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Three Years of Experience with Child Safety Education for Multipliers

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1. Abstract

Numerous studies, accident analyses, and other results of research projects dealing with child car safety have demonstrated many times that child seat misuse is rather widespread and in many cases a decisive factor when it comes to the outcome of an accident. Very often, the misuse results from a lack of knowledge on the part of the user. This is the reason why the Association for Vehicle Safety (“Verein für Fahrzeugsicherheit Berlin e.V.”), in cooperation with partners from the German industry and others, has developed a training concept to disseminate information about the correct use of child restraint systems (CRS).

This presentation summarizes three years of experience with child safety education for multipliers. Within the last few years, several different groups of multipliers have been coached in all aspects regarding child car safety. These multipliers are people who maintain work-related contacts with parents of children aged 0 to 12 years, such as midwives, nurses, but also policemen and salesmen of cars and child seats. During these training courses, a vast amount of experience has been gained with regard to how to raise people’s awareness to this important issue, how to address the major problems, and how to present the basic facts, so that multipliers can pass the relevant information on to their clients.

2. Aim and Purpose of Child Safety Education for Multipliers

When it comes to the improvement of child restraint systems, the issue of using these systems appropriately is a crucial one. Field studies, accident analyses, and other scientific publications have increasingly shown that the main problem does not primarily lie in the quality of a CRS itself, but rather in the way it is used. There is certainly a connection between these two aspects: A good quality child seat is much less likely to be used incorrectly. However, even with the best CRS of the current generation the risk of misuse cannot be entirely eliminated. Consequently, there is a need to inform the users, in particular the parents, how to avoid this risk.

In collaboration with the industry, the Association for Vehicle Safety (“Verein für Fahrzeugsicherheit Berlin e.V.”) has developed an education concept that can be used to inform and instruct so-called multipliers on the correct use of CRS. The idea

behind the training is that these multipliers will subsequently be able to pass the knowledge on to the parents.

3. Multipliers

Multipliers are people who, as part of their work, deal with parents of children at the age of zero to twelve years, for example nursery teachers, midwives, policemen, driving instructors as well as car salesmen or salesmen of child seats.

Due to different professions the multipliers have a different basis of knowledge. While driving instructors have a good understanding for vehicle safety, midwives are well versed in the biomechanics of children. Hence, the content of the education has to be adapted to the specific skills of the participants.

Thanks to the support of the industrial partners, the training courses can be offered free of charge. However, it must be said that it remains a big challenge to attract participants to these courses. In general, we as the organizers are confronted with two major problems: The first one is doubt on the part of the target group as to whether such training is useful in the first place. For many people securing a child in a car does not appear to be a topic that should be dealt with in a full-day course. There is no awareness to potential problems that can occur in connection with the transport of children in cars and even less awareness to the possibility of child seat misuse and its possible consequences. There is therefore certainly a need for new strategies to win more participants in the future.

Secondly, there is a time problem. Attending a full-day training course means to be a full day away from work. For this reason, some of the courses offered took place on Saturdays.

4. The Education Concept

In the last three years, the Association for Vehicle Safety (“Verein für Fahrzeugsicherheit Berlin e.V.”) has been able to gather a vast amount of experience in teaching multipliers with regard to which facts about child car safety are relevant for the target group, how the participants can be sensitised to typical problems and, last but not least, how such a complex issue can be explained to people who have never been engaged with the kinematics of accidents. What follows is a brief description of the theoretical and practical content of the education programme.

4.1. Theory – necessary basic knowledge

Even though it is not necessary to teach them the whole range of protection mechanics in accidents, it is nevertheless important that the participants of the training courses acquire a basic understanding of what happens in an accident and of the forces that are acting upon those involved. To further explain typical biomechanical effects and the influence of the misuse of child restraint systems on them, videos of crash tests and misuse tests are shown.

By comparing the correct with the incorrect use of child seats, the participants realise why the correct securing of children is important and what serious consequences the misuse can have. Videos show for example the effect of an interchanged belt on a baby shell, which is almost unsecured if shoulder and lap belt are inverted. Another video demonstrates that under no circumstances should a child be carried in the parent's lap during the car journey.

In general, biomechanics is also among the topics dealt with in the training courses: Why is there a need for a special seat for children, what are the differences between children and adults apart from weight and size when it comes to questions of road safety, why is a rearward-facing seat especially designed for infants much safer than a forward-facing one?

In addition, detailed information on the different CRS classes are given: Which seat for which child; how are the different seat types used; what are the typical forms of misuse with regard to the different seat types; at which age of the child should the seat be replaced.

Furthermore, basic figures about accidents in Germany and their development in recent years are given as well as basic information regarding the legal situation.

At the beginning of each course, each multiplier receives a description of a real accident where children were involved. The description comprises information on the accident details, the child's age and seating position and the CRS used. The participant is asked to keep this in mind over the day. At the end of the course, after the participants have learned a great deal about child safety, they are asked to present the accident details to the group. This is followed by a discussion of why the children involved in the respective cases were injured, i.e. whether there was any

child seat misuse involved, or why in a certain accident the fact that a child was not injured resulted from the correct use of the child seat, which would then demonstrate the safety potential of these seats. The accidents discussed are reconstructed accidents from the child database, so that videos of the reconstruction tests can be shown.

Most of the participants of our training courses say that discussing these real accidents has shown them in a particularly impressive way the serious consequences child seat misuse can have and how important it is to prevent it.

4.2. Practice – learning by doing

At the beginning of the course, volunteers are asked to correctly fit a child seat to a car seat and then to place a training doll into the CRS. The other participants are asked to observe the action. In most cases, the volunteers have major problems in installing the seat. Thus, it is demonstrated right from the start that securing a child in a car is not as easy as it appears to be. After this demonstration, the participants normally have no further doubts about the usefulness of the training.

The practical part plays indeed a major role in the training. Nearly fifty per cent of the time is used for it, so that the participants have the possibility to practise installing different child seats into different cars, to make mistakes and to correct them. The instructors show them the consequences of child seat misuse and how to identify it.

After that, the multipliers have the task of detecting the incorrect use of seats already installed in cars. With this method, the participants learn to easily identify typical mistakes and to improve their awareness with regard to the correct and incorrect use of child seats.

5. Evaluation and Feedback

To receive a feedback on the success of the education, the participants of the last two years were requested to fill out an evaluation sheet. They were asked to state how useful for their work they had considered the training to be just before the start of the course; what they thought about it after they attended the course and what their current opinion was.

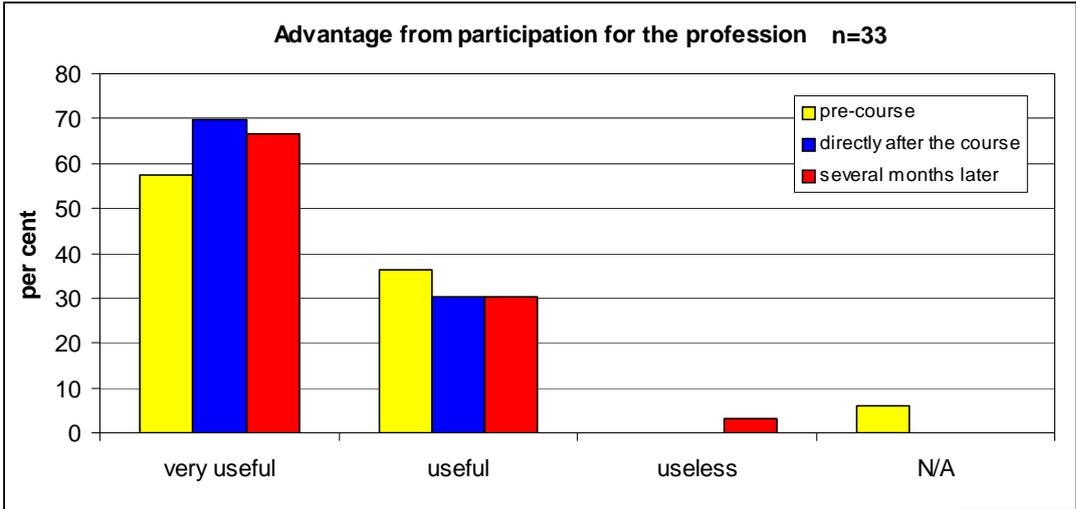


Figure 1: Assessment of the participants of the course

Figure 1 shows the participants' rating with regard to the question of whether they think taking part in the training was useful for their work. Prior to the course, 58 per cent expected it to be *very useful*; directly after the course, 70 per cent of the participants believed that it was *very useful* for their job and after more than a year, 77 per cent thought that the participation was *very useful*. In sum, the training was considered *useful* by all but one of the participants.

31 of 33 interviewed multipliers said they would recommend to other people of their profession. However an "advertising effect" for winning further participants was not given.

In average each multiplier gave his knowledge to 30 people per year. Considering all 160 participants from the last three years means that round about 6500 people were trained about child safety in cars.