Children’s Independent Mobility: An International Comparison and Recommendations for Action

Appendix I: Survey methodology and country details
Children’s Independent Mobility: An International Comparison and Recommendations for Action

Appendix I: Survey methodology and country details

This is an appendix to the report Children’s Independent Mobility: An International Comparison and Recommendations for Action, published by Policy Studies Institute in 2015 and available at: http://psi.org.uk/children_mobility

Policy Studies Institute
Faculty of Architecture and the Built Environment
University of Westminster,
35 Marylebone Road,
London, NW1 5LS.

Telephone +44 (0)20 7911 7503
Email: psi-admin@psi.org.uk
Twitter: @PSI_London
Web: www.psi.org.uk
Contents

Introduction .............................................................................................................................................. 3
Overall Methodology ............................................................................................................................. 4
England .................................................................................................................................................. 10
Australia ................................................................................................................................................ 13
Brazil ..................................................................................................................................................... 15
Denmark ............................................................................................................................................... 17
Finland .................................................................................................................................................. 18
France ................................................................................................................................................... 19
Germany .............................................................................................................................................. 22
Ireland .................................................................................................................................................. 24
Israel ...................................................................................................................................................... 26
Italy ....................................................................................................................................................... 28
Japan ..................................................................................................................................................... 30
Norway ................................................................................................................................................. 32
Portugal ................................................................................................................................................. 34
South Africa ......................................................................................................................................... 36
Sri Lanka ............................................................................................................................................... 38
Sweden ............................................................................................................................................... 40
**Introduction**

The appendix complements the summary information on methodology given in the main report. Further details of the overall methodology are given with sections for each of the countries summarising the key points about where our data comes from and how it was collected in each of the different countries. This information comes from the individual country reports which can be found on the Children’s Independent Mobility website ([http://psi.org.uk/children_mobility](http://psi.org.uk/children_mobility)). Please refer to the individual country reports for more detail.

Following a section on the overall methodology the first country summary focuses on England, followed by the remaining countries in alphabetical order. Where possible, any sample-specific limitations and variations from the English methodology are highlighted.
Overall Methodology

Between early 2010 and mid-2012, 18,303 children and a subset of their parents from across 16 different countries were surveyed in order to explore their degree of freedom to travel and play without adult supervision.

Schools were selected from a cross-section of settlement types in each of the 16 different countries, namely from each of five areas having a range of population density, geography and socio-economic characteristics: inner city; suburban (city); suburban (large town); small town; and rural village. The target child age group was between 7 and 15 years.

The questionnaires used for children and adults in 2010 were very similar to those designed for the first surveys conducted in England in 1971 and in England and West Germany in 1990. The questionnaires were designed to collect information from parents and children on children’s travel patterns and accompaniment on journeys to school and other activities, seeking to explore the extent to which children are free to travel around their local environment without adult supervision. Further questions explored child and parent attitudes and fears, mobile phone and car ownership, socio-demographics, and other potential factors.

The questionnaires were first designed in English, piloted in a primary and secondary school in England, and subsequently shortened to make it easier to administer in one school session. Partner researchers in the other 15 countries were sent the questionnaires and detailed methodological instructions. Questionnaires were translated into the appropriate local language, making any adjustments deemed necessary for the content to be both understandable and appropriate for the local context. Attempts were made to observe the following methodological procedures:

- Where possible, secondary schools were selected that used the surveyed primary school as one of their ‘feeder’ schools – meaning that some of the
children who attended the surveyed primary school were likely to go on to attend the surveyed secondary school.

- Head teachers were asked to nominate classes that were likely to be broadly typical of their year group to take part in the study. One class from each year group in each school was surveyed. The sample of school children was therefore reliant on the cooperation of teachers within the school.

- To try and minimise the effect of changing daylight hours and seasonal weather variations, the surveys took place on days when the weather was unexceptional (e.g. no snow, ice or other abnormal conditions). The survey was also conducted early in the week to make it easier for the children to remember the journeys they had made on the preceding weekend.

- In line with accepted ethical guidelines on involving children in research studies, consent was sought from the ‘responsible adult’ in each school (the head teacher or principal) to survey the children. Each child was also given the option to opt-out of any or all questions.

- The survey was conducted in the classroom as part of the normal school day, and the teacher remained in class throughout the survey to help the children answer questions.

- After the child questionnaires were handed in, each child was given an envelope to take home containing a second, similar self-completion paper questionnaire, an information sheet on the study, and a postage-paid return envelope for their parent/guardian to complete and return to the school.

An overview of any variations in methodologies and sample characteristics is given below in sections for each of the 16 countries included in this study.
Total respondent numbers for each of the 16 different countries are detailed in Table 1.

<table>
<thead>
<tr>
<th>Country</th>
<th>Valid child respondents</th>
<th>Valid adult respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>672</td>
<td>875</td>
</tr>
<tr>
<td>Brazil</td>
<td>941</td>
<td>636</td>
</tr>
<tr>
<td>Denmark</td>
<td>1096</td>
<td>621</td>
</tr>
<tr>
<td>England</td>
<td>1029</td>
<td>551</td>
</tr>
<tr>
<td>Finland</td>
<td>821</td>
<td>821</td>
</tr>
<tr>
<td>France</td>
<td>936</td>
<td>666</td>
</tr>
<tr>
<td>Germany</td>
<td>801</td>
<td>579</td>
</tr>
<tr>
<td>Ireland</td>
<td>2203</td>
<td>1688</td>
</tr>
<tr>
<td>Israel</td>
<td>1751</td>
<td>980</td>
</tr>
<tr>
<td>Italy</td>
<td>805</td>
<td>790</td>
</tr>
<tr>
<td>Japan</td>
<td>431</td>
<td>431</td>
</tr>
<tr>
<td>Norway</td>
<td>3273</td>
<td>1227</td>
</tr>
<tr>
<td>Portugal</td>
<td>1099</td>
<td>1099</td>
</tr>
<tr>
<td>South Africa</td>
<td>933</td>
<td>534</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>721</td>
<td>148</td>
</tr>
<tr>
<td>Sweden</td>
<td>791</td>
<td>482</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18303</strong></td>
<td><strong>12128</strong></td>
</tr>
</tbody>
</table>

Table 1: Number of valid survey respondents by country

In addition to the questionnaire responses, secondary data sources have been used in this study to explore correlations between the primary data and national statistics such as PISA educational rankings and road safety and casualty data.
**Workshop**

A workshop was held in London on 16th September 2013 to present findings from the surveys of children’s independent mobility conducted in the 16 different countries included in Table 1. The workshop also helped to identify and explore the main factors that account for the variations observed in levels of independent mobility in different countries, as well as facilitate discussion about the range of policy responses that can be made and challenges that need to be overcome to enable children to have greater levels of independent mobility. Further details about the workshop are available in the accompanying reference document *Appendix II. Workshop Report*.

**Caveats**

Certain limitations in the survey design and implementation mean some caveats must be placed on the conclusions that may be drawn from this study. The findings arising from this study must each be considered in light of these limitations and their potential impact on the validity and reliability of results. Limitations include:

- The samples used in this research are limited in scope – they are non-random and not nationally representative. The areas were chosen to provide a cross-sectional snapshot of the countries.

- The survey captured a single day in each child’s life to construct a ‘snapshot’ of children’s independent mobility. Each child was only surveyed once, and they were not tracked over time to see if their journeys varied from day to day. Weather and seasonal changes could easily influence the mode of journey. By asking children about their travel modes to and from school on the day of the survey, and about their activities on the previous weekend only, rather than about their travel modes and activities in a typical week, the data may not capture habitual travel modes and activities and therefore not give an accurate representation of independent mobility.
• The samples of children and parents were selected through a multi-stage process of type of area, school and class and not randomised. This replicated the methods used in the earlier studies, but may risk cluster effects.

• Only a limited amount of socio-economic data was collected in the survey. For example, questions about the respondent family's household income, education and social status were generally kept to a minimum to try to make the questionnaire less intrusive, and thus increase the response rate from parents. However, this limits both the depth of analysis that can be carried out as well as our ability to evaluate the characteristics of the sample.

• The methodology relies on honest and accurate answers from both children and parents. For example, parents' responses on attitudes, permissiveness on granting licences, etc., may be coloured by the desire to be seen to be acting responsibly when replying to certain questions. Similarly, children might report an exaggerated degree of freedom or the use of ‘luxury’ modes of transport that reflect their desires or that of a more desired social status. To control one party making a false statement, the same questions were asked of both children and parents for some of the questionnaire. The comparability of these questions was sometimes limited.

• While the questionnaires have collected data on the levels of children’s independent mobility at different ages and indifferent locations, reasonable limitations on the survey length mean that less data was gathered on factors that may explain these differences.

• Self-selection and low response rates: Response rates, while high in previous studies, were in some cases disappointing low amongst parents of secondary school children (11-15 year olds), with, for example, only 62 per cent of German secondary school parents and 36 per cent of English secondary school parents returning their questionnaires, for example. While this is relatively high for a survey of this kind, it has implications for the robustness of the data.
• Another limitation was that only one parent in each family responded to the questionnaire, and this was usually the mother of the child. It is unclear what impact this has had on the answers given.

• In two countries, Norway and Brazil, child responses were not linked to those of their corresponding parent or guardian. This poses problems for any analysis that relies on combining the child and adult responses.¹

• Differences between local characteristics: a teacher at one of the schools in Fougères, France said the path from school to some residential areas was unsafe, while Japanese researchers reported that in one of their areas sampled, the local government had handed out devices equipped with a personal safety alarm and GPS technology and which may have boosted levels of independent mobility in the area. On the other hand, Australia, Portugal, Finland, Italy and Sri Lanka all reported that the areas sampled had no known unusual characteristics that were likely to impact on the reported level of independent mobility.

Although by no means representative of schoolchildren across the 16 countries involved, and keeping in mind the varying impacts of the limitations discussed above, the results in this report provide some indication of independent mobility for children attached to specific schools in these countries. Given the lack of available data on these issues this dataset forms an important baseline on children’s independent mobility to build further work on.

¹ For example: a comparison of parents’ fears and attitudes against child-reported variables such as age, mode of travel to school, and participation in weekend activities.
**England**

**Sample characteristics**
Surveys were conducted in schools in five locations in England intended to give a ‘cross-section’ of settlement types in the country, with the five areas having a range of population density, geography and socio-economic characteristics.

<table>
<thead>
<tr>
<th>Area type</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner City</td>
<td>Islington, London</td>
</tr>
<tr>
<td>Suburban</td>
<td>Stevenage</td>
</tr>
<tr>
<td>Edge of large town</td>
<td>Nottingham</td>
</tr>
<tr>
<td>Free-standing market town</td>
<td>Winchester</td>
</tr>
<tr>
<td>Rural village</td>
<td>Hook Norton and Chipping Norton, Oxfordshire</td>
</tr>
</tbody>
</table>

**Sampling and recruitment**
The survey revisited schools surveyed as part of previous research in 1971 and 1990. Nearly all of the original schools (7 out of 10) participated. Where the original schools were unable to participate, nearby schools with similar characteristics were selected as replacements. Only state primary and secondary schools were surveyed. Where possible, secondary schools were selected that used the surveyed primary school as one of their ‘feeder’ schools – meaning that some of the children who attended the surveyed primary school were likely to go on to attend the surveyed secondary school.

Children from school years 3-10 were surveyed. Since the target age group was 7 to 15 years, any children not within these age groups (aged less than 7 or more than 15 years old) were excluded from the survey.

The questionnaire was first piloted in a primary and secondary school, and was subsequently shortened to make it easier to administer in one school session.

Head teachers were asked to nominate classes that were likely to be broadly typical of their year group to take part in the study. One class from each year group in each
school was surveyed. The sample of school children was therefore reliant on the cooperation of teachers within the school.

The survey was conducted during February and March 2010. To try and minimise the effect of changing daylight hours and seasonal weather variations, the surveys in both England and Germany took place on days when the weather was unexceptional (e.g. no snow, ice or other abnormal conditions). The survey was also conducted early in the week to make it easier for the children to remember the journeys they had made on the preceding weekend.

**Sample size and parental response rates**
The achieved 2010 samples for England are presented in Table 2 with data for the previous surveys to allow comparison.

<table>
<thead>
<tr>
<th>Survey location and year</th>
<th>All children</th>
<th>All parents</th>
<th>Primary children 7-11 years old</th>
<th>Primary parents</th>
<th>Percentage of primary parents that responded</th>
<th>Secondary children, 11-15 years old</th>
<th>Secondary parents</th>
<th>Percentage of secondary parents that responded</th>
</tr>
</thead>
<tbody>
<tr>
<td>England 1971</td>
<td>629</td>
<td>1387</td>
<td>629</td>
<td>Not applicable 2</td>
<td>-</td>
<td>Not surveyed</td>
<td>Not surveyed</td>
<td>-</td>
</tr>
<tr>
<td>England 1990</td>
<td>1011</td>
<td>887</td>
<td>541</td>
<td>507</td>
<td>94%</td>
<td>470</td>
<td>374</td>
<td>80%</td>
</tr>
<tr>
<td>England 2010</td>
<td>987</td>
<td>535</td>
<td>481</td>
<td>353</td>
<td>73%</td>
<td>546</td>
<td>196</td>
<td>36%</td>
</tr>
</tbody>
</table>

Table 2: Response rate among parents and children in England 1971-2010.

In line with accepted ethical guidelines on involving children in research studies, consent was sought from the ‘responsible adult’ in each school (the head teacher or principal) to survey the children. A letter drafted by the researchers was then sent home to each child’s family at least two weeks in advance of the study by the head

---

Note that in the 1971 survey, the parents of the children were not surveyed; instead, randomly selected adults were surveyed by post, separately from the children who were surveyed in school as part of the normal school day.
teacher, on school headed paper, outlining the nature and objectives of the study and providing an option to opt their child out of the study without any consequence for their child, with a prepaid envelope addressed to the school included.

These opt-out forms were collected on the day of the survey, and used by the researcher to ensure that only children with parental consent were surveyed. The children who had opted out were unobtrusively given an appropriate alternative activity to complete by their teacher. In each class, the researcher explained the research to the children using a pre-prepared script pitched to the appropriate level. Each child was given the option to opt-out of any or all questions. No children in England refused to participate in the study on the day. Among the younger children (aged 7 to 9 years old) the survey was read aloud. The survey was conducted in the classroom as part of the normal school day, and the teacher remained in class throughout the survey to help the children answer questions.

After the child questionnaires were handed in, each child was given an envelope to take home containing a second, similar self-completion paper questionnaire, an information sheet on the study, and a postage-paid return envelope for their parent/guardian to complete and return to the school. Also included with the parent questionnaire was a second letter giving parents another opportunity to retrospectively withdraw their child from the survey.
## Australia

### Sample characteristics

Overall 4810 parents surveys were distributed and 891 of these were completed (i.e. the response rate was 18.5%). A total of 688 children participated in the study.

The types of schools and numbers of primary and secondary schoolchildren who participated in each settlement type surveyed are reported in the Table 3 below.

<table>
<thead>
<tr>
<th>Details</th>
<th>Inner city</th>
<th>Urban</th>
<th>Suburban</th>
<th>Small town</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>of</td>
<td>within 5km</td>
<td>non-inner-city area of Melbourne's Central Business District</td>
<td>outer area of Metropolitan Melbourne, population density &gt; 2000 people/km²</td>
<td>non-Metropolitan Melbourne, rural, population of town &lt; 6000 people</td>
<td>rural, population of town &gt; 6000 people</td>
</tr>
<tr>
<td></td>
<td>of</td>
<td>non-inner-city area of Metropolitan Melbourne, population density &lt; 2000 people/km²</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Primary</th>
<th>2 schools:</th>
<th>2 schools: 128 children</th>
<th>1 school: 30 children</th>
<th>1 school: 51 children</th>
<th>3 schools: 71 children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prep-Year</td>
<td>1 school</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Details of Australian Survey and Sample

### Sampling and recruitment

When a randomly selected secondary school was identified for a particular settlement type, the Principal was provided with details of the study and an invitation for the school to participate. If this invitation was declined, then the Principal of the next randomly selected secondary school that met the selection criteria for that settlement type was contacted. If the invitation was accepted the Principal of the primary school located the closest distance to the secondary school was asked to participate. In areas where school enrolments were low, several primary schools were approached to boost potential participation rates. Secondary schools in two
separate rural areas were recruited as teachers at the first school recruited anticipated low participation rates.

Once the Principal had agreed for their school to participate, a notice was sent home to parents/guardians of all students who were in Years 3-6 or in Years 7-10 in 2010. The parents/guardians and children were provided with appropriate information in a plain language statement and two consent forms. One form was for parents to provide consent for their own participation, and the other form was for parental consent for their child's participation in the survey (in Australia, active informed consent is required for children's participation). Completed parent surveys and consent forms were returned to Deakin University by mail (using a pre-paid envelope). Participating parents were invited to enter a prize draw for four $100 vouchers for a major department store.

Each parent-child pair was assigned a unique identifier code (ID). Three weeks after parent surveys were distributed, each school was contacted to arrange a time to conduct the student surveys in the classroom. Each school was provided with a list of students for whom parental consent had been obtained. Since only the Project Manager was available to conduct the school visits the surveys were conducted over several weeks in October and November (Spring-time). One secondary school (urban) requested that the student surveys be mailed to school so that teachers would conduct the surveys when convenient. An instruction sheet was provided to guide participating teachers. On completion of their survey, children were given a small sports ball, as compensation for their time. Each participating school received a $100 book voucher for the school library.
Brazii

Sample characteristics
A total of 1629 questionnaires were collected, 993 of which were completed by pupils, and 636 by their parents.

<table>
<thead>
<tr>
<th>Region</th>
<th>Area</th>
<th>Survey date</th>
<th>Students</th>
<th>Parents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Years 2-5</td>
<td>Years 6-9</td>
</tr>
<tr>
<td>Southwest</td>
<td>Muriqui District</td>
<td>5 - 6 April</td>
<td>82</td>
<td>88</td>
</tr>
<tr>
<td></td>
<td>– Rio de Janeiro (RJ)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>Paraná (PR)</td>
<td>19 - 20 April</td>
<td>88</td>
<td>135</td>
</tr>
<tr>
<td>Northeast</td>
<td>Maranhão (MA)</td>
<td>17 - 18 May</td>
<td>102</td>
<td>106</td>
</tr>
<tr>
<td>North</td>
<td>Pará (PA)</td>
<td>31 May - 1 June</td>
<td>75</td>
<td>107</td>
</tr>
<tr>
<td>Central -</td>
<td>Distrito Federal</td>
<td>6 - 7 July</td>
<td>77</td>
<td>133</td>
</tr>
<tr>
<td>East</td>
<td>(DF)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>993</td>
<td>636</td>
</tr>
</tbody>
</table>

Sampling and recruitment
The choice of towns was made according to convenience and not by technical selection. The research was carried out in one town from each region of Brazil. The University of Brasilia carried out a national review and, as a result of their representativeness, a number of towns from different regions of Brazil were considered to help achieve the project’s objectives. Following this, several towns were selected to take part in the independent mobility study.

In all of the towns the research was carried out over the course of two days. Each day it began at the start of morning classes, and concluded at the end of afternoon
classes. The respective head teachers of each school nominated the classes that would take part in the questionnaire.

In each school the questionnaires were handed out to classes from 2nd to 9th Year, with each class containing 30 pupils on average. The participants in this research are: (i) school pupils between the ages of 7 and 15; (ii) the parents of the respective pupils. As the parents’ questionnaires are to be taken home by the children and collected at school the following day, it was expected that fewer of these will be returned in comparison to the number of completed pupils’ questionnaires. In this research the sampling method used was judgemental and purposive non-probability sampling.

With the cooperation of the heads of the schools and the teachers of each participating class, it was possible to obtain a 100% completion rate from students. The completion rate for parents of 2nd to 5th Year was 68.4%, and 60.1% for 6th to 9th year.
Denmark

Details of the method for the Danish surveys are not available in English, The full country report (in Danish) is available at: http://psi.org.uk/children_mobility.
Finland

About 2,500 questionnaires were delivered to pupils in primary and secondary schools in 5 research areas. The questionnaire consisted of two parts: parent’s and child’s surveys. Both surveys were send home from school via children. According to our instruction, children and parents filled their own surveys independently. After filling both parts, the parents sent us filled questionnaires by mail in prepaid envelopes.

821 questionnaires were returned, a response rate of 33%. In practically all cases child's and parent's responses were both received.

Limitations and variations from English methodology

The Finnish data was collected during May 2011. A somewhat different data collection strategy than other countries in the CIM study was performed. As funding was received very late (beginning of 2011), the researchers had to get research permits from cities (which took several months) and had to wait for the snow to melt. For all these reasons we had only one month in the spring of 2011, (May) for the data collection. A more efficient data collection strategy to deal with these factors was therefore created.

Division to primary and secondary school was defined in the collected data according to the English system (approximately) in order to make the international comparison possible. In the English school system pupils begin secondary school usually in the age of eleven; Finnish children begin secondary school not until the age of thirteen. The primary and secondary school subgroups in the Finnish data were approximately the same in amount: 414 primary school and 407 secondary school respondents.

Finnish survey data was not statistically representative in strict sense, because it was not based on any random sampling. However, it can be considered quite well representative in broader sense, because it includes cross-section of Finnish neighbourhoods.
France

Sample characteristics
A total of 947 children participated in the French survey. A total of 672 parental questionnaires were returned, that is 71%. However, the percentage of returned parental questionnaires is markedly higher in primary school (84.3%) than in secondary school (57%).

The following settlement types were included in the study:

<table>
<thead>
<tr>
<th>Areas</th>
<th>Questionnaires</th>
<th>Children</th>
<th>Parents</th>
<th>% returned</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inner city Major town</td>
<td>Total</td>
<td>193</td>
<td>108</td>
<td>56.0%</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>85</td>
<td>53</td>
<td>62.4%</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>108</td>
<td>55</td>
<td>50.9%</td>
</tr>
<tr>
<td>Suburban new-town</td>
<td>Total</td>
<td>222</td>
<td>183</td>
<td>82.4%</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>126</td>
<td>116</td>
<td>92.1%</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>96</td>
<td>67</td>
<td>69.8%</td>
</tr>
<tr>
<td>Small town</td>
<td>Total</td>
<td>191</td>
<td>144</td>
<td>75.4%</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>98</td>
<td>77</td>
<td>78.6%</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>93</td>
<td>67</td>
<td>72.0%</td>
</tr>
<tr>
<td>Rural market town</td>
<td>Total</td>
<td>201</td>
<td>146</td>
<td>72.6%</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>106</td>
<td>96</td>
<td>90.6%</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>95</td>
<td>50</td>
<td>52.6%</td>
</tr>
<tr>
<td>Rural village</td>
<td>Total</td>
<td>140</td>
<td>84</td>
<td>60.0%</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>69</td>
<td>59</td>
<td>85.5%</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>71</td>
<td>25</td>
<td>35.2%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Total</td>
<td>947</td>
<td>672</td>
<td>71.0%</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>484</td>
<td>408</td>
<td>84.3%</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>463</td>
<td>264</td>
<td>57.0%</td>
</tr>
</tbody>
</table>

All the primary schools (n=8) involved in the survey were state funded schools. In all the five areas a state-funded secondary school participated in the survey; in one of the areas- rural market town- two secondary schools participating in the study: one state funded school (6th and 8th grades) and one private school (7th and 9th grades).
The primary schools were all ‘feeder’ schools for the secondary schools that were surveyed.

**Sampling and recruitment**

The French research team asked permission for the research from the relevant local authority (*Education Nationale, Inspection d’Academie d’Ille-et-Vilaine*), then liaised with the head-teacher to explain the research objectives and procedure. None of the primary schools refused to participate in the study. The head-teachers asked the teachers of the different year groups whether they were willing to participate. On two occasions, it was not possible to have a complete sample of all the year groups in the same school; thus the researchers contacted the nearest primary school in the same area. Once the teachers had agreed, information about the survey was sent to the pupils’ parents for their consent, giving them the opportunity to opt out.

A similar procedure was used in secondary schools; the only difference was that the researchers did not have to ask the teachers for agreements because the survey was not conducted during teaching periods but during free periods on schooldays. From all the parents asked very few of them opted out (n=5). The children were also given the opportunity to opt out; which some of them used because they preferred to do their school work (n=6). On the whole, less than 1% of the children or parents refused to participate in the survey.

**Limitations and variations from English methodology**

Some adjustments to the questionnaire were made including additional questions and rephrasing to take into account French circumstances.

For example, questions about being allowed out ‘after dark’ were not translated literally in the French questionnaire; in particular, researchers felt that the direct translation of after dark into “après le noir” or “après le sombre” was not commonly used in French. Therefore, the alternative translation was used: Ordinairement, votre enfant a-t-il la permission de sortir seul après la tombée de la nuit? (Does your child usually have permission to go out alone after nightfall?)
Correspondingly, the phrase in the children’s questionnaire was translated as: Passer du temps avec des amis dehors quand il fait nuit (to spend time outside with friends at night).

The researchers observed that many parents fixated on the word “nuit” (night), overlooking the intended “tombée de la nuit” (nightfall) and interpreting it instead as: “in the night” or “during the night”. Some of the parents commented that they were struck by the question, commenting that from their point of view it was totally irresponsible to let a seven or eight old child to go out alone at night, that is, in France at the time, after 8:30 p.m. See annex 2 of the French report for further explanation and comparison of children’s and parents’ responses to the question.
Germany

Sample characteristics
The following settlement types were included in the study:

- Inner city
- Suburban
- Edge of large town
- Free standing market town
- Rural village

A total 801 child responses and 579 adult responses were received. The breakdown of responses by primary and secondary school is given in the Table 4 below.

<table>
<thead>
<tr>
<th></th>
<th>Children</th>
<th>Adults</th>
<th>% of parents that responded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary (age 7-11)</td>
<td>317</td>
<td>281</td>
<td>89%</td>
</tr>
<tr>
<td>Secondary (age 11-15)</td>
<td>484</td>
<td>298</td>
<td>62%</td>
</tr>
<tr>
<td>Total</td>
<td>801</td>
<td>579</td>
<td>72%</td>
</tr>
</tbody>
</table>

Table 4: German surveys responses

Sampling and recruitment
The schools surveyed in a previous study in 1971 and 1990 were revisited with nearly all of the original schools (7 of 10 schools) participating. Where the original schools were unable to participate, nearby schools with similar characteristics were selected as replacements.

Where possible, secondary schools were selected that used the surveyed primary school as one of their ‘feeder’ schools – meaning that some of the children who attended the surveyed primary school were likely to go on to attend the surveyed secondary school. Head Teachers were asked to nominate classes that were likely to be broadly typical of their year group to take part in the study. One class from each year group in each school was surveyed. The sample of school children was therefore reliant on the cooperation of teachers within the school. After the questionnaires were handed in, each child was given an envelope to take home.
containing an information sheet on the study, a postage-paid return envelope, and a questionnaire for completion by a parent/guardian.

In Germany school years 2-9, the target age group was 7 to 15 years. Any children not within these year groups, aged less than 7, or more than 15 years old were excluded from the survey.

**Limitations and variations from English methodology**

German school year-groups do not correspond to the British system, as German children are 1 to 2 years older in any given school year-group than their English counterparts. Thus the subject numbers had to be adjusted accordingly. Initial data sampling showed that the children's school year-group in particular affected their behaviour more strongly than their age. The Year 1 children from the 1990 survey and the Year 9 children from the 2010 survey were therefore removed from the respective data sets. Thus the comparison only includes the data of children who were in Years 2 through to 8 and aged between 7 and 15 in 1990 and/or 2010 (with the exception of one Grundschule which taught Years 2 and 3 simultaneously in two streams).

The areas chosen provide a cross-sectional snapshot of the country, not a nationally representative sample.

Some additional questions (on cycling, road safety, use of seat belts and cycle helmets) were inserted into the German questionnaire, and some questions about the parents' employment status were excluded due to a perceived general higher level of concern about privacy in Germany. In addition, a small number of questions were modified to suit national circumstances.
Ireland

Sample characteristics
A total of twenty-five schools – fifteen primary and ten post-primary - from across the island of Ireland were invited to participate in this study. All responded positively.

Over twelve hundred (N=1,283) primary school pupils between the ages of 7 and 12 approximately participated in the study. Slightly under half (46%) of primary school respondents were female and approximately were 54% male. Over one thousand (N=1,081) parents of primary pupils completed the questionnaire.

Just under a thousand (N=945) post primary school pupils participated in the study comprising 51.4% female and 48.6% male respondents. Approximately two-thirds of parents (N=614) of post primary students participated.

In geographical terms, the participating schools included those in city and suburban locations in the island of Ireland’s two largest urban centres of Dublin and Belfast. One school in each of the provincial major urban centres of Cork, Limerick and Galway also participated. The medium to large towns which provided participating schools included Navan, Co. Meath and Tralee, Co. Kerry, while smaller towns were also identified (but cannot be identified to ensure the anonymity of the schools and its pupils). Similarly, the sample also included schools in villages and more remote areas but cannot be named in this document.

Sampling and recruitment
The sample of participating schools was selected to provide a cross section of participants from a range of geographical and socio-economic contexts.

The breath of the sample allowed for the recruitment of participants from a range of socio-economic contexts. Thus, the impact of such variables on child mobility can be identified. Among the factors at play here are car ownership and housing.

\[\text{\footnotesize \textsuperscript{3} In Ireland, children progress from primary to second level school at aged 12 or 13.}\]
The surveys were administered in the final term of the school year 2010 – 2011 (between March and June 2011). All children’s and youth surveys were distributed in school and completed in the classroom or in an assembly area under the joint guidance of the researchers and school staff. A total of 2,228 children and young people in 25 schools completed the survey. Upon receiving his / her survey questionnaire, each young person was also provided with an envelope containing the confidential survey for his / her parent or guardian. These were completed at home and returned to the school – usually the following day. A total of 1,695 adults completed survey questionnaires. Thus 76% of parents / guardians whose children had participated in the study also did too, making this one of the largest samples in a survey of this type on the island of Ireland. All survey questionnaires have been treated with complete confidence and are anonymous. Each survey was assigned a unique code so as to enable each adult’s survey to be linked to that of his / her child.

Limitations and variations from English methodology
A number of modifications were made to the PSI questionnaires in order to adapt them for the Irish context. Among the amendments made was the use of Irish terms for public transport providers. The revised survey also provided respondents with an expanded range of options in stating where they go to after school and at weekends. In addition it re-defined the categories that respondents could use to describe the place in which they live, so as to provide for Ireland’s relatively dispersed settlement pattern.
Israel

Sample characteristics
This study is based on a questionnaire given to children between 9-15 years old studying in 4th to 9th grades.

Overall 922 parents surveys were distributed and 607 of these were completed (i.e. the response rate was 65.8%). A total of 892 children participated in the study. The numbers of primary and secondary school children who participated in each settlement type are reported in the table below.

<table>
<thead>
<tr>
<th>Settlement Type</th>
<th>Primary</th>
<th>Secondary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>North (town)</td>
<td>3 schools: 183 children</td>
<td>2 schools: 179 children</td>
<td>362 children</td>
</tr>
<tr>
<td>North (city)</td>
<td>1 school: 79 children</td>
<td>0⁴</td>
<td>79 children</td>
</tr>
<tr>
<td>Centre (city)</td>
<td>1 school: 94 children</td>
<td>1 school: 30 children₅</td>
<td>124 children</td>
</tr>
<tr>
<td>South (town)</td>
<td>1 school: 72 children</td>
<td>1 school: 97 children</td>
<td>169 children</td>
</tr>
<tr>
<td>South (city)</td>
<td>1 school: 75 children</td>
<td>1 school: 83 children</td>
<td>158 children</td>
</tr>
</tbody>
</table>

Table 5: Israel survey and sample details

Sampling and recruitment
These areas are intended to provide a ‘cross-section’ of Israeli society. Therefore, the schools were chosen so that the sample includes children from the northern part of Israel down to the southern part. It includes schools in various cities with different settlement size and different ethnicities and religions. In each school a random class was chosen.

The survey was conducted between February and March of 2011 at 3 geographically distinct areas for each part of the Israeli population – Jewish and Arab.

⁴ In the Israeli Arab population, there is little difference between the ‘city’ and the ‘small-to-medium-sized town’. Most of the population live in towns in the northern district. So, in this study it is assumed that the towns satisfactorily represent the Israeli Arab populations in cities too.

⁵ An additional 30 questionnaires were sent by mail and got lost.
Limitations and variations from English methodology

The questionnaire was adjusted to the Israel environment and culture and translated to both Hebrew and Arabic. However, an effort was made to keep the questionnaire as consistent as possible with the original UK one so the data can be compared with historical and recent data from the UK and Germany.

Children included in the study were age 9-15 rather than 7-15 as was the case in England and many of the other international cases.
Italy

Sample characteristics
Five areas to be involved in the research were selected based on guidance received from the PSI research group in February 2010. These areas were: The settlement types included were:

- City centre
- Urban
- Suburban
- Small town
- Rural

A total of 1124 questionnaires were distributed (562 to pupils and 562 to the respective parents) in primary schools and 750 in secondary schools (375 + 375). The return rates were 99.4% (primary students), 94.8% (primary parents), 100% (secondary students) and 90.1% (secondary parents) respectively. However, the analysis considered only those cases when both the student’s and respective parent’s questionnaire were returned: 468 in primary schools and 339 in secondary schools, amounting to 85.2% of the total distributed.

Sampling and recruitment
The questionnaires were conducted between the first week of February and the first of March 2010 with calm or not very cloudy weather conditions and temperatures in the norm for that period of the year (between 10° - 18° C depending on the areas).

Limitations and variations from English methodology
The 5 inhabited centres were chosen to ensure that they were representative as far as possible.

Although the questionnaire used for the Italian research maintains the same format as the English one, it does feature subtle differences. These concern the inclusion, for some items, of a number of alternative responses, designed to reflect specific aspects of the Italian context: the use of a scooter to take their children to school is very frequent amongst Italian parents, just as the involvement of grandparents in the life of their grandchildren and hence in taking them to and from school, particularly in
the afternoon. In addition, the use of mini cars as a means of transport is very frequent, particularly for Rome children.

In addition, it was not possible to involve 15-year-old pupils, first of all because in Italy junior secondary school lasts for 3 years and is frequented by 11-14 year-olds. The involvement of young people in the 1st year of senior secondary school would also have involved two huge problems: the first is that these schools are not found in the smaller inhabited centres and the second is that they have different disciplines, and so are not chosen solely on the basis of proximity to pupils' homes, but are based on pupils' personal and vocational interests. If 15-year old pupils had also been involved we would have had a sub-sample, very mixed by area of residence and so difficult to compare with the rest.
Japan

Sample characteristics
Of the areas selected for the case study, three prefectures were also chosen: Tokyo to represent the capital city environment; Chiba to represent the suburban city environment; and Shizuoka to represent the small town and rural area environment.

Sampling and recruitment
Schools that had a strong connection to the research team and where the possibility of conducting surveys in those schools were listed, along with the three prefectures mentioned above.

At first, contact with the head principals of the targeted schools was made. Fortunately, all of them agreed to participate in the project. After that, the schools were visited to explain the research and survey plan. Based on negotiations, there were several conditions that needed to be obeyed. First, as the questionnaires were translated from English version, they wanted to check the questions and language used in the questionnaires. Second, the researchers were asked to provide a research information letter so children and parents could decide whether to or not to involve in the research.

The questionnaires were distributed after receiving the approval from the schools regarding the content and language used in the final questionnaires. In the first stage, around 800 questionnaires were distributed to children age 7 to 15 years, and their parents. There were 530 valid questionnaires retrieved from all schools. A quantitative analysis was carried out to understand the responses of parents and children regarding children’s licenses to independent mobility. As there were several interesting issues revealed from parent and children’s answers, each region was visited to conduct interviews with head principals, teachers, and some PTA members to obtain further information. To understand the locality, field observation was carried out as well as interviews with the local people and local government staffs.
Limitations and variations from English methodology

Some questions from the questionnaire were eliminated by schools due to their inappropriateness to Japanese culture, such as questions relating to the child’s health condition.
**Norway**

*Sample characteristics*

The sample schools were chosen from five geographical categories: the inner city, suburban, large city, small town and district. In total, 19 schools participated from across the areas of Oslo, Akershus, and Buskerud.

A total of 3298 children participated in the survey. Since there were nine year groups in the selection, that should mean, in principle, approximately 11% of the pupils for each age level. However, an examination of the entire sample shows that there is a predominance of lower secondary school pupils (35% versus the expected 33%), even though the pupils in year group 10 were underrepresented. An examination of the individual counties shows the bias to be somewhat greater.

*Sampling and recruitment*

In line with the guidelines for the international study, the survey was conducted over a two-day period (Monday, 8 November to Tuesday, 9 November 2010).

Arrangements were previously made with three counties (Akershus, Buskerud and Oslo) that the study should be conducted in selected schools in their area. In line with the guidelines given by the international study, schools were selected to cover different types of geographic areas, in addition to covering all year groups 2–10. (After a pilot study, it was determined that conducting the survey in year group 1, where the pupils have not yet learned to read, would be too demanding and give unreliable results).

The schools had been previously contacted according to the criteria set out in the international study. Schools were also selected, to some extent, on the basis of the information needs of the participating counties (Akershus, Buskerud, and Oslo). Out of the 40 schools that were contacted for the survey, 19 responded positively. The schools were contacted by e-mail (using the e-mail address of the school and/or the school's headmaster), followed up by a telephone call in cases where a reply was not received within a stipulated period. The e-mail gave a presentation of the study's scope, content and purpose. In addition, the schools were asked to select one class...
for each year group for the survey, and were made aware that they would later collect the completed questionnaires from the parents of those pupils. As an incentive for participation, the schools were also informed that one of the participating schools would be randomly picked to receive a prize of their choice worth 5000 NOK.

**Limitations and variations from English methodology**
Due to issues relating to school size, response patterns and types of areas in those counties, it was not possible to obtain an equal representation for all types of geographic areas.

The Norwegian study uses translated versions of the English questionnaires, and is conducted along the same lines as the English study, to the extent that it has been feasible.
Portugal

Sample characteristics
The main sample of this study consists of 1099 children, aged between 8 and 15 years old, from the third to the tenth grade and of 1099 parents. The settlement types used in the Portuguese survey were:

- City centre
- Urban
- Suburban
- Small town
- Rural

Sampling and recruitment
The areas selected for the study were chosen to be representative of five different areas requested by the international partners (i.e., inner city, urban, suburban, small town and rural).

First, consulting the Ministry of Education web site, more specifically, the school rotary (Roteiro das Escolas), it was possible to identify the schools according their location in terms of district, county and parish.

Second, consulting the web site of the Statistics Portugal (INE), more precisely the application “territorial divisions” it was possible, by choosing the option “statistical divisions” and “typology of urban areas” together with the proximity application, to determine the areas of counties and respective parishes which are “predominantly urban”, “medium urban” and “predominantly rural”. By crossing this information with the location of the possible candidate schools taking part in the study, it became possible to identify them according their “urban typologies”.

In order to characterize the areas where the selected schools are located, we used several sources of demographic and socioeconomic information available in the official web sites of the local councils and/or parishes, which the schools belong to, together with the relevant information presented in the Statistics Portugal web site (INE), namely, the 2011 Census survey.
Schools from the urban, rural, suburban and small town areas were surveyed between February and June, and the inner city between May and June 2011.

**Limitations and variations from English methodology**

There was one factor which differed from the English methodology:

1. Since data was collected after January, there were no 7-year-old children in the third grade by that time, so the younger children in the Portuguese sample were 8 and not 7-years-old.
South Africa

Sample characteristics
The children and parents surveyed in the research either lived within the boundary of metropolitan Cape Town, or in selected small town and rural settlements within its hinterland. All but two of the nine schools included in the research fall within the boundary of the Western Cape Province.

Sampling and recruitment
The unique and diverse nature of socio-demographic and settlement patterns in the Western Cape necessitated a departure from the standard sample stratification used in the other participating countries. Instead of solely settlement type, sample stratification was based on both neighbourhood affluence and location, namely: metropolitan high-income, metropolitan low-income, small town, and rural. Participating schools within these neighbourhoods were recruited between August and October 2010 (for documents used to recruit schools, see Annexures 3A and 3B). Grades were selected to target children aged 7-15 years. At each school, only one class per grade was surveyed. All learners in the selected classes at each school were included in the survey. The age of child respondents ranged between 6 and 18 years, and 50% were girls, 45% were boys (5% did not indicate their gender). Thirty six percent of the children were aged between 7 to 10 years old, with 55% between 11 and 15 years old. The remaining 9% were children below 7 and over 15 years and item non-response. The survey was conducted between October 2010 and March 2011, and initially intended as a relatively elaborate pilot survey, to be followed by a larger, statistically representative study.

Limitations and variations from English methodology
The results of the analysis of the survey data are indicative rather than statistically representative of all learners and parents in the study area. The number of schools surveyed represents a very small proportion of the total number of schools in the Province (the 6 primary schools represent 0.6% and the four secondary schools 1.2% of all primary and secondary schools). The small town and rural schools are particularly unrepresentative of their sample strata. A further limitation of the data is

6 For further information, see section 3.1 of the South Africa country report.
bias introduced by non-response. The use of self-completion questionnaires resulted in item non-response and recording error (up to 5% for some questions), and a unit non-response rate of 43% in the case of the parent questionnaires.
Sri Lanka

Sample characteristics
Five different geographical areas for this survey were selected including: inner city, suburban, large town, small town, and rural area. One primary school and one secondary school in each of five different geographical areas participated in this survey. Approximately 50 children from each grade level for children aged 7-11 years and children aged 12-15 year olds were asked to complete a questionnaire. The study sites were located to the south and east of the country.\(^7\)

In total 721 children participated in the Sri Lankan survey and around one quarter of the participants were based in each of the urban (23%), suburban (26%) and large town (24%) settlements. Participants from the small town and the rural area accounted for 15% and 12% of the survey sample, respectively. Just over half of the participants attended primary school (56%).

Sampling and recruitment
Several aspects were considered when selecting the school sites for the study, and the selection process underwent a staged process. A brainstorming session was conducted to select the areas for each settlement category. After selecting potential towns for the study, consideration was given to identify potential schools for the study within the selected localities. Several guidelines were developed through brainstorming sessions to ensure the effectiveness of selecting schools for the study. These included:

- Selection of mixed-gender schools (girls & boys) in each locality in order to ensure gender equity in the study;
- Collection of data within one school since it is common for the primary school and the secondary school to be co-located in one facility under one school name; and
- Identification of three to four potential schools from each area that were prioritised for obtaining the consent of the principals to conduct the study.

\(^7\) Surveying in the north of the country was not possible due to continued violence, and surveying to the west was not possible due to time and distance.
**Limitations and variations from English methodology**

There were two main limitations in this study:

1. First, few parents completed a questionnaire. This may be due to poorly conveyed messages to the parents about the purpose of the questionnaire and time limitations for its return (two days). Poor responses may also be due to busy time schedules of parents, especially those who are employed in large urban areas such as Kurunagala and Borella, or low literacy levels in rural areas like Ehaliyawagoda.

2. Second, the questionnaire was difficult for many children to answer. Primary school children required substantial help, with questionnaires taking 40 minutes to complete, and secondary children had troubles answering whether they could take public transport, where they went on the weekend and their feelings of safety. This may have been due to cultural bias, as the questionnaire was based on a research instrument of Anglo-European origin.
Sweden

Sample characteristics
The Swedish study chose four schools from different areas within greater Stockholm and one school from a rural area. The areas differed in both physical and social aspects.

Of the 941 questionnaires distributed to pupils, 797 were completed, i.e. a response-rate of 85 per cent. A total of 419 questionnaires were answered by both children and their parents. There were 64 parents whose children failed to answer the questionnaire.

Sampling and recruitment
In collaboration with the head teachers of the schools it was decided to send out the parents' questionnaires by post: the missing data would have been greater if the questionnaires had been distributed via the pupils. The parental questionnaire was sent to 939 parents. Fifteen of the questionnaires were returned unanswered, leaving 924 possible respondents. The reason that fewer parents received the questionnaire than children was that addresses for all the children were not available on the class lists. The questionnaire was completed by 482 parents, a response-rate of 52 per cent. It was followed up by two reminders. Parents could also respond via a Web questionnaire and were therefore given a unique login and password along with the paper questionnaire. The data collection took place during September and October of 2010.

Eight classes from each school took part in the study. Class lists were collected as a basis for the study, in order that the children's responses to the questionnaire could be linked to their parents' responses.

---

8 The reasons for the missing data were that the questionnaires were unusable or the pupils had gone home from school or were sick. In a few cases some members of the class were engaged in other activities or other lessons (e.g. where there were newly-arrived children from abroad who had not learned Swedish yet).
Children in Sweden begin school at the age of seven, when reading skills are naturally low or absent. One class from Years 2-9 in each school (8-15 years of age) was included in the study – a total of 941 pupils. The pupils' questionnaire was distributed and collected during lesson time. The project assistant took the younger pupils through the questionnaire, question by question, with the aid of an overhead projector.

**Limitations and variations from English methodology**
The schools chosen were not meant to be representative of the country as a whole but rather they were chosen as they were located in areas that may be regarded as typical. All the schools are state schools and can be chosen by parents even if their child has been assigned a different school.

Certain questions were changed in the Swedish questionnaire and a number of questions added.