm, however, two children reported getting home at 9. The latest time reported was 10 o'clock, but this applied to only one child. Based on the information posted on the Matsuyama City website<sup>8)</sup> most encounters where children were approached by strangers occurred between 4 and 6 pm, with the second most common time being after 10 pm. It can be assumed that people who approach children tend to target those times when children are on their way home from school or *juku*.

In summary, we found that there was a difference in parents' attitudes towards crime prevention depending on the circumstances of the child in question, namely the sex of the child, the child's past experience of stranger danger and whether or not the child attends *juku*. We should be familiar with children's day-to-day habits and whereabouts and take concrete measures against the problem of stranger danger by cooperating with school, parents, the police and community residents.

In particular, promoting cooperative efforts in which police and volunteer patrol groups keep an eye on the streets, lanes and alleyways surrounding schools will be effective in mitigating the risk of stranger danger especially during the times during when children are typically targeted, that is to say, as they travel home from school or *juku*.

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## Additional statements

The survey was carried out during 2005 under an academic supervision of Dr. Jiro Takahashi, Professor Department of Science Faculty of Education, Ehime University. The first author attended the graduate school of Education, Ehime University from April 2004 to March 2006.

The first author has been a member of the 'Safety of Child in the Local Community' research group in the Center for Education and Educational Research, the faculty of Education, Ehime University.

## Appendix 1

Questionnaire to Schoolchildren and Parents

