Background

Children are vulnerable road users in the community travelling to school, parks and other neighborhood destinations. Pedestrian injury is a major hazard to the health of children in most developed countries. Pedestrian accidents are one of the first causes of injury-related deaths for children aged 5 to 14 years old in industrialized countries. Accidents in Italy are the main cause of death and disability in the ages after the first year of life, and most of those with death (about 50% of the total) are on the road. While the number of children dead in road accidents is overall decreased from 2010 to the present date, the number of children dead as pedestrian is almost stable. As for the children injuries, both the number of children injured in road accidents and the number of children injured as pedestrian are almost stable. A very high percentage of road accidents involving children occurs on the home-school path which is the first and most important use of children of the urban areas.

Aim

This study has a dual objective: to identify and analyze the factors that affect the parents’ propensity to use private cars to accompany their children to school; and to analyze the availability of Italian parents to send their children to walk to school alone. In order to identify of these benefit factors both for the preparation of more effective information campaigns, and the definition of calming traffic interventions to be carried out on the home-school paths.

Method

The observational survey was focused on parents who were taking their children to school. The survey was conducted in front of 9 primary schools in Catania (Italy). The data reported in this study were collected from 1482 parents (953 mothers and 529 fathers) of children between 3 and 11 years old. The methodology used in this paper was path analysis, for which the following hypotheses were made:

- hypothesis 1: "Driver instead of walking" is influenced by variables of type “Socio-demographic characteristics”;
- hypothesis 2: the variables of the type “Socio-demographic characteristics” also influence “Parents’ availability”;
- hypothesis 3: the parents’ perception of the safety of the home-school path played a role in conditioning the parents’ choice of the mode of transport;
- hypothesis 4: the parents' perception of the safety of the home-school path also influence “Parents’ availability”;
- hypothesis 5: "Driver instead of walking" is influenced by exogenous variables belonging to the category “Parents’ reasons for choosing the car”;

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**Title:** Home-school travel: a path analysis of factors underlying the choices of the Italian parents

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• hypothesis 6: the variables of the type “Road safety measures” influence “Parents’ availability”; and

• hypothesis 7: “Parents’ availability” is a mediator variable for the "Driver instead of walking".

Result

The results of the present study show that just same variables of the type “Parents’ choice motivations” are statistically significant for variable “Driven instead walking” (Car-use habit, go to work by car, child too young and excessive distance). All variables of the type “Socio-demographic characteristics” are positively associated with the variable “Driven instead of walking”; the most significant role is played by the following two variables: Home-school distance; Park. The variable “safety perception” is statistically not significant, in none of the cases. About the variable “Parents’ availability” only 4 variables of the type “socio-demographic characteristics” are statistically significant (child’s age, Home-school distance, working parents, and number of sons). 2 out of 4 variables of type “Road safety measures” are statistically significant (traffic reduction and pedestrian crossing). Finally, there is a negative correlation between the variable “Parents’ availability” and the variable “Driven instead of walking”, this means that parents who are more inclined to have their children walking to school are also predisposed to using less the private vehicle.

Conclusions

The safety of home-school paths can be improved by reducing vehicular traffic in the roads near schools and increasing parents' availability to send their children walking to school. This is a goal that can be reached through information campaigns aimed at both children and parents and through infrastructural interventions.