Controlling factors of the parental safety perception on children's travel mode choice

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1. Introduction

The last 20 years, a decade in the number of traffic accidents involving children can be observed in several European countries. The annual statistical report of the European Road Safety Observatory shows a reduction of 25% in the number of fatalities in general and a 50% reduction in the age group 0–15 years between 1997 and 2006 (ERSO, 2008). This decline seems to indicate safer traffic environments. However, according to Roberts, 1993 and Diguiseppi et al., 1997 this decline can be attributed to a decline of child autonomy in the transport system. In several European countries e.g., Zeilier, 2001 the movements of children are restricted to ‘safe’ locations such as schools, playgrounds and in-house, and the transport between those safe islands is often supervised by an adult. Children between 6 and 12 years old are more often transported in the backseat of the car than 20 years ago. Increases up to 40% over the last 10 years, even for trips less than a mile, have been reported in various case studies in Northern America and Europe (Carlin et al., 1997; Ewing et al., 2004; Hillmann et al., 1990; Kaesemans, 2002; Karsten et al., 2001; Mcmillan, 2006; O’Brien et al., 2000; Pooley et al., 2005; Zweerts and Nuysts, 2001). In general the decrease of the number of child pedestrian or cycling trips is perceived as negative because (1) it implies more car traffic and (2) autonomous travelling on foot or by bicycle enhances children’s motor system development, stimulates the development of their social identity and improves their physical condition (Cooper et al., 2005; Timperio et al., 2004). On top of this, independent travelling raises the chance of having superior traffic skills at a later age. In the light of these findings it is important to increase (autonomous) travel of children.

Prezza et al. (2006) mention the following reasons for an increased car dependency of young children (1) increasing car ownership, (2) greater complexity in lifestyle, (3) increasing time pressure, and (4) parental concern about children’s safety, both because of traffic and possible abuse by strangers. The first three reasons can be related to ‘travel time to destination’ (Mcmillan, 2006; McDonald, 2007; Schlossberg et al., 2006; Black et al., 2001). The parental concern about traffic safety is particularly important for children travelling as pedestrians or cyclists (Johansson, 2006; Ewing et al., 2004; Fotel and Thomsen, 2004; Martin and Carlson, 2005). These reasons complement each other and overlap to some extent in explaining travel mode choice. The study of parental concern about traffic safety can help to better understand children’s travel mode choice in different environments.

Proponents of smart growth and livable community concepts developed a persuasive hypothesis attributing the change in children’s travel mode choice to the urban form of our communities and believe that the decrease of trips as a pedestrian...