

Child restraint use in Sweden

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Primary theme/topic:

Field observations

Keywords:

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Abstract:

This study aims at presenting the CRS usage, perception and behavior of parents in Sweden 2021, and to compare with the last 6 years.

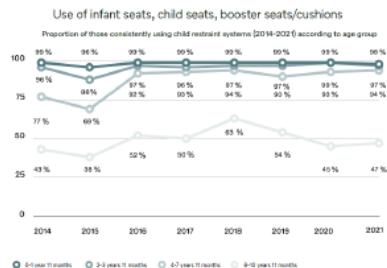
Methods:

Questionnaire based study, conducted annually from 2014 to 2021. Selection criteria included parents aged 20-65 with children aged 0 to 10 years and 11 months (0-10y11m) as well as access to cars which they drive regularly. Each year, the quantitative survey is conducted online with a web panel of more than 1000 interviewees put together to be representative for Swedish parents, each year more than 1000 persons. In cases where an interviewee has more than one child, the answers were registered per child. For 2020 the study was also performed in Norway, Finland and Denmark, providing a reference for comparison.

Results:

Restraint use for children is high in Sweden. For children up to eight years old, 96% of the parents say they always use some kind of CRS. Only in exceptional cases at low speeds some children occasionally may ride unrestrained for a short distance. These high figures have been consistent since 2016, see Figure. For the age group of 8-10y11m, 47% use CRS and the rest seatbelt only.

The Swedish national recommendation is that children should travel rear-facing until at least 4-5 years of age, thereafter



best practice is a booster. Convertible seats or forward-facing seats with internal harness are rarely used in Sweden.

Many parents keep their children in rear-facing CRS until they are around 4 years old. In this year's study 89% of children 0-3y11m are always traveling rear-facing. The youngest age group (0-1y11m) have remained stable and high around 97% over the years, while an increase has been seen in the group of 2-3y11m, from 72% in 2015 to 81% in 2021. In addition, this year 22% of the 4-year-olds travel rear-facing, while only 3% of the 5-year-olds. Although high in relation to most other countries, it is a concern that over the last few years, the proportion of children in the age group 2-3y11m placed in forward-facing CRS has remained relatively consistent at 20%. Moreover, as many as 78% of 4-year-olds travel forward-facing. The parents' main answers for changing to a forward-facing CRS are that they claim the child has outgrown the rear-facing seat or that the child gets car sick.

In the oldest age group (8-10y11m), 29% state that their children *never* use a booster. A booster cushion is the most commonly used type of booster at the age of 7 in Sweden.

Are Swedish parents special? As a society, Swedes have a long-term focus on safety, including child safety in cars, as well as driving safe cars. The results are striking even when comparing to other Nordic countries, where the use of rear-facing child seats is considerably lower than in Sweden. Furthermore, in Sweden children stay in CRS to a high age before using seat belt only.

Swedish parents consider "good test results regarding safety", a child seat with "a high total weight-limit" and "easy to attach" as most important factors when choosing a CRS. Attaching large rear-facing seats are not seen as a hinder for usage. When buying a CRS, the most common is to buy a new for the first child and let the next child inherit the sibling's seat if they are not too close in age. With respect to car sharing, many parents consider it to be an option. If so, about 70% would bring their own CRS, while 30% would like the CRS to come with the car. This will be a challenge when different types of car sharing solutions get more popular. There is an apparent risk that the use of CRS will be considerably low among these parents.

Although not required by law in Sweden, 70% of the parents state that a child should travel rear-facing until the age of 4, which is in line with the national recommendations. However, only 4 out of 10 parents know that children are recommended to use a booster until 10-12 years of age and 54% don't know that children shorter than 135 cm are required by law to use a CRS. The booster usage of 47% in the oldest age group, indicate an area for improvement in Sweden. Generally Swedish parents are very aware of recommendations for younger children, but as the child grows older the knowledge gap widens.

The results from this study has been presented to media in May 2021, through Volvia.se media site and to journalists.

CHILD RESTRAINT USE IN SWEDEN



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VOLVIA

Aim

To present the use of child restraints in Sweden, and the perception and behavior of parents.

Introduction

- Volvia is the largest branded car insurance provider in Sweden, insures Volvos. Founded by Volvo in 1959 and now part of the Nordic insurance company If P&C.
- Each year since 2010, Volvia conducts a Child Safety study.
 - All car brands, not restricted to Volvo owners nor Volvia customers specifically.
 - The study is unique in terms of continuous collection and depth.
- The initial purpose to collect data was to promote the use of rearward facing child seats in Sweden. Today the scope is all CRS usage up to 11-year-olds.
- To reach parents with information, the Child Safety Day is arranged each May since 2010. Around 55 000 children participate.



Swedish recommendations and law

– What is “normal” in Sweden?

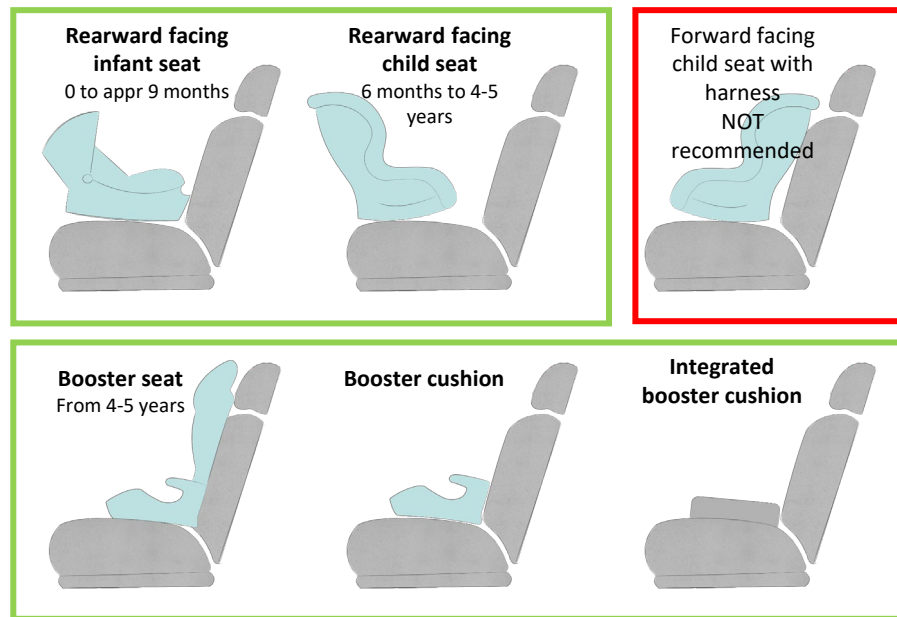
The law

All children shorter than 135 cm must always use an approved child restraint system.

The national recommendation

Children should travel rear-facing until at least 4 years of age, preferably longer.

Children should be 140 cm + 10-12 years old before using a vehicle seat belt only.

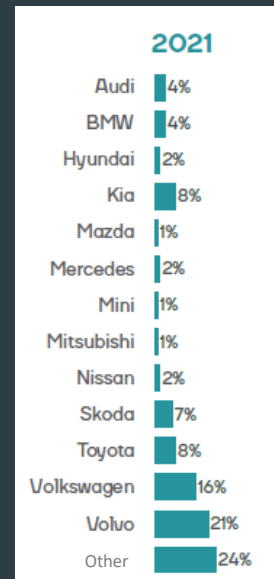


Data collection

- Questionnaire-based study performed online. The best way to reach a representative panel in Sweden.
- Questionnaire covers habits, behavior and knowledge in relation to CRS use in cars.
- Selection criteria:
 - People aged 20-65 with children aged 0-10 years and 11 months
 - Access to car in which they drive the child regularly.
- When person has more than one child, the answers were registered per child.
- From 2014: >1000 persons representing Swedish parents or care takers, geographical representation.
- Data collected by Norstat, one of the leading data collectors for market research in Northern Europe.

2021 data set, Sweden:

- 1,004 adults. In total 1,682 children included.



Sub-studies

Over the years: 2014-2021

- The same selection criteria and core questions.
- Additional questions changed from year to year to get more information regarding a specific area, for example shared mobility.

A Nordic comparison: 2020

- Purpose: to compare results between the Nordic countries.
- A selection of the questions from the Swedish study was asked to people in Norway, Finland and Denmark.
- Same collection criteria as for Sweden and same collection provider, Norstat.
- Number of interviews: Denmark 603, Norway 901 and Finland 601.

Restraint use for children is high in Sweden

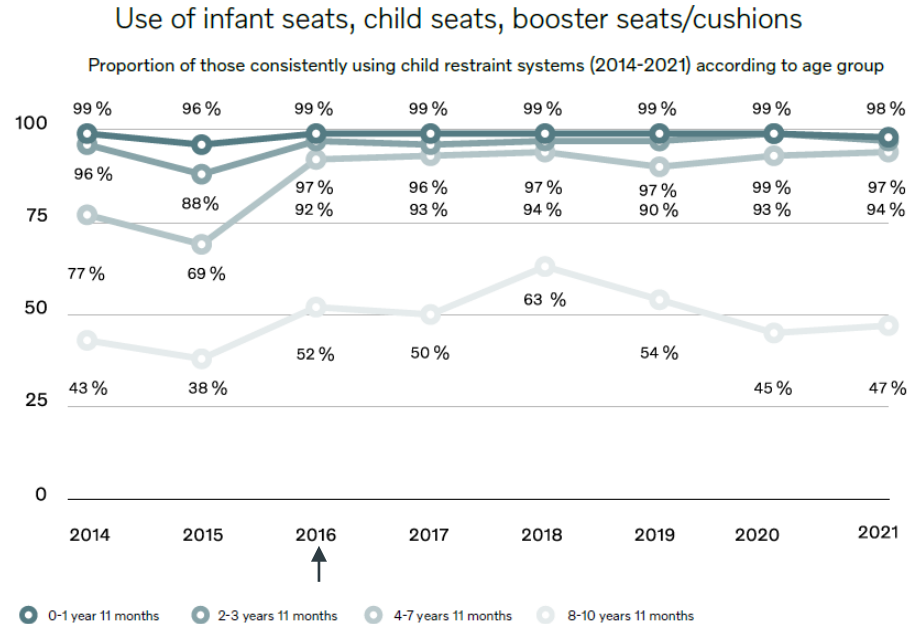
For children up to eight years old:

- 96% always use some kind of CRS.
- Similar levels since 2016.

For the age group of 8 - 10y 11m:

- only 47% always use CRS
- 29% use seatbelt only.

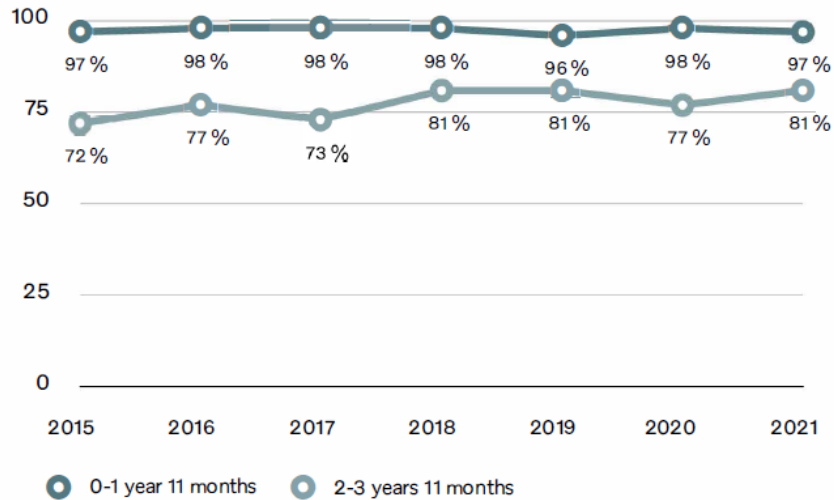
Some children occasionally may ride unrestrained for a short distance but only in exceptional cases at low speeds.



Use of rear-facing child seats

The graph shows those who always use rear-facing CRS

Proportion of those using rear-facing restraint systems between 2015-2021 according to age group

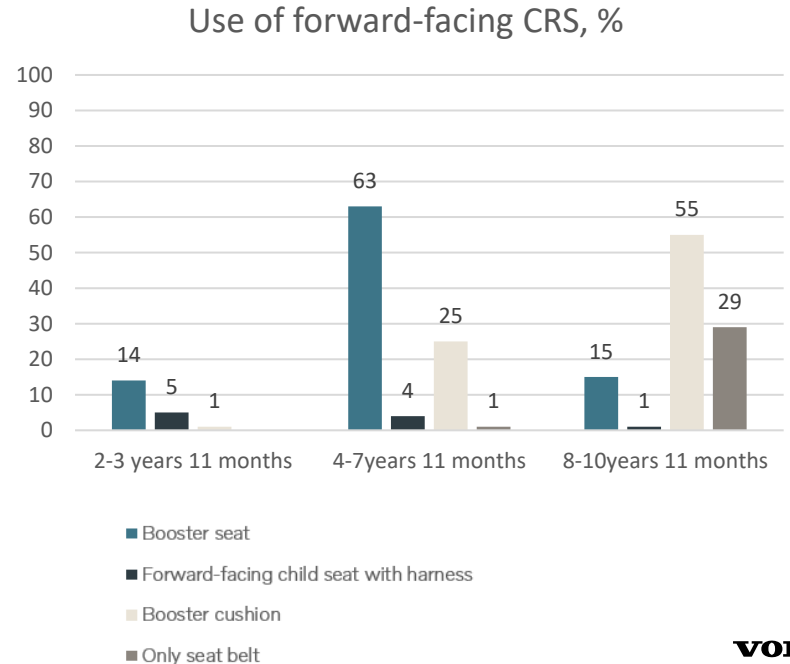


How do the child travel in cars?



What kind of CRS do forward-facing children use?

- 4-year-olds: 75% travel forward-facing.
- 5-year-olds: 96% travel forward-facing
- The majority of the 4-7y11m use booster seats (mainly 4-6-year-olds).
- Forward-facing child seat with harness is not frequently used in Sweden.
- Children 8-10y11m:
 - the booster cushion dominates (from age 7).
 - 29% always use the vehicle seat belt as their only restraint.
- Only 4 out of 10 parents know that children should use a booster seat or booster cushion until 10-12 years of age.



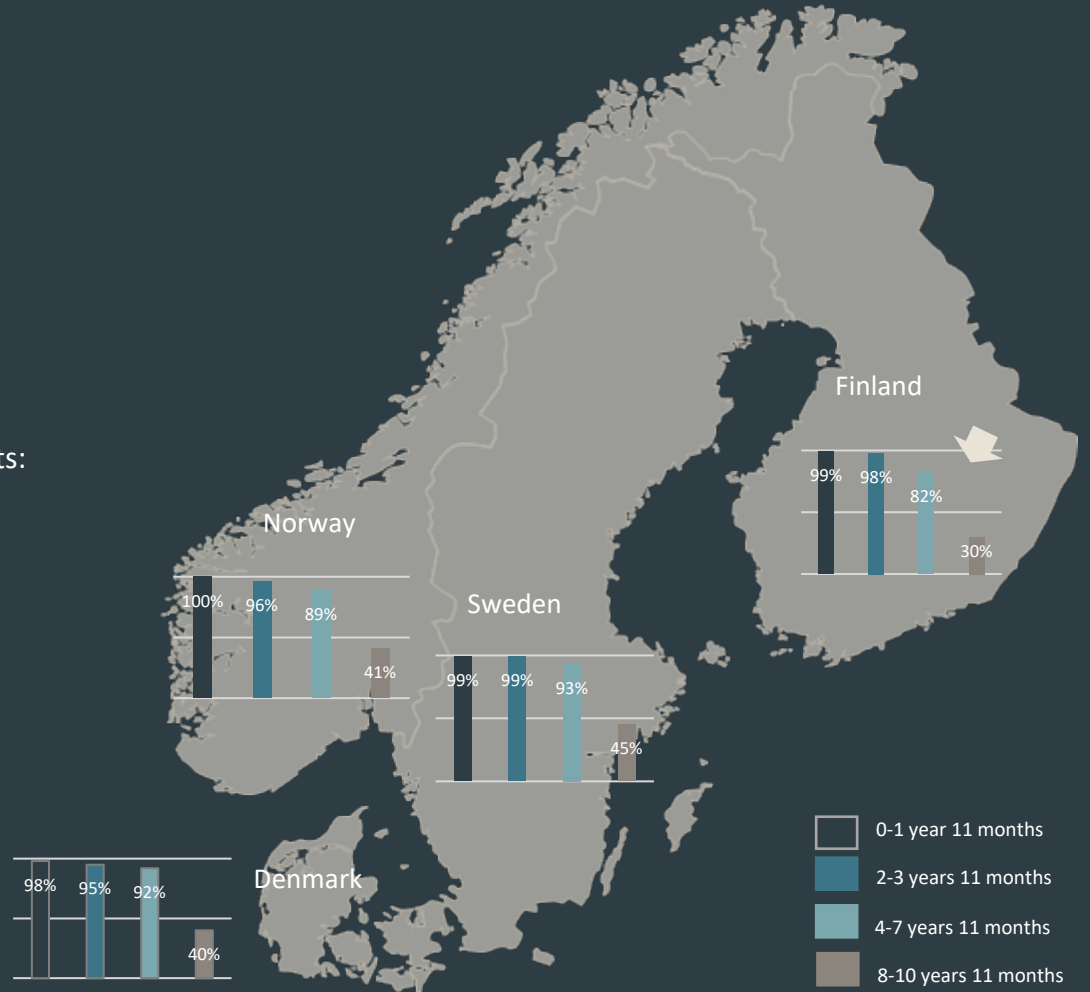
Nordic comparison

CRS usage 2020

Overall high CRS usage rate.

Finland deviates in the two oldest age segments:

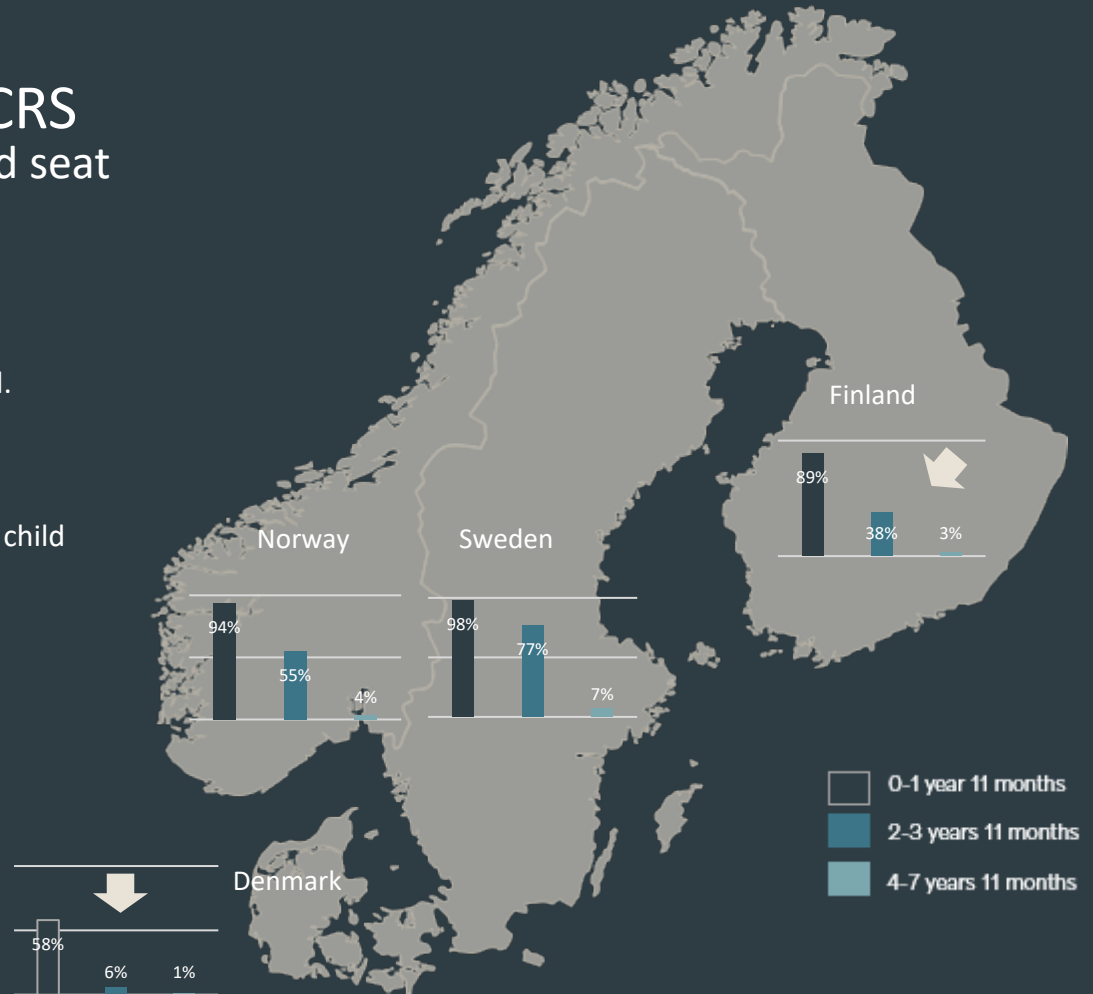
- 18% of 4-7-year-olds don't use any CRS
- 70% don't use CRS in the oldest age group.



Among children using CRS % always using rear-facing child seat

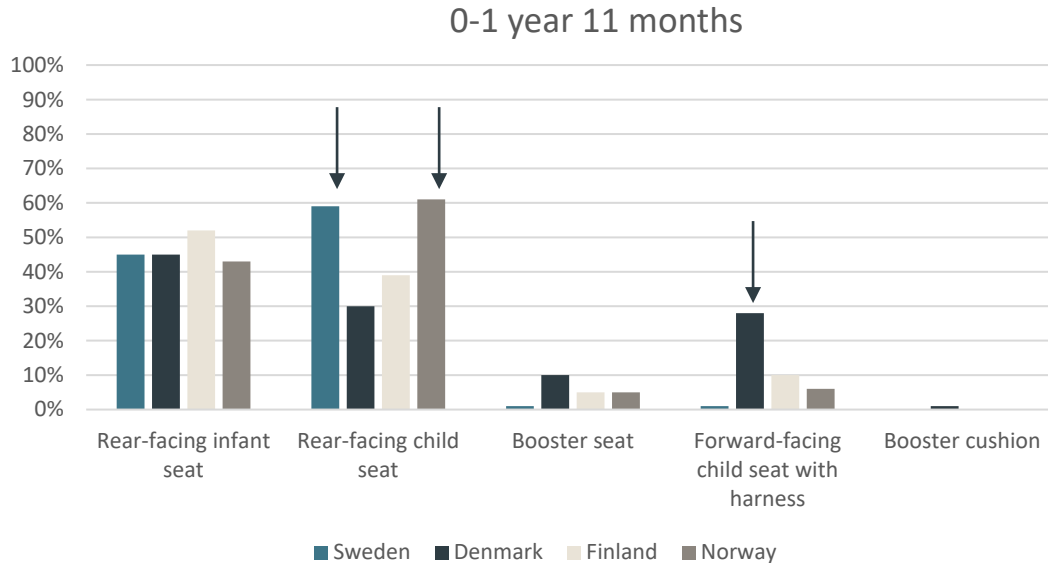
Different views on rear- or forward-facing travel.

- Norway most close to Sweden's usage.
- Finland & Denmark: Major change when the child turns 2.



Type of seat, based on children who use CRS

Multiple choice possible.

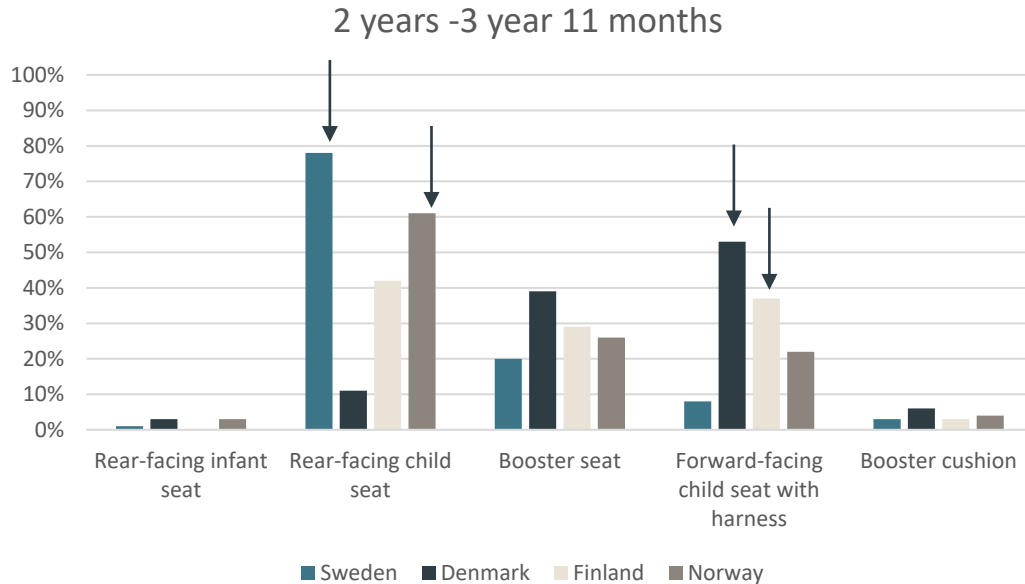


Rear-facing child seat is the most used CRS in Sweden and Norway.

Forward-facing child seat with harness almost as popular as the rear-facing child seat in Denmark.

Type of seat based on children who use CRS

Multiple choice possible.



Rearward facing child seat most common CRS in Sweden and Norway

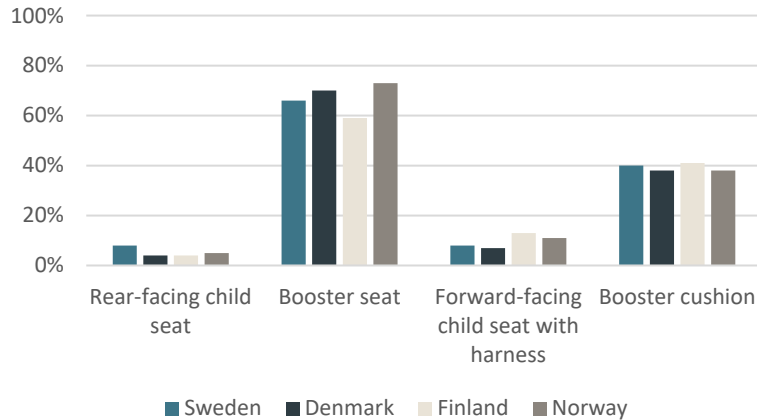
The forward-facing child seat with harness is the most common in Denmark, but also popular in Finland.

Denmark and Finland follow the trend in the rest of Europe.

Type of seat based on children who use CRS.

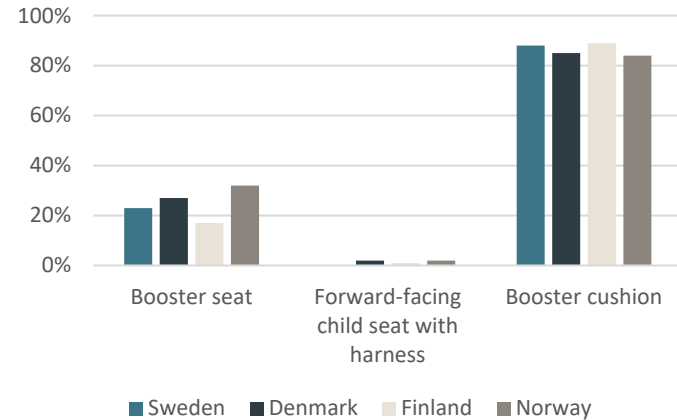
Multiple choice possible.

4 -7 years 11 months



Booster seat is the most common in all countries.

8 -10 years 11 months



Booster cushion is the most common in all countries.

Sweden: Taxi and/or rideshare services

- During 2020-2021: 32% travelled with taxi and/or rideshare services.
- There was no difference in usage of services between age groups.
- It was more common to use these services in larger cities compared to smaller cities or rural areas.
- The majority have only done single trips.

- CRS usage (all children)
 - 23% did not use any CRS
 - 17% bring their own
 - 21% borrow CRS from the taxi/ride share
 - 32% order a CRS when ordering the taxi/ride share

Future mobility: Car sharing and CRS

- 27% positive to use car sharing services.
- CRS perspective among those positive to car sharing services:
 - 69% would bring their own CRS
 - 18% CRS must be pre-installed in the car for them to use the service
 - 11% CRS must be available in the car, but parents install the CRS themselves.
- Input on how to put up a business case for family easy access to car sharing.
- Challenge when shared mobility (ride share and car share) get more common?

Discussion: Rear-facing child seats

- High usage but we are not satisfied – all children should travel rear-facing until they are 4-5.
 - Still appr. 20% of 2-3y11m who travel forward facing.
 - Rear-facing offers best real-world protection, complex crash events included. Evidence based since decades.
 - Forgiving seat (child is well protected even if the seat is not correctly installed)
 - Since a child easily fits in a rear-facing child seat until 4-5 years, our preferred behavior is to use a rear-facing child seat until at least 4, then a booster seat. Forward-facing child seat with harness is not recommended.
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- Continuous information activities needed.
 - Challenge: changed behavior with increased use of shared mobility?

Discussion: Boosters

- Booster seats are used for younger children, the booster cushion is the most popular from the age of 7.
 - Booster usage: 47% in the oldest age group. 53% use seat belt only.
 - Increase the use of boosters.
 - Risk that older children use only seat belt if the booster cushions are not available.
 - Will people be less inclined to use boosters in shared mobility?
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- Improvements needed regarding usage. Information needed.
 - How ensure no decline in the age group if a booster cushion is not available or future mobility solutions make people less inclined to use any CRS?

Conclusions

Rearward facing in Sweden:

- 97% of 0-1y11m, constant level since 2015
 - 81% of 2-3y11m, increase from 72% in 2015
- Ensure this over time, given external influences including the Nordic countries
 - An extra challenge with respect to shared mobility

Booster usage of 47% in the oldest age group (8 years – 10 years 11 months)

- Improvements needed
- How encourage even higher usage?