

Summary:

Children's neighbourhoods, activities and everyday transport

There is a lack of knowledge of children's travel behaviour and physical activity levels in Norway. In all the national travel surveys that have been conducted, children under 13 years of age have been excluded from the samples. The only knowledge we have of children's travel behaviour has been gained indirectly through information about parents' travels as accompanying persons during the children's various daily activities. We therefore have little knowledge of the physical activities and travels of young children or of the road traffic environments that they are exposed to. What we do know is that increasing use of the car as mode of transport has a negative influence on their health and well-being. The Ministry of Transport and Communications, the Public Roads Administration, the Ministry of Children and Equality, the Directorate for Health and Social Affairs and the Norwegian Council for Road Safety therefore sponsored a separate study of children's neighbourhood environments, physical activities and everyday travel. Approximately 1750 parents and children 6 to 12 years of age answered questions about:

- Opportunities for play at home and in the neighbourhood
- Traffic volumes where they live and along the way to school
- Travel to school -- length, mode and reasons for this particular mode of travel
- Traffic safety education
- Play and physical activities
- Sports and organized activities -- travel mode to these
- Friends -- where they live, how much time spent together and travel mode to friends

Traffic and opportunities for play in the children's neighbourhood environment

Most parents report that the neighbourhood they live in is well suited for the needs of children in terms of playing and moving around freely. Ten percent express that the neighbourhood is ill-suited for children, but only 4 percent live in totally car-free neighbourhoods. A further 54 percent live in areas where car traffic is limited to local residents only. These are to a large extent

neighbourhoods that have been planned from the start with traffic separation as a principle.

Most children have some place in the neighbourhood where they can play safely. For 92 percent, this is a garden, and for 85 percent a recreation area. Still, traffic is a strong restricting factor on their everyday activities. Approximately half of all parents forbid their children from cycling in certain streets, from crossing others and/or from straying too far from home because of the traffic. Children who live in large cities and very young children are even more restricted.

The main effects of the restrictions are that the children are limited in which of their friends they can visit and in what errands they can carry out unaccompanied.

School trips – short, but not free from traffic

Half of the children live less than 1 km from school, and 81 percent less than 3 kms. There is a strong relationship between degree of urbanisation and distance to school. Children in large cities have the shortest school trips, on average, and those in rural areas the longest.

For half of the children there is a pavement or pedestrian/cycle lane all the way or nearly all the way to school, while one-third have to walk on the roadway all the way, or nearly all the way.

There is a strong relationship between degree of urbanisation and degree of traffic separation: children in the more rural areas have fewer pavements and pedestrian/cycle lanes on the way to school. There are significantly fewer traffic separation measures, such as pavements, along the route of children who live more than 3 km from school than there are for children who live within 3 km of school.

In excess of 40 percent of parents experience the route to school as unsafe due to heavy and speeding traffic along the way, and more than half consider the traffic situation around the school as chaotic when dropping off and picking up their children.

More than half of the children walk or cycle

During summer months, 40 percent of Norwegian school children walk to school and 22 percent cycle. During winter months, the proportion taken by car or by public transport increases slightly, but the major difference from the summer months is a large shift in travel mode from cycling to walking.

There is a clear relationship between distance to school and mode of travel. The proportion of children taken by car increases from 12 percent on distances below 0.5 kms to 42 percent on distances between 2 and 3 kms. Local councils provide free public transport on school buses for children who have to travel distances above 4 kms (2 kms for 1st graders). The results of the study show that when distance to school increases to above 3 kms, cars take over from public transport as the preferred mode of travel. Even though they are entitled to free public transport, 25 percent of these children are still taken to school by car.

The percentage who walk is highest for distances under 0.5 kms (79 percent), decreasing to 2 percent under 3 kms. Bicycling is the norm for distances between 1 and 2 kms, and is almost at the same level for distances below 0.5 km as for distances above 3 kms.

Parents who took their children to school by car were asked for their main reasons for doing so. The most frequent answer was that the school was located along the route to the parents' working location (60 percent). Traffic safety was mentioned by approximately 20 percent.

Outdoor playing is the norm

Good mental and physical development in children is strongly dependent on there being ample opportunity for physical activity. The Norwegian Directorate for Health and Social Affairs recommends that children and youth should be physically active for at least 60 minutes per day, and that the activity should be of moderate to high intensity. Fifty-two percent of the children in the study (ages 6 to 12) play outdoors every day, half of these for more than two hours. There are fairly significant seasonal differences. The proportion who play outdoors for more than two hours a day varies from around 50 percent in summer to 20 percent in winter.

The restrictions that parents place on their children's activities influence the amount of time spent outdoors playing. Children who are not allowed to play outdoors unless in the company of adults will also spend less time outdoors than children who are less restricted. This effect is strongest for children under 10 years of age, but also obtains among older children.

Children of parents with low education spend more time outdoors than children of parents with high education. There is also a tendency for children in urban areas to spend less time outdoors than children in more rural areas, but these differences are small.

Nearly all children have a place where they can play safely away from road traffic in their neighbourhood. There are four main settings for children's outdoor play: gardens, playgrounds/sport grounds, street or road environments and green areas. The most common arena is a garden, either at home or with friends. However, the garden's function as an important playground decreases with age. More than half of the children in the age group 10 to 12 spend time in a sports ground, as opposed to 20 percent in the age group 6 to 7 years. Younger children tend to go to playgrounds more often than older children. About 20 percent of children play in some kind of roadside environment -- a phenomenon that varies little with age, but is more common in urban areas.

A majority of children (92 percent) say that they take part in some kind of sports activity (organised or not). Younger children are less active than those above 8 years of age, and children in urban areas tend to be more active than others. In terms of frequency of taking part in sports activities, boys are more active than girls, 3.3 times versus 2.8 a week, and children of highly educated parents are more active than children of parents with lower education.

Leisure time activities are “car driven”

77 percent of children aged between 6 and 12 years take part in organised sports activities, and one-fifth in organised musical activities outside school. Older children, children in urban areas and children of parents with higher education participate more frequently in sports and musical activities than others. Generally, there is a tendency for children of parents with lower education to take less part in organised activities and more in independent activities than children of higher educated parents.

The most typical mode of transport for getting to organised activities is the car, the least typical is public transport. The exception is children going to a recreation club during summer months. For these children, walking or cycling is just as much the norm as going by car. In general, children are taken by car to a much greater extent in their leisure time than they are on school trips.

Most children have friends in their neighbourhood

Most of the children (69 percent) in the study have their closest friends (defined as those they spend most time with) living within a radius of 1 km. Only 15 percent have their closest friends more than 2 kilometres away. This tendency is even stronger in the case of children in urban areas, but is less prevalent with age. The most typical mode of transport for visits to friends is on foot and unaccompanied. Bicycling is frequent.

Aggregate measures of activity levels and mobility

In order to arrive at a total measure of children's transport behaviour and their physical activity levels, we calculated an aggregate index of transport mode both to school and to leisure activities.

Analysis of the index for independent active transport confirms the findings from the travel to school results. Children are less dependent on their parents during summer months, and their degree of independence increases with age. Boys are more independent than girls. Children in urban areas are more independent than others. This might be because of shorter distances in city areas, but might also have to do with better facilities for walking and cycling, especially in newer residential areas.

Children of parents who drive daily are less independent and active than others, which might suggest that parents' car use habits socialize their children into transport habits similar to their own.

We also calculated an index of degree of physical activity. Analysis of this index shows a similar pattern of differences as for the index of independent active mobility. Age, gender, degree of urbanity, time of year and parents' car-use habits are all related to the children's degree of physical activity.