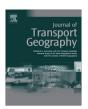


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# The last free-range children? Children's independent mobility in Finland in the 1990s and 2010s



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#### ABSTRACT

The study reports the degree of children's independent mobility (CIM) in Finland for over two decades, from the beginning of the 1990s up to 2011. The first part of the research examined the differences of CIM in five different settlements in 2011: inner city, suburban, large town, small town, and rural village. A cross-sectional survey was used on a total of 821 7- to 15-year-old children in various settlements in different parts of Finland. Independent mobility was operationalized both as mobility licenses, meaning parental permits to perform certain activities independently, and as actual mobility, the proportion of active and independent school travel and independent weekend activities. In the second part of the study. we used the same measures to compare the independent mobility of Finnish children in the 1990s and 2010s. The second sample consisted of a total of 306 8- to 10-year-old children and their parents who participated in the CIM study in 1993-94 or in 2011. The major finding of the study was that in Finland children's independent mobility had decreased significantly during a span of 20 years, even more noticeably in the small town and rural village settings than in the inner city settlements. Finnish children, nevertheless, still enjoy a very high degree of independent mobility when compared with the children from the 16 countries involved in the large international comparative study for which the current research was conducted. In the discussion, we give some possible factors that can provide some understanding of and explanation to these trends.

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#### 1. Introduction

Children's independent mobility (CIM), freedom to move around without adult accompaniment, has raised interest since the seminal work by Hillman and colleagues (Hillman et al., 1990; Hillman and Adams, 1992) who reported the decreasing possibilities of children to independently engage with their surroundings in Britain and Germany between 1970s and 1990s. Recently, the interest toward the rapidly changing mobility patterns of children has only increased mainly because of alarming health risks related to sedentary lifestyle and growing obesity problem among both Western children (Dunton et al., 2009; Lopez and Knudson, 2012) and children in other parts of the world (Lau et al., 2013; Selassie and Sinha, 2011).

CIM studies have attracted quite a lot of interest in Britain, Germany, and Italy (Granville et al., 2002; Hillman et al., 1990; Hillman and Adams, 1992; O'Brien et al., 2000; Prezza et al., 2001) as well as in Australia and New Zealand (Witten et al.,

2013; Carver et al., 2012; Tranter, 1993; Tranter and Whitelegg, 1994). Some studies on CIM have also been conducted in Nordic countries (Fyhri and Hjorthol, 2009; Johansson et al., 2010; Mikkelsen and Christensen, 2009), but none of them have been able to provide comparative data over time across different settlement types.

Since the work by Hillman and colleagues (Hillman et al., 1990; Hillman and Adams, 1992), who reported the decreasing possibilities of children to independently engage with their surroundings in Britain and Germany between the 1970s and 1990s, only a few other studies have been able to examine the longer-term mobility trends of children (Carver et al., 2011; Salmon et al., 2005). Some studies have relied on information from national travel surveys that are repeated within fixed time intervals (Fyhri et al., 2011; McDonald et al., 2011; Twisk et al., 2013). For example, Fyhri et al. (2011) reported about the increase of motorization of children's mobility and decrease in bicycling and walking during the last decades in Denmark, Norway, Finland, and Great Britain. National travel surveys, nevertheless, can only partially reveal the changing possibilities for CIM because the available data mostly only cover school travel patterns, rather than mobility more

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generally. These datasets offer few possibilities to distinguish the sociocultural, family, or child-related factors that can motivate increasing mobility restrictions.

The current study reported in this paper contributes to these sparse foundations by replicating the original CIM survey by Hillman et al. (1990) in Finland. CIM was operationalized on two levels: as a set of mobility "licenses" parents give to their children and as the actual mobility patterns of children. A license simultaneously "reflect[s] parental judgments about the degree of maturity and competence required by their children to cope safely with the perceived dangers that lie outside the home" (Hillman et al., 1990) and the actual permissions children are granted to conduct particular activities. Even if children enjoy mobility licenses, they do not always use possibilities to move around independently. Therefore it is essential to also study the actual mobility and not only to school but to other places of interest where children want to travel independently and actively. In this study. data about licenses and actual mobility were requested from both parents and children themselves. This approach allowed the analysis of children's mobility patterns beyond home-school travelling and provided some indicators of children's experiences and household attitudes as well.

The study reported here is a part of a large international comparative study that was carried out in 16 countries (Shaw et al., 2015). While the majority of the participating countries cannot compare the current level of CIM with the levels of independent mobility experienced by children decades earlier, this comparison is possible for Finland. In the earlier half of the 1990s, similar data were gathered in Finland using the same questionnaire developed by Hillman et al. (1990). Findings of this study by Kyttä (1997, 2004) suggested that the independent mobility of Finnish children was clearly higher than that of British and German (Hillman et al., 1990; Hillman and Adams, 1992) and Australian children (Tranter and Whitelegg, 1994).

The first part of the current study reports the degree of independent mobility of Finnish children in 2011. We studied the independent mobility of primary and secondary school children aged between 7 and 15 years. Our analysis concentrated on comparing five different settlements in terms of CIM and the associations between mobility licenses and actual mobility. In the second part of the study, the current situation was compared with earlier findings from the 1990s, with a particular focus on 8- to 10-year-old pupils.

#### 2. Background

The past decade has produced a vast evidence base identifying various factors that can promote or hinder children's independent and active lifestyles. The independent and active mobility of children is an outcome of a very complex set of developmental (Ahmadi, 2007; Burgmanis et al., 2014; Rissotto and Tonucci, 2002), familial (Barron, 2014; Jensen et al., 2014), sociocultural (Depeau, 2001; Malone and Rudner, 2011; Valentine, 2004), and environmental characteristics (Alparone and Pacilli, 2012; Mitra and Buliung, 2014; Villanueva et al., 2013), as well as the policy context (Fyhri and Hjorthol, 2009; Rudner, 2012). Individual and family characteristics that are affecting CIM include children's age, maturity and gender (Johansson, 2006), family structure, socioeconomic status, ethnicity (Loebach and Gilliland, 2014; Weir et al., 2006), gender of parent, and parent employment (Valentine, 2004; Witten et al., 2013). This includes matters regarding weight of school bags, convenience, families spending time together, and trip chaining (Johansson, 2006; O'Connor and Brown, 2013; Witten et al., 2013). Environmental factors such as weather, urban form, pathways, connectivity, presence of green spaces, and distance to school and other destinations also affect CIM (Broberg et al., 2013a,b; Giles-Corti et al., 2011; McMillan, 2005; Rothman et al., 2014), as do mode of transport, traffic speeds, and volumes (Carver et al., 2008; Drianda and Kinoshita, 2011; Woldeamanuel, 2014). Increasingly, the role of social trust and conceptions of risk have been identified as significant influences on decision making about children's freedom to go places on their own (Jackson and Scott, 1999; Madge and Barker, 2007; Rudner, 2012; Tomanović and Petrović, 2010).

If children have low independent mobility, their active travel tends to decrease and hence can diminish their overall physical activity. Organized activities can rarely compensate for the spontaneous everyday outdoor activities and independent mobility to school, errands, and hobbies (Mackett and Paskins, 2008). The physical health consequences on children's inactive lifestyle, the growing risk of overweight and obesity, and the resulting health problems like type II diabetes has therefore raised researchers' attention (Casey et al., 2014; Datar et al., 2013; Saelens et al., 2012; Wolch et al., 2011). In Finland, these concerns are relevant because the proportion of overweight 12- to 18-year-old children almost tripled between 1977 and 2003, which now comprises about 20% of adolescents (Kautiainen et al., 2002, 2009).

Other individual detrimental effects associated with low CIM include cognitive, emotional, and social developmental impacts. There are impacts on the processes of building environmental knowledge and consciousness (Palmberg and Kuru, 2000; Burgmanis et al., 2014) and personal emotional bonds with the environment (Bixler et al., 2002; Kong, 2000). Decreasing CIM has also been associated with difficulties in socializing with peers (Hüttenmoser, 1995; Prezza et al., 2001), and this can lead to impacts on social and personality development (Kantomaa, 2010).

The decrease in CIM can also be accompanied by larger-scale societal impacts like everyday life practices of families who use increasing time for chauffeuring (Kyttä, 2008; Fyhri et al., 2011), which compromises the sustainability of public transport systems. These impacts can vary within and between different settlement types. For example, families in rural areas may experience longer travelling distances, fewer and less frequent transport options, and lack of local schools compared with inner urban areas (Carver et al., 2013; McDonald et al., 2011). Since the factors affecting mobility and impacts of loss of mobility can vary geographically, it is important that research includes different settlement areas. This will facilitate more sensitive policy development.

Focusing on school travel as an indicator, Finland, along with Norway and Japan (Drianda and Kinoshita, 2011), has recently been identified as having a higher level of CIM compared with many countries. Carver et al. (2013) found that 26% of English and 33% of Australian children travelled to and/or from school on their own, whereas according to Shaw et al. (2013), 67% of German children travelled without adult accompaniment. Less than 30% of children travel alone as reported in a Canadian study (Loebach and Gilliland, 2014), and 26% in a study from the USA (Surface Transport Policy Project, Transportation and Land Use Coalition and Latino Issues Forum, 2003). Portugal and Iran suggest even lower rates of CIM at 15% (Lopes et al., 2014) and 8% (Shokoohi et al., 2011), respectively. In many African nations, levels of CIM are more starkly reflective of income, with children from poorer backgrounds experiencing much higher levels of CIM than those from richer backgrounds, with wealthier children experiencing less independent mobility (Behrens and Muchaka, 2011; Larouche et al., 2014).

Most studies primarily focus on inner urban and suburban neighborhoods, which do not reflect the diversity of settlement patterns in which children live, the number of variations of activities they can access within their local area, or their access to multiple modes of transport. Furthermore, few studies reveal

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