

# SOCIAL CONTEXT AS DETERMINANT OF BOYS ACCIDENTS IN ROAD TRAFFIC IN BELÉM CITY- BRAZIL

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## ABSTRACT

Thousands of Brazilian children die or suffer physical injuries from traffic accidents. In Brazil it is easy to watch road traffic violations and there is a lot of violence both in the cities and in the country, as a result from this social context. Because the aim of this investigation was to identify behavioral factors present at the time of accident, 20 boys, 5 to 10 years old who were hit by cars, were studied. Although an attempt to obtain representative samples for each socio-economic level has been made, it was not possible to get them; an extensive review of medical and police records indicated that 95% of these cases were from low-income families. Subsequently, the data were obtained from the subjects, their parents, witnesses and drivers. Interviews, questionnaires, and various instruments were used in order to reconstruct the scenario, and to provide a fuller description of high-risk behaviors emitted by the subjects. The results indicated that 1) lower-income boys, due to their poor living conditions, were more exposed to high-risk traffic conditions, and hence more likely to be hit. More specifically, the following aspects were characteristic of accident causality: a) the boys were performing some errand, b) were distracted, c) seemed unaware of traffic-related dangers. 2) With reference to their psychological profiles, the boys did not differ significantly from peer controls, which led to the conclusion that available psychological tests are not predictive of accident proneness. In conclusion, there is an urgent need for restructuring the Brazilian social system, mainly focusing on justice, violence, diminution of gap from low to high social classes in order to lower this particular risk-factor, and for introducing an intensive program emphasizing pedestrian safety precautions in the school curriculum.

**Key words:** traffic in social-context; boys hit by cars.

Everytime on Brazilian streets, avenues and highways it is easy to watch traffic violations, where every year thousands children die or get injured caused by traffic accidents. There is a lot of violence in the cities and in the country of Brazil, as a result of the social context. Reason, Manstead, Stradling, Baxter and Campbell (1990) found that "violations require explanations in terms of social context in which behavior is governed by operating procedures, codes of practice, rules norms, and the like" (p. 1316). An example of these aberrant behaviours is represented in collective awareness of a Brazilian driver, who disobeys the red light frequently, justifying this violation as a necessary act to avoiding assaults practiced when he is waiting for the light change in an intersection. This act is reinforced by immunity.

One of the responsible factors for increasing violence is the urban deterioration, because of the negative effects from bad governmental administrations, which are aggravated by the World economic crises, as a result of overpopulation,

unemployment and other social factors. Lima (2000) describes that urban population growth from the 1940s has been due both to large contingents of people moving from rural areas to cities, and an increased birth rate, but, fortunately, the last census of IBGE (Brazilian Institute of Geography and Statistics) held in 2000, shows that urban population growth has been decreased in the 90s. In the country the violence is increasing due to the fights for lands, mainly in Pará State. At the very moment, when this article is being written, a religious missionary, who was born in the USA and became a Brazilian citizen for having lived here for about twenty years, Dorothy Stang, was assassinated because she asked for pieces of lands so that country people could use them for planting, producing milk and exploring the richness of the forest on the limits of the supporting development. The murderer, who would have received about \$US20.000 for this crime, is already in prison, but it is very common to hear among Brazilian people that the bossy killer will not be identified. The government authorities promise justice, but a journalist (Coutinho, 2005, 23 february), of a known Brazilian magazine, talks about the end of this episode as "the same history" of the other crimes which have been happening in the Amazon Region, from 1976 until today, without solution, while the murderers live out of jail. He adds that only in Pará State there have been 264 assassinations related to land fight during the 1990s.

This research was made in Belém, Capital of Pará State, situated in the North of Brazil, in the Amazon Region, the city where there are about 1.500.000 inhabitants and there is a fleet of 150.000 vehicles. Seven years after this study has been made, in 1998, some poor urban areas took a turn for the better, in which many streets were paved, squares were built and illuminated, but also where the violence has increased very much, because of unemployment, low lace, education, and other social factors. In relation to unemployment, there has been a small decrease of this factor in 2005, and about traffic education, Rozestraten (2003), brought a good information: "eventually DENATRAN – the National Department of Traffic - will begin a previous study to introduce the traffic education in schools of Fundamental Teaching". In fact, it was good and necessary news.

The initial intention of this work was to study boys from several social classes. However, early in the development of this study it was possible to be aware of the difficulty in finding boys data from middle and upper social classes, who had been run over in Belém city. In order to find and interview the injured boys run over by cars, the researcher had to examine about 12.000 medical records in a private hospital of injured people, at Pronto Socorro Municipal (casualty department), in Instituto de Medicina Legal (legal medicine institute), school records and bulletin records from police stations, but it was found only 5% of injured boys from middle or low classes. Then, the researcher understood that the sample would be constituted almost only of boys from a population, which the injured ones were poor people. The boys from high class and middle high class were injured or died because of other types of accidents, such as crashes between cars or capsizes, for example.

The literature about this subject makes reference, with some frequency, to the age of the boys when the accidents take place. Boys between 5 and 10 years old are more often hit by vehicles. Thomson (1991) refers more frequently to children between 5 and 9 years old. Rothengather (1984) signs that accidents happen earlier, among children of 4 and 6 years old, but this occurrences increase drastically between 5 and 10 years old. Whitebread and Nelson (1996) argue that the biggest vulnerability of children to accident takes place when they enter the primary school and then they are given more independence, developing relevant quantity of skills. In Brazil there are not reliable data, but the search on finding boys injured to include in this study showed the supremacy of the boys, generally showing the danger more, "because boys spend more time in the streets than girls" (Malek, Guyer & Lescohier, 1990, p. 304). Besides

these factors, children attention at this age range is concentrated on their desired objects. Then they are more vulnerable to be run over. Piaget and Inhelder (1995) made experiences and concluded that at this age range there is a selected activity of some senses. In fact, it was possible to observe that most cases studied in this research were related to attention.

It is important to sign that the boys described in this article are not "street boys", as it is said in Brazil about those who left their houses and now live on the streets, and are marginalized from society, practicing crimes, using drugs, etc. These boys on focus here live, in most cases, in their family homes, in poor houses located in dangerous places, developed without urban planning, but the boys family focused here make a great effort to survive under minimum life conditions.

These social aspects described here seem to be the perfect scenary to develop accidents.

## METHOD

Nineteen non-lethal cases, involving boys from 5 to 10 years and from low social class, were studied. Only one case was from middle social class, totalizing twenty cases. It was considered as dependent variables the accident and the dangerous behaviour of the victim. As independent behaviour:

VI1: Road conditions of place where accident happens.

VI2: Weather conditions at the time of the accident.

VI3: What the boy was doing out of home.

VI4: Social level of the victim.

## Instruments

Screenplay to interview victims, parents, teachers, witnesses, relatives and drivers.

CAT A Test (Bellak & Bellak, 1981)

Victims questionnaire, adapted from Ogawa and Papp (1997).

Pencil, eraser and paper to draw.

## Procedures

The practice showed that it was better to interview the boys in their homes, because when they were in the hospital it was not possible to know some variables about them, as for example, social conditions, life style, relation among relatives, parents and friends. Besides this, in their homes it was possible to construct the accident story through many talks of people related to the victim and to know about the accident. However, it was very difficult to hear witness, because the parents or relatives of the victim did not allow getting him or her. Maybe these people do not believe that this procedure can do something else to help their sons, or they do not believe in the justice. In only one case it was possible to interview a driver, because he was a victim's neighbour. But, if for one hand there was some difficulty, on the other hand these people showed a lot of availability to give information to the researcher, maybe believing that this person could help them. In a unique sample case, a mother from middle social class refused to be interviewed by not receiving the researcher in her

home. However, after insistent requests the victim's grandmother accepted to talk about the accident, but only through phone. In this case, it was impossible to apply the necessary instruments to the victim.

Besides the interview, the researcher and his auxiliary applied the CAT A Test in a control group of twenty student boys, at the same age range, non run over, with the intention to compare psychological conditions between boys from two groups. It was applied too a victim questionnaire, adapted from an Ogawa and Papp instrument, that includes a draw made by run over boy at the time of accident.

Sometimes, it was extremely difficult to apply these instruments, because there were always a lot of people around the victims, and they generally lived in small houses constituted of only one room.

## RESULTS AND DISCUSSION

Table 1 - Boys run over in Belém city.

Years old	Pedestrian	Cyclist	Others
5	0	0	0
6	2	0	0
7	1	0	0
8	5	0	2
9	3	0	0
10	5	2	0
Total	16	2	2

The interviews revealed that the boys were short-sighted and without consequences in their actions in traffic. The examples, below, chosen among the studied cases, show these characteristic behaviour of the children. Remembering what Piaget and Inhelder (1955) describe above that the attention was concentrated on a specific place, on a desired object.

"X" was at the house gate of his aunt, where he went to spend some time. When he saw a kite's line, he follows the line until he sees the kite falling on the lane, without paying attention to his surroundings. Hypnotized by a toy arriving at his hands, he was run over when he advanced until the middle of the lane.

"Y" was playing volleyball with his friends in front of his house, in a calm street in the suburb of Belém. At that time, a truck that was passing by the place stopped because the volleyball net didn't permit the truck to go ahead. "Y" and his friends hanged up on the truck bodywork and, when the truck went off, "Y" fell down to the back wheel, suffering serious injuries.

"Z" was returning from school by bus with his sister. When he was descending from the bus, he nipped and came off the hand of his sister, crossed the lane in front of the bus, when he was run over by a car and had the femur fractured.

Nineteen mothers and three fathers were interviewed. In their talks they explained the difficulty to control their sons, understanding that this behaviour was because of their childhood characteristics. Sixteen parents admitted their sons as responsible for the accidents, but in both cases there were flat claims about the drivers. In an unique interview with the driver he attributed culpability to the boys' parents, who permitted that he stayed out of home until 9 p.m.

### The pictures about the accident and the questionnaire.

The accident scenes represented by pictures made by the boys contributed to the understanding of the accident. Some questions were asked to boys based on one of the work of Ogawa and Papp (1997). The authors' questions have a wider character related to traffic, different from those made in this study, restricted to the accident scene. Only the first question, "What do you think about the cars that you see in the streets?" was kept out. The fourth question, " Why did you get to be run over?" puts up important and objective answers (Table 2) to help in the behaviour understanding of the boys who were studied here.

Table 2 – Percentual causes informed by the run over boys, in reference to the fourth question

Causes	Frequency	%
Absence of attention (Without a specific motivation)	6	31,57
Absence of attention because of running after a kite's line	2	10,53
Absence of attention because of hurrying to go somewhere	3	15,79
A vehicle confuses the boys' vision	2	10,53
The boy did not say the cause	2	10,53
Driver's fault	2	10,53
Influenced by friends hanging over vehicles	1	5,26
"Paying the sinfulness/the time of accident arrived"	1	5,26
Total	19	100,00

RMK: The total corresponds to 19, because one boy didn't answer this question.

The attention factor is explicitly present in 57% among the total answers and it appears in other ways in some answers, as " one vehicle confuses the boys' vision". This answers are good examples of the Piaget and Inhelder (1995) affirmations about attention.

The question number 5, "What were you doing out of home?", gave answers showing their social life conditions, such as, "I was helping my mother search for food", in grocery or in some residence. The most incidence of out home permanence refers to cheap amusements with their next doors, considering that their poor and small residences, which do not offer minim conditions of providing the necessity of the children. The answer "on the way to school" was expected with great frequency, considering that the boys from the low class go to school by bus or walking. This bus is not like the yellow American ones that appear on movies or TV. It is a common bus and generally crowded by children who get near or far from their houses. A plausible explanation about low frequency of these answers would be related to little exposition of the boys to the dangerous traffic in comparison to those that stay longer periods of time in other activities. About this subject, Malek et al. (1990, p. 303) signs that "the pattern of incidence of pedestrian injury cannot understand without examining risk, i. e. the exposure of children to the traffic environment". The authors add: "Few studies have analyzed the recreational roadway exposure".

Table 5 – Answers about question number 5

The boys were doing:	Frequency	%
Buying/seeking something in groceries, drugstores, residences, etc.	8	44,44
Flying kite	2	11,12
Playing ball next to residence	2	11,12
Hanging up vehicles	2	11,12
School way	1	5,55
Going to a friend house	1	5,55
Going to swim in the river	1	5,55
TOTAL	18	100,00

RMK.: Two boys didn't answer this question.

About results of the CAT A Test, none significant psychological differences between the two groups were found. The answers given by the boys in the two groups were practically the same.

## CONCLUSION

In another article about this subject it was asked: "Is childhood run over: a misfortune destined to the low social class?" Rocha (2003 p. 219). The answer was "yes", because this research shows how it is difficult to find children from middle and low classes hit by cars. In the same article I asked if in Brazil, perhaps in the world, some phenomena occur only in certain social layers, considering the statistics and Brazilian media, which recorded almost only runover and prisons of low class people. These facts suggest that this situation is promoted by economic, political and social conditions, in spite of the effort of the governments to reverting the actual situation, responsible for immunity, violence and increase of gap between high and social classes. In this specific case, the boys of low social class are more vulnerable of being hit by cars, because their poor houses do not offer a minim condition to leisure, then they go out of home to search for friends in their spare times. The urban areas where the boys live were not designed for leasuring, and then they stay dangerously in the middle of the streets, exposed many hours during the day or night, sometimes, to accidents. On the other hand, the immunity contributes to the drivers disobey the traffic code, crossing these areas in high speeds and not rescuing the victims most of the times. In opposition to this scenery, children from other layers have suitable and safe places to spend time. Eventually, it is important to sign that there is a trend to consider these questions as a social-economic and political matters, without any specific causes. These variables certainly contributes to the accidents, but more researches are necessities to find more reasons besides these already described here, as for example, specific and regular education in primary school, instead of occasional campaigns before hollidays and vacations, like those that are made in Brazil.

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