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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.

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

whether children's or parents' concerns differ across these settlement types (Behrens and Muchaka, 2011; Kamargianni et al., 2012). Fortunately, recent international research is providing greater insight into rural children's mobility patterns (Behrens and Muchaka, 2011; Bwire, 2011; Carver et al., 2013; Drianda and Kinoshita, 2011; Gutiérrez-Zornoza et al., 2014; Yatiman et al., 2012). This paper contributes to this work by providing a comparative study of CIM from the 1990s to the 2010s across five different settlement types to identify whether similar situations are occurring in Finland.

3. Methodology

3.1. Procedure, subjects, and the data collection in 2010s

The international comparative study on CIM, for which the Finnish data was collected, was led by a research team at the Policy Studies Institute (PSI) in London, Great Britain. According to the instructions from PSI, five types of settlements were surveyed to ensure various Finnish contexts were represented: inner city, suburban setting, large town, small town and rural village. Below we describe these settlements and the schools studied.*The inner city* was an urban neighborhood, Töölö, in the central part of the city of Helsinki, the capital of Finland, situated on the southern coast of Finland. The population of Helsinki is about 600 000 and the population density 2826 inhabitants/km^2. The data was collected in the elementary and secondary schools of Töölö with the total of about 430 and 300 pupils, respectively. Both Töölö schools have special bilingual (English – Finnish) classes, secondary school has also mathematics and Latin-oriented classes.

The suburban setting was the Kirkkonummi suburb located 30 km west from Helsinki's center. Kirkkonummi is a municipality with about 37 000 inhabitants and the population density is 103 inhabitants/km^2. A large proportion of the population is working in Helsinki. The elementary school of Kirkkonummi is located in the centre of Kirkkonummi and the number of students is approximately 400. The secondary school with about 100 students situates in a suburb of Masala about 8 km from the centre of Kirkkonummi.

The large town, Hämeenlinna, is a medium-sized town (about 67 000 inhabitants, population density 38 inhabitants/km^2), that is situated 100 km north of Helsinki. The studied school in Hämeenlinna consists of two units: The elementary school Tuomela and the secondary school Hätilä. Both units are 5 min walking distance from the centre of Hämeenlinna. The number of students in total is approximately 550.

The small town Kitee, is located in Eastern Finland and has about 9 000 inhabitants with population density 9 inhabitants/km^2. A remarkable proportion of population live in sparsely populated rural areas. The Arppe school that includes both elementary and secondary schools is located in the centre of Kitee. The number of students in total is approximately 550.

The rural villages are located in Kauhajoki, a town in Western Finland. Kauhajoki has about 14 000 inhabitants and it is population density is on average 11 inhabitants/km^2. The villages Aro, Päntäne and Hyyppä are very sparsely build rural villages with a few hundred inhabitants. The elementary schools in these villages have from 15 to 50 students per school. The secondary school of Kauhajoki is situated in the centre of Kauhajoki and the number of students is about 300.

From each of the five settlements, primary and secondary schools were approached and permits from school boards and heads of the schools were acquired. In the inner city and large town, there were more than one primary and secondary school. In these cases, we selected schools that best met the criteria of selection for study areas. In all schools, surveys were delivered to all pupils and their parents.

The data were collected in May 2011. It was important to time the data collection equally in all settlements because of significant seasonal varieties in Finland. About 2500 questionnaires were delivered to pupils in primary and secondary schools in the five research areas. The exact number of delivered questionnaires is not known because the schools/teachers always took some extra copies to ensure that each child got a copy. The questionnaire consisted of two parts: parents' and children's surveys. Both surveys were sent home from school via the children. According to our instructions, children and parents responded to their own surveys independently. The parents returned both their and their children's completed questionnaires by mail in prepaid envelopes that were provided.

In total, 821 primary and secondary schoolchildren[1] aged 7–14 years from five settlements participated in the study. The overall response rate was 33% but cannot be known precisely because of the unknown exact number of delivered surveys mentioned above. The response rate varied in the different settings, with the lowest response rate in the suburban setting (29%) and the highest response rate in the small town setting (35%). In all cases, we received both children's and parents' responses.

3.2. Procedure, subjects, and the data collection in the 1990s

In the follow-up study, a subsample of a dataset collected in the 2010s was compared with an earlier dataset collected by Kyttä (1997) between 1993 and 1994 (later referred to as a dataset from the 1990s). The subsample from the 2010s included second- and third-grade pupils (8- to 10-year-olds) and consisted of 140 children and 140 parents who were living in inner city, small town, or rural settings. This dataset was compared with the earlier data from the 1990s, where the inner city (Töölö, Helsinki) and small town (Kitee) locations and schools were the same as those studied in the 2010s. The rural villages originally studied in the 1990s, Harjankylä and Luomankylä, were not the same villages as in the later dataset because the schools in these villages had been closed. Both sets of rural villages were, however, located in the same town (Kauhajoki) in Western Finland and represented the same cultural context. Some pupils also lived in the original villages, although nowadays they are transported by taxis or buses to the neighboring villages that were among our new set of villages. The large town and suburban settings were not studied in 1990s and therefore were not included in this comparison. Both datasets were collected in May to ensure that seasonal variation does not influence the findings comparing the two periods.

In the data collection of 1990s, all second or third grade students (aged eight to ten) were recruited from the selected settlement types to participate in the survey through the local primary schools. Children answered the survey at school under the supervision of their teachers and took home an envelope with the parental survey to be completed by their parents. The parents returned the sealed envelopes containing the completed questionnaire to the schoolteachers, who sent them to the researcher. A total of 165 children and 130 parents returned the survey. The response rate for children was 79%, while that for parents was 75%.

3.3. Measures

In the two phases of the study, almost identical methods were used. In the earlier study, the CIM survey by Hillman et al.

[1] Finnish children begin school usually at the age of seven. The elementary school has grades 1 to 6. When pupils are about 13 years, they start the secondary school, which has grades 7–9. This dataset includes respondents from grades 1–8.

(1990) was translated from English to Finnish, and some minor changes were made to adjust the questions to the Finnish context. An almost identical questionnaire was used in the international comparative study organized by PSI. The new version of the survey included a more detailed survey of weekend activities of children and the reasons parents had for restricting children's mobility.

The two research themes, mobility licenses and actual mobility, were studied using the following measures:

Mobility licenses: Both parents and children were asked whether the child was allowed to (1) cross main roads alone, (2) travel home from school alone, and (3) travel on buses alone. Parents were also queried whether the child was allowed to (4) go on their own to places other than school or to (5) go out alone after dark. Children were asked if they may (6) cycle on main roads alone. All these mobility license questions were answered using a dichotomous scale (0 = no, 1 = yes).

A mobility license score (value range 0–6) was computed by summing the aforementioned six items using a procedure applied in the original study by Hillman et al. (1990). Three of these items were from children's survey, namely, licenses to cross roads, cycle on roads, and use buses alone. The items from the parents' survey included coming home from school, going to places other than school, and going out after dark. Missing values were imputed with value 0 in cases where there were responses for at least four items. This happened in 3% of the cases.

Parents were queried about the possible reasons for restricting the mobility of their child. Unfortunately, the listed reasons in the original survey differed from those in the later one. Therefore, the reasons are only reported in relation to the findings of the data from the 2010s.

Actual mobility: Three measures were used to study the degree of actual independent mobility. First, children were asked about their independent mobility to and from school on the day they were surveyed. Dichotomous variables were created based on answers in the following way: 1 = travelled without adults/older children during both journeys (options: "travelled on my own" or "child of same age or younger") and 0 = travelled with adults/older children (options: "parent," "another adult," or "older child/teenager").

Second, children were asked about their school travel mode. A dichotomous variable was constructed that measured the activity of the school travel mode. Score 1 represented active travel modes (options: "walked most of or all the way" and "cycled") if the child had travelled actively both to and from school. Score 0 represented all inactive options ("school bus," "local bus or train or underground," and "car") and the cases if the child went one way actively.

Weekend activities: The third measure was related to the number of independent weekend activities. The questionnaire in the 2010s included 12 options for weekend activities. Children were asked if they independently (1) visited a friend's home; (2) went for a walk or cycled around; (3) played sports or went swimming; (4) went to listen music; (5) went to a playground, park, or playing field; (6) went to hobbies/youth clubs; (7) went shopping; (8) spent time outside with a friend after dark; (9) visited relatives or grown-ups; (10) went to a library; (11) went to a cinema; or (12) visited a place of worship. In addition, children could name up to three other activities. While the original survey in the 1990s included 16 different activities, only 6 of them were identical with the activities used in the 2010s. These activities were numbers 1, 2, 5, 7, 10, and 11 listed above. Dichotomous variables were created based on this information that indicated whether a child had engaged in at least one independent activity on the weekend. In the follow-up study, a shorter list of six activities was used as a basis for the creation of this dichotomous variable.

Statistical analyses were performed using IBM SPSS Statistics version 21. Independent t-tests were used to test the differences between means of mobility licenses. Chi-square tests were conducted to test the significance of the differences in the degree of independent mobility to school and weekend activities. Finally, logistic regression analysis was used to study the associations between mobility licenses on one hand and actual independent and active mobility on the other. In these analyses, gender and car ownership were controlled because they had significant associations with dependent variables.

4. Results

4.1. The samples in the 2010s and 1990s

To study CIM in Finland in the 2010s, a sample of 7- to 14-year-old children and their parents were studied in five different settings in 2011. The first part of this results section reports these findings. In the second part, a subsample of 8- to 10-year-old children were analyzed. These children in three different settings had been studied both in 1993–94 and in 2011. Thus, we were able to do the follow-up for CIM in the 1990s and 2010s.

The first sample comprised 641 primary school (46% boys, 54% girls) and 180 secondary school (43% boys, 57% girls) children and their parents, which provided a total of 821 children. The share of inner city children was 20% (165 children), suburban was 18% (150 children), large town was 22% (180 children), small town was 23% (187 children), and rural children was 17% (139 children). The mean ages of the primary and secondary school children were 10.1 (SD 1.8, range = 6) and 13.9 (SD 0.7, range = 2), respectively. Parents' questionnaires were completed mainly by mothers (87%). Of the parents who replied, 81% had full-time work, 84% of families owned their home, and 94% had one or more cars. There were no significant differences in the mean ages of children living in various types of settlements. Some background variables of the respondent families varied among the settlements. The degree of car ownership was lowest in the inner city settlement ($X^2 = 59.7$, df = 4, $p = .000$), where the share of families without a car was 19% while it was in suburban setting 5%; large town, 4%; small town, 2%; and rural village, 1%. The share of families living in rented homes was also the highest ($X^2 = 59.7$, df = 12, $p = .000$) in the inner city. The percentage of families living in rented homes in the inner city was 26%; suburban, 16%; large town, 10%; small town, 17%; and rural village, 4%. The proportion of families where neither of the parents was in paid work did not differ significantly among the five settlements but varied between 4% (small town) and 10% (large town).

The second sample consisted of a total of 305 8- to 10-year-old children and their parents who participated the CIM study in the 1990s (165 children or 54%) or in the 2010s (140 children or 46%). Only three different settlements (inner city, small town, and rural village) were studied because the earlier sample included only these settlement types. In the earlier sample, the proportion of inner city (44%) and small town (44%) children were higher than in the later sample (34% and 40%, respectively), while the proportion of rural village children was lower in the earlier sample (12%) compared with the later one (26%), these differences being significant ($X^2 = 9.8$, df = 2, $p = .008$). The mean age of the children was 8.9 years (SD 0.7), which did not differ significantly in the 1990s and 2010s. In both datasets, 53% of respondents were boys, and the parents filling the survey were predominantly female (83%). In the earlier sample, the share of families without cars was higher (16% in 1990s versus 7% in 2010s, $X^2 = 25.4$, df = 2, $p = .000$), and more families lived in rented homes (34% in 1990s versus 20% in 2010s, $X^2 = 6.4$, df = 1, $p = .01$). During a span 20 years, these differences had become less sharp among the three types of settlements:

The share of families without a car had changed in the inner city from 32% to 19% and in the small town from 7% to 2%; and in the rural village had stayed at 0%. The proportion of families living in rented homes had changed in inner city from 60% to 28%, in the small town from 24% to 23%, and in rural village from 0% to 6%.

4.2. CIM in Finland in the 2010s

4.2.1. Mobility licenses

The mean scores of mobility licenses of the primary and secondary school children in various settlements are presented in Table 1. The mobility licenses of primary school children living in suburban and large town settings were significantly higher ($F = 12.6$, df = 4, $p = 0.001$) than those of inner city, small town, and rural children. These differences between settlements were not significant in the secondary school level.

The only significant difference ($t = -2.34$, df = 153, $p = .021$) between the mobility licenses of boys and girls was related to the fewer licenses granted to small town primary girls (mean 3.7) compared with those granted to boys (mean 4.3). Secondary school children generally enjoyed more mobility licenses than children attending primary school ($mean_{sec} = 5.59$, $mean_{pri} = 4.11$, $t = -11.73$, df = 816, $p = .000$). This difference applied to all settlements.

The only background variable that was significantly related to the degree of mobility licenses was the work status of the parents. The mobility licenses of children whose parents were not in paid work were lower (mean = 3.6) than those of children in families where at least one of the parents was in paid work (mean = 4.1). This difference was significant only in the primary school level ($t = 2.03$, df = 637, $p = .042$).

A closer look at the various mobility licenses revealed that the clearly superior mobility licenses of children living in suburban and large town settings hold true only in the license to cross roads and to go to leisure activities. Inner city children had especially low licenses to come home from school and cycle on roads, while they enjoyed most freedom to use buses (see Fig. 1).

4.2.2. Actual mobility

As shown in Table 2, primary children living in the large town travelled independently both to and from school more often compared with children living in other settlements. The differences among the settlements were significant only among primary school children ($X^2 = 19.8$, df = 4, $p = .001$). In all settlements, the general level of independency was very high, and the proportion of children travelling both to and from school independently varied from 64% to 86% in primary school and from 79% to 91% in secondary school. There were no significant gender differences, but secondary school children went to school independently more often than primary school children (84% and 72%, respectively, $X^2 = 11.35$, df = 1, $p = .001$).

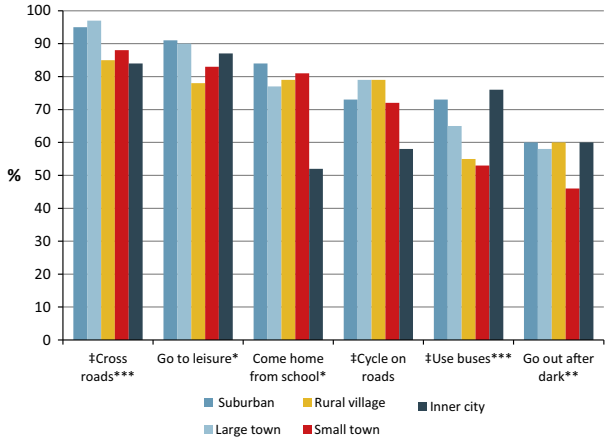

Fig. 1. The various mobility licenses of children living in the five settlements in Finland in the 2010s. The information concerning the dimensions marked with ‡ were obtained from children, while the other dimensions of license holding were reported by parents ($^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$).

Also, the activity of children's school travel mode was significantly higher in large town compared to the other settlements, among both primary ($X^2 = 66.3$, df = 4, $p = .000$) and secondary ($X^2 = 26.5$, df = 4, $p = .000$) school children. The differences among the settlements were rather clear: while 88% of large town children travelled both journeys to and from school actively, the proportion for rural village children was only 47%. In inner city setting, walking was the most common mode of travel (60% to school, 56% from school). Cycling was most prevalent in large town (54% to school, 54% from school). Travelling by school bus, taxi or public transportation was most common in rural village (35% to school, 36% from school) and almost nonexistent in large town (2% to school, 2% from school). Travelling with a private car took place most often in suburban (17% to school, 14% from school) and rural village (14% to school, 13% from school) settings. Primary school girls were more active in their school travel than boys: 65% of girls and 54% of boys travelled both journeys actively ($X^2 = 8.0$, df = 1, $p = .005$). This gender difference did not apply to the secondary schoolers.

Children were picked up from school by parents 0.9 day a week on average. Pickup occurred most often in rural village and least often in large town. The differences among settlements were significant ($X^2 = 6.5$, df = 4, $p = .001$). The most common reasons reported by parents were that they combined the pickup with another activity (32%) or they had concerns about traffic danger (32%). Various settlements differed here often significantly (see Fig. 2). For example, inner city parents had more concerns about traffic danger and indicated they enjoyed the opportunity to spend time with their children in the car, whereas small town parents were more prone to combine trips. Children were somewhat more

Table 1
The mobility licenses of primary and secondary school children in various settlements in Finland in the 2010s.

	Inner city		Suburban		Large town		Small town		Rural village		ANOVA
	n	Mean (SD)	*n*	Mean (SD)	*n*	Mean (SD)	*n*	Mean (SD)	*n*	Mean (SD)	
Primary boys	66	3.7 (1.9)	48	4.6 (1.5)	53	4.3 (1.7)	77	4.3 (1.3)	48	4.1 (1.6)	$F = 2.5$, df = 4, $p = 0.042^{*}$
Primary girls	61	3.8 (1.9)	61	4.2 (1.4)	90	4.5 (1.5)	78	3.7 (1.8)	47	3.6 (1.7)	$F = 4.2$, df = 4, $p = 0.002^{**}$
Total primary	128	3.8 (1.9)	111	4.4 (1.4)	145	4.4 (1.5)	157	4.0 (1.6)	98	3.9 (1.7)	$F = 12.6$, df = 4, $p = 0.001^{***}$
Secondary boys	16	5.3 (0.8)	18	5.6 (0.7)	13	5.8 (0.4)	12	5.5 (0.7)	17	5.6 (0.5)	$F = 1.1$, df = 4, $p = 0.371$ ns.
Secondary girls	21	5.7 (0.7)	18	5.8 (0.4)	21	5.4 (0.6)	18	5.7 (0.5)	23	5.4 (0.7)	$F = 2.0$, df = 4, $p = 0.106$ ns.
Total secondary	37	5.5 (0.7)	37	5.7 (0.6)	34	5.6 (0.6)	30	5.6 (0.6)	41	5.5 (0.6)	$F = 0.8$, df = 4, $p = 0.542$ ns.
Total	165	4.2 (1.9)	148	4.8 (1.4)	179	4.7 (1.5)	187	4.2 (1.6)	139	4.4 (1.6)	$F = 4.2$, df = 4, $p = 0.002^{**}$

* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

Table 2
The various measures of actual mobility (independent school travel, active school travel, and independent weekend activities) of primary and secondary school children in the five settlements in Finland in the 2010s.

	Independent school travel Travelled independently both to and from school					
	Primary		Secondary		Total	
	Total n = 641		Total n = 180		Total n = 821	
	n	%	n	%	n	%
Inner city	82	64	32	87	114	69
Suburban	77	69	30	79	107	71
Large town	125	86	31	91	156	87
Small town	105	67	24	80	129	69
Rural village	69	70	34	83	103	74
Subtotal	458	72	151	84	609	74
Chi Square test	X^2 = 19.8, df = 4, p = .001		X^2 = 2.6, df = 4, p = ns.		X^2 = 20.2, df = 4, p = .000	
	Active school travel Travelled actively both to and from school					
	Primary		Secondary		Total	
	Total n = 641		Total n = 180		Total n = 821	
	n	%	n	%	n	%
Inner city	77	60	13	35	90	55
Suburban	59	53	22	58	81	54
Large town	127	87	31	91	158	88
Small town	84	54	13	43	97	52
Rural village	39	40	26	63	65	47
Subtotal	386	60	105	58	491	60
Chi Square test	X^2 = 66.3, df = 4, p = .000		X^2 = 26.5, df = 4, p = .000		X^2 = 77.3, df = 4, p = .000	
	Independent activities on weekends One or more activities independently					
	Primary		Secondary		Total	
	Total n = 641		Total n = 180		Total n = 821	
	n	%	n	%	n	%
Inner city	95	74	35	95	130	79
Suburban	103	92	36	95	139	93
Large town	130	89	34	100	164	91
Small town	138	88	29	97	167	89
Rural village	87	89	38	93	125	90
Subtotal	553	86	172	96	725	88
Chi Square test	X^2 = 20.6, df = 4, p = .001		X^2 = 2.6, df = 4, p = ns.		X^2 = 19.1, df = 4, p = .001	

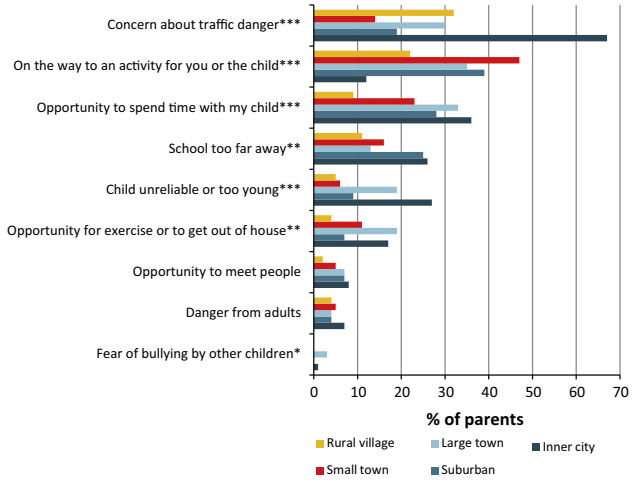

Fig. 2. Reasons parents gave for picking up their child from school. Significance of differences tested with Chi square tests: $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

concerned about social threats than parents. Small town children in Kitee also mentioned wolves and bears that sometimes frighten them during school journeys.

When it comes to the independence of weekend activities, most of the children did at least one independent activity during the previous weekend. The percentages of children having at least one independent weekend activity varied from 74% (inner city primary children) to 100% (large town secondary children) (Table 2). Generally, secondary school children performed independent weekend activities more often than primary schoolers (95% and 86%, respectively, X^2 = 10.42, df = 1, p = .001). Boys and girls did not differ in this respect significantly. The differences among various settlements in the independence of weekend activities were significant in the primary school level (X^2 = 20.6, df = 4, p = .001), not in the secondary school level. Children living in suburban setting enjoyed independent weekend activities most often, whereas inner city children enjoyed them least often.

The only significant background variable that was related to the degree of actual mobility patterns of children was family's access to a car. Children whose family had access to a car did travel to school actively less often (59%) than children whose families did not have access to a car (83%). This difference was only significant (X^2 = 9.4, df = 1, p = .002) among primary school children.

4.2.3. Mobility licenses and actual mobility

The associations between mobility licenses and independent school travel and active school travel and independent weekend

Table 3
The associations between mobility licenses and independent and active travelling among primary school children in the five settlements.

	Travelled independently to and from school OR (95% CI)	Travelled actively to and from school[a] OR (95% CI)	At least one independent activity on the weekend OR (95% CI)
Primary			
Inner city	1.87 (1.46, 2.38)***	1.31 (1.08, 1.60)**	1.34 (1.09, 1.64)**
Suburban	1.44 (1.08, 1.92)**	ns.	ns.
Large town	1.94 (1.43, 2.68)***	1.85 (1.36, 2.53)***	1.58 (1.17, 2.19)***
Small town	1.45 (1.17, 1.81)***	1.29 (1.05, 1.60)*	1.41 (1.05, 1.89)*
Rural village	1.52 (1.16, 2.00)***	1.37 (1.04, 1.81)*	ns.

[a] Analyses controlled for gender and household access to car.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

Table 4
The temporal changes in children's mobility license scores between the 1990s and the 2010s.

	Mobility license score				
	1990s ($n = 126$)		2010s ($n = 142$)		
	n	Mean (SD)	n	Mean (SD)	Difference between 1990s and 2010s
Inner city	48	3.8 (1.17)	48	3.6 (1.6)	ns.
Small town	60	4.5 (1.2)	56	3.9 (1.6)	$t = 2.2$, df = 114, $p < .030$
Rural village	17	5.2 (0.9)	36	3.4 (1.4)	$t = 4.6$, df = 52, $p < .000$
Total	125	4.3 (1.3)	140	3.7 (1.6)	$t = 3.7$, df = 266, $p < .000$

activities are presented in Table 3. In the inner city, large town, and small town settings, the mobility licenses of primary schoolers were significantly associated with independent and active school travel as well as with independent weekend activities. In the suburban setting, this association only applied to independent school travel, whereas in the rural setting, this association applied to independent and active school travel. In secondary school, any significant associations between mobility licenses and actual travelling did not exist.

4.3. CIM between the 1990s and 2010s

We compared the 8- to 10-year-olds' subsample of the data in the 2010s with the earlier data from the 1990s (Kyttä, 1997) in regard to possible temporal differences in children's mobility licenses and actual mobility. In this part of the study, we could only compare three settlements (inner city, small town, and rural village) because in the earlier dataset, only these settlement types were studied.

4.3.1. Mobility licenses

We found that the overall mobility license score of children had been reduced during a span of two decades in all three settlements: inner city, small town, and rural village. This decrease was, however, only significant in the small town ($t = 2.20$, df = 114, $p = .030$) and rural village ($t = 4.59$, df = 52, $p = .000$) settings but not in the inner city context (see Table 4). In the 1990s, children living in the rural village enjoyed significantly more mobility licenses ($F = 9.7$, df = 123, $p = .000$) than small city or inner city children. In the 2010s, the mobility license scores did not any more differ significantly among the three settlements.

Fig. 3 shows in a more detailed fashion the temporal differences in various categories of license holding. Between the 1990s and the 2010s, the mobility licenses of rural village children had reduced significantly in five out of six mobility license categories: to cross roads ($t = 4.2$, df = 52, $p = .000$), go to leisure ($t = 2.6$, df = 36, $p = .012$), come home from school ($t = 3.9$, df = 36, $p = .000$), cycle on roads ($t = 3.4$, df = 45, $p = .001$), and use buses ($t = 2.2$, df = 24, $p = .036$), the only exception being going out after dark. For the

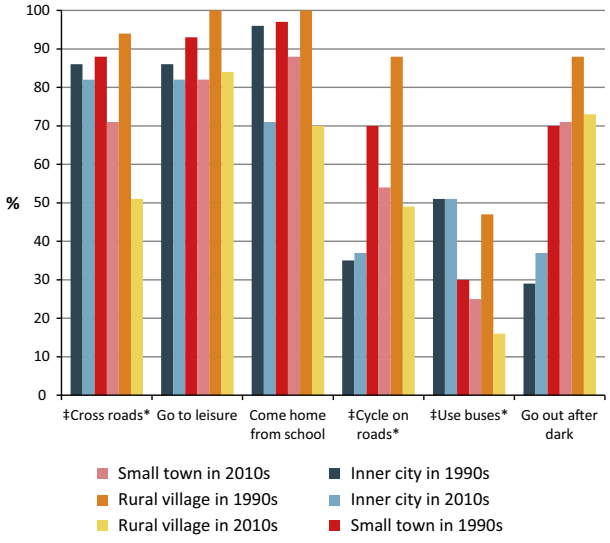

Fig. 3. License holding among Finnish urban and rural children in the 1990s and 2010s. The information concerning the dimensions marked with ‡ were obtained from children, while the other dimensions of license holding were reported by parents (*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$).

children living in the small town, the decrease of the mobility licenses applied only to the license to cross roads ($t = 2.3$, df = 99, $p = .024$), and for the inner city children, it applied only to the license to come home from school ($t = 3.4$, df = 66, $p = .001$). In the inner city, some licenses had even increased slightly, but these differences were not significant.

4.3.2. Actual mobility

Overall, the actual independent mobility of children diminished between the 1990s and the 2010s (see Table 5). The reduction of actual independent school travel was most clear in the inner city context, whereas the drop in active school travel was most dramatic in the rural village. The proportion of children who travelled both to and from school independently had declined significantly

Table 5
The temporal changes in children's independent and active school travel and independent weekend activities between the 1990s and the 2010s.

	Independent school travel					Active school travel					Independent activities on weekends				
	Travelled independently both to and from school				Difference between 1990s and 2010s	Travelled actively both to and from school				Difference between 1990s and 2010s	One or more independent activities				Difference between 1990s and 2010s
	1990s Total n = 158		2010s Total n = 135			1990s Total n = 161		2010s Total n = 140			1990s Total n = 164		2010s Total n = 140		
	n	%	n	%		n	%	n	%		n	%	n	%	
Inner city	54	82	23	49	X^2 = 13.8, df = 1, p < .000	55	80	29	61	X^2 = 5.3, df = 1, p < .021	46	64	31	65	ns.
Small town	64	89	38	70	X^2 = 6.9, df = 1, p < .009	67	93	29	52	X^2 = 28.6, df = 1, p < .000	65	90	42	75	X^2 = 4.4, df = 1, p < .036
Rural village	17	85	26	77	ns.	18	90	14	38	X^2 = 14.4, df = 1, p < .000	15	75	32	89	ns.
Total	135	85	87	65	X^2 = 17.3, df = 1, p < .000	140	87	72	51	X^2 = 46.5, df = 1, p < .000	126	77	105	75	ns.

Table 6
The associations between mobility licenses and independent and active travelling in the datasets from 1990s and 2010s.

	Travelled independently to and from school OR (95% CI)	Travelled actively to and from school OR (95% CI)	At least one independent activity on the weekend OR (95% CI)
1990s			
Inner city	1.40 (0.75, 2.61) ns.	0.81 (0.40, 1.64) ns.	1.21 (0.70, 2.10) ns.
Small town	1.52 (0.82, 2.81) ns.	1.84 (0.82, 4.11) ns.	1.14 (0.55, 2.36) ns.
Rural village	0.94 (0.14, 6.39) ns.	1.27 (0.14, 11.39) ns.	0.87 (0.20, 3.71) ns.
2010s			
Inner city	3.58 (1.63, 7.84)***	1.34 (0.90, 1.99) ns.	0.95 (0.64, 1.41) ns.
Small town	1.01 (0.66, 1.54) ns.	1.41 (0.93, 2.13) ns.	0.78 (0.50, 1.22) ns.
Rural village	2.02 (0.95, 4.29) ns.	1.47 (0.87, 2.49) ns.	1.28 (0.58, 2.85) ns.

Analyses controlled for gender and household access to car.
*** p < 0.001.

from 82% to 50% in the inner city (X^2 = 13.76, df = 1, p < .000), from 89% to 70% in the small town (X^2 = 6.86, df = 1, p < .009), and from 85% to 77% in the rural village (n.s.). Also, the share of children travelling to school actively noticeably dropped in the inner city settlements from 80% to 61% (X^2 = 5.3, df = 1, p < .022) and even more drastically in the small town from 93% to 52% (X^2 = 28.6, df = 1, p < .000) and in the rural village from 90% to 38% (X^2 = 14.4, df = 1, p < .000). The proportion of children having at least one independent weekend activity changed between the 1990s and the 2010s only in the small town, where the proportion of children having at least one independent activity dropped from 89% to 75% (X^2 = 4.4, df = 1, p < .036).

4.3.3. Mobility licenses and actual mobility

In the datasets from the 1990s, there were no significant associations between mobility licenses and independent school travel, active school travel and independent weekend activities (see Table 6). In the datasets from the 2010s, there was only one significant association: in the inner city context, higher mobility licenses increased the likelihood of travelling independently to and from school. This findings, however, applies onto to the subsample of second- and third-grade pupils, more profound analysis were made in the earlier chapter.

5. Discussion

The purpose of this paper was to contribute to a better understanding of the current degree of Finnish CIM and the temporally changing mobility patterns of school-age children in Finland. The major finding of the study was that in Finland children's independent and actual mobility had decreased significantly during a span of 20 years. Finnish children, nevertheless, still enjoy a very high degree of independent mobility when compared with the preliminary findings from the 16 countries involved in the international study for which the current research was conducted; Finland achieved the highest ranking both in the overall estimation of CIM and in all six measures of license holding (Shaw et al., 2015). According to this large comparative study, the other countries with a high degree of CIM were Japan, Germany, and Norway.

One historical reason for the still relatively high degree of independent mobility of Finnish children may be that there is a high proportion of both parents who work full-time; the percentage of Finnish families with children in which both parents work full-time was 59% in 2002, whereas the figure was, for example, 39% in Swedish families and 28% in British families. The percentage of families with one parent working full-time and the other parent working part-time was only 5% in Finland, compared with 39% and 36% in Sweden and Britain, respectively (OECD, 2005).

The current study indicated that children whose parents were not at paid work had lower mobility licenses than other children. Also, Mammen et al. (2012) found that unescorted children typically had parents who work full-time. This outcome, however, contrasts with a comprehensive literature by Davison et al. (2008), which indicated that children were less likely to have independent mobility if their parents worked or did not commute, which is supported by Freeman and Quigg (2009), who noted that mothers who worked were more likely to engage in trip chaining with their children. The contrast is probably due to varied influences, such as single parenthood, socioeconomic status, and mismatch of work and school hours (Valentine, 2004).

Another cultural characteristic that is promoting CIM in Finland could be a high degree of shared responsibility or trust (cf. Hillman and Adams, 1992; Hüttenmoser, 1995) among neighbors or even strangers. Finland and other Nordic countries score high in

International World Values Survey especially in interpersonal trust (Medrano, 2013). A lack of trust can become evident in the fear toward strangers. Stranger danger is shown to be among the key factors restricting CIM in many parts of the world (Behrens and Muchaka, 2011; D'Haese et al., 2013; Ding et al., 2012; Fyhri et al., 2011; Prezza et al., 2005; Rudner, 2012). In our study, danger from adults was among the least-often mentioned reasons that parents gave for picking up their child from school. Therefore, stranger danger does not seem to play a major role in Finland, which can be seen as an indicator of a high degree of trust.

Our finding, in which the independent mobility of Finnish children had clearly decreased between 1993–94 and 2011, replicates international trends. A marked reduction in children's active transport and independent mobility over the past decades has also been reported by Hillman and colleagues in England (Hillman et al., 1990; Hillman and Adams, 1992), by Grize et al. (2010) in Switzerland, Van der Ploeg et al. (2008) in Australia, McDonald (2007) in USA, and Buliung et al. (2009) in Canada.

The mobility licenses of small town and rural children narrowed significantly, whereas in the inner city context, this did not take place. The actual mobility, in terms of active and independent school travel, decreased substantially in all settlement types. The most noticeably drop in the independent school travel took place in the inner city context, whereas the activity of school travel had decreased even more dramatically in the rural village.

At least in the rural village context, one possible explanation for the severe decrease of mobility licenses and active school travelling can be related to the lengthened school journeys that result from the concentration of schools to larger units and the closing down of small village schools. Indeed, between 2003 and 2007, the proportion of Finnish children who attended small schools decreased by 27%, and the share of pupils attending large schools increased by 22% (Kumpulainen, 2008). Distance to school has been found to be the key barrier to active travel (Carver et al., 2012; Fyhri and Hjorthol, 2009). According to Mammen et al. (2012), children were more likely to walk to school unescorted if they lived not more than one kilometer away from the school.

Unfortunately, we cannot verify the lengthening of children's school journeys through our current data because of the lack of commensurable measures.[2] Because the schools in the rural village that were studied in the 1990s were closed and children from these villages were transported to nearby schools, it is very likely that the school journeys had lengthened in the rural villages that we studied. Since the end of the 1990s, parents of elementary school children have also been able to choose schools other than the local school closest to them (Varjo, 2011). Therefore, the noticeable drop in the proportion of pupils travelling to school actively and independently in the inner city context, which offers many school options, could also at least be partly explained based on this turn. Changes to school zonings and school closures reflect trends in other countries and have also been identified as a significant issue for CIM (Freeman and Quigg, 2009).

The above findings can be partly due to a more car dependent lifestyle, especially in countryside where the service network has probably become sparser. In our sample the number of households without a car was significantly higher in 1990s (16%) compared to that in 2010s (7%). The total increase of the number of passenger cars in Finland between 1994 and 2011 was 59%, from almost 2 to nearly 3 million private cars (Statistics Finland, 2015). So, our findings reflect only modestly this clear increase of car ownership. The traffic culture in Finland also supports the use of cars in other ways. Although the physical infrastructure in Finland promotes children's independent and active mobility by providing sidewalks and/or separate walking and bicycle lanes along most roads, motorized school transportation is also supported. The Finnish Basic Education Act guarantees free transportation to all pupils whose school journey is five kilometers or more, and some cities and towns offer free transportation even for shorter journeys.

Another potential factor contributing to the noticeable decrease of the mobility licenses of rural village children could be that in the rural village settlement, Kauhajoki, a serious school shooting occurred in 2008.[3] A student of a local vocational college shot and fatally injured 10 people before shooting himself. In our dataset, only 5% of rural village parents mentioned threat from adults as a reason for picking up their child from school, and this proportion was not larger than those in other settlements. Therefore, it does not seem very likely that the school shooting would explain much of the decrease of CIM.

Our data from the 2010s offered the possibility to compare various contexts more closely because the dataset included five settlements: inner city, suburban, large town, small town, and rural village. Children living in the large town and suburban settings enjoyed the highest degree of mobility licenses. In the large town setting, the highest proportion of actual independent, active school travel and weekend activities were also detected. Nevertheless, the proportion of independent travelling was also rather high in all other settlements, being lowest in the inner city, where 69% of children travelled independently in their school journeys and 79% did activities independently during the weekends. Rural children were the least active in their school travel, but even there quite a high proportion (47%) of children travelled actively to and from school. In rural setting, motorized travel was the most common mode of travel. Generally, travelling by private car was not very common even in the suburban setting, where it was most predominant as only 17% of children travelled to school by car.

Besides our current study, other related work by Broberg et al. (2013b) indicated that Finnish children living in semiurban environments were most independent and active in their mobility. Perhaps that is due to shorter school journeys; according to the Finnish National Travel Survey (2010–11), the school journeys are, on average, shortest in the middle-size cities, the size of the large town in our study. Generally, the evidence from other studies is not consistent about how levels of urbanization contribute to variation in CIM. Some studies have found urban areas supporting children's independent or active mobility (Babey et al., 2009; Martin et al., 2007; Robertson-Wilson et al., 2008; Tillberg Mattsson, 2002), whereas other studies show the opposite trend (Lopes et al., 2014). Also, the various measures of CIM (i.e., mobility licenses and actual mobility measures) sometimes produce inconsistent findings. For example, Drianda and Kinoshita (2011) reported a high degree of mobility licenses in urban settings, where actual mobility was low.

In our study from the 2010s, parental mobility licenses were often associated with actual independent and active travelling. In all settlements, in inner city, large town, and small town, they predicted independent and active school travel as well as independent weekend activities of primary schoolers. In contrast to this, parental mobility licenses were not associated with actual mobility among the primary schoolers in 1990s. Parental mobility licenses were clearly more influential for children's actual mobility now than 20 years ago. It can be an expression of changing parental values and attitudes about CIM and parental surveillance, conformity

[2] The length of school journeys was asked from parents in the original survey using this question: "How long [in minutes] would it take you to walk to the school?" In the later survey, this question was broken down to various travel modes (how long would it take by using car/taking public transport/walking). It was impossible to construct a comparable measure based on this information.

[3] In Finland, school shootings have occurred in two towns: Jokela in 2007 and a year later in Kauhajoki.

to cultural norms, and individual approaches to risk management (Rudner, 2012), as well as a response to changing environmental conditions. In secondary school, the associations between mobility licenses and actual mobility disappeared. This is understandable because as children become more independent decision makers, parental perceptions or permissions become less meaningful in their mobility choices. The findings above can, nevertheless, also be due to too small variation in the key variables. A ceiling effect (Cramer and Howitt, 2004) occurs, when scores are approaching the maximum they can be. In our case, the mobility license score in 2010s and the actual mobility measures in 1990s were approaching their maximums.

Combining pickup with other errands and concerns about traffic danger were the most important reasons for collecting children from school, although Finnish children were rarely picked up by parents. Johansson (2006) and Fyhri et al. (2011) have noticed the growing importance of trip chaining as a relevant factor behind the changing mobility patterns of families. While trip chaining may be viewed as a necessity in other contexts (Mitra, 2012; Freeman and Quigg, 2009; McMillan, 2005), this is not necessarily the current situation for Finland because school travel is dominated by active and public transportation; moreover, the majority of children have independent weekend activities. This may change in the future as society responds and adapts to recent policies of centralization of services and closure of local schools, and potentially increases its reliance on centralized shopping and recreation facilities (Freeman and Quigg, 2009). However, trip chaining may also be reflective of geographical location, socioeconomic status, and attitudes (McMillan, 2005). These possible changes in the lifestyles of families would deserve closer scrutiny.

We found only a few gender differences in the independent mobility of Finnish children. In the dataset from 2010s, small town primary school girls held fewer mobility licenses than boys their own age. Boys' higher degree of mobility licenses have been indicated in many earlier studies (Carver et al., 2012; Fyhri and Hjorthol, 2009; Johansson, 2006; O'Brien et al., 2000). In our study, these differences were small and had little influence on children's actual mobility. On the contrary, primary girls were more active in school travel than boys, which is in contrast to an earlier study by McDonald (2012). Not surprisingly, secondary school children enjoyed more mobility licenses and were more independent in their school travel and weekend activities.

The limitations of this study are related especially to the missing data about the distance to school and the low response rate in the 2010s dataset. Also the fact that all the studied settings were not quite identical in the two data collection phases was an unfortunate matter that potentially influenced the findings. The actual distance to school should have been asked from parents instead of asking how long time the journey would take using various travel modes. The low response rate applied to the dataset of 2010s. It was probably partly due to the data collection strategy where all surveys were delivered in schools but filled at homes and sent directly to researchers. In 1990s, when the response rate was higher, children filled the surveys in school and returned the parental surveys to teachers. The new strategy was used to save resources. Also the fact that in 2010s both primary and secondary schools were studied instead of only primary schools may have contributed to the lower response rate in the 2010s. Overall, the big differences in the response rates between the datasets from 1990s and 2010s can include a risk that non-responders would score even lower CIM than the participants of the survey. Then the perceived declined trend in children's independent mobility would in reality be even more clear.

The reliability of the kind of self-reported data collected here is never without problems, and in future studies, objective mobility data should also be collected. Again, it is not enough to follow only the changing mobility licenses as these at best only represent potential independent mobility. It is even more important to invest in the development of more advanced methods for the study of actual mobility. In addition to self-reported surveys, other methods, such as mobility diaries, GPS tracking, and public participation GIS tools (Kyttä et al., 2012), could provide a more place-based, more reliable, and richer understanding of the actual mobility patterns of children.

6. Conclusions

Safeguarding the independence of children has attracted little public debate in Finland (Aarnikko et al., 2002; Turpeinen et al., 2013). Instead, children's independence and free mobility have been criticized; they have been associated with a lack of parental care and children's loneliness; hence, more adult supervision for children's free time has been suggested (Pulkkinen and Launonen, 2005). This is disconcerting because decreasing levels of CIM and fewer children on the streets can increase or reinforce the need for surveillance (Rudner, 2012), and potentially levels of concern about children's safety similar to the UK, USA, and Australia.

Our view is that a high degree of CIM is an elementary part of Finnish childhood and child development. It is possible that when children are trusted enough to allow them independence in their mobility, it also helps them build competencies needed in other spheres of life. Stopping the decline of CIM and safeguarding the current level of independent mobility of Finnish children should be a common concern of a variety of stakeholders, including the social, health, school, cultural, youth work, recreation, real estate, and environmental sectors.

The most urgent concrete measure would be to provide children with the possibility to attend school close to home. A program for assessing urban, social, and health policy development should also be implemented at local, regional, and national levels to identify the potential positive and adverse impacts on CIM in different settlement types. Actions like school closures disproportionately affect rural children more than their urban counterparts, and the centralization of facilities such as shopping and recreation can lead to socioeconomic inequality across all settlement areas, which can be compounded by other factors such as changes to transport routes and frequency of services. Finland has an opportunity to slow down, stop, or even reverse the decline of CIM before it drops to the levels experienced by children in other nations.

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