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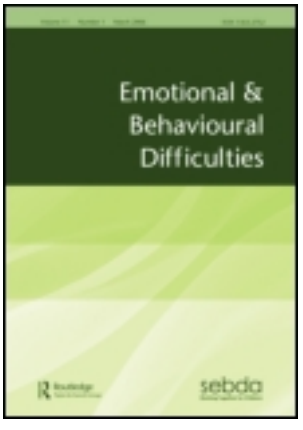

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International evaluation studies of Second Step, a primary prevention programme: a review

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Second Step is a social-emotional, skill-based, violence-prevention programme, which has been adapted for several European countries. The various versions of the programme (for kindergarten/preschool, elementary school, middle school) have been evaluated in a series of research studies. The outcomes and study designs of these studies are reported in this overview, proving that Second Step is effective in reducing aggressive behaviour and promoting social-emotional skills in children and adolescents. As examination of the European programme versions show, the effectiveness of the programme is upheld when the original programme is adapted.

Keywords: review; violence prevention; Second Step; evaluation

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The Second Step programme

Second Step is a social-emotional, skill-based prevention programme developed from the Committee for Children in Seattle, USA. It is designed to prevent aggression and violence in children and young adults. A series of research studies, described in more detail later on, have proved the effectiveness of the Second Step curriculum. The content of the programme is derived from and based on research findings and developmental-psychological theories related to the deficits observed in aggressive children (e.g., Cierpka 1998) and their social information processing (e.g., Crick and Dodge 1994; Lemerise and Arsenio 2000). These data indicate that aggressive children have specific information processing and emotional management deficits in the areas of empathy, impulse control and anger management. For this reason, the curriculum units are based on the promotion of empathy, impulse control and anger management. Empathy development in children is fostered by teaching them to recognise the emotions of others and experience those same emotions from the perspective of the other person, so that they may react appropriately. Impulse control is the second component of the programme. Often, children act in a highly impulsive manner, which can result in conflict or aggressive behaviour. This process occurs when deficits in social information processing exist and no appropriate rules or adult supervision are given to guide children's behaviour. In the impulse control unit, learning socially competent behaviour is based on realistic problems. Children practice problem-solving skills through role plays, which are a basic component of all lessons. While the problem-solving steps provide the 'how' of achieving positive solutions, the different social skills provide the 'what'. In order to find appropriate solutions to problems, children must know both

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what is to be done and *how* to proceed. In the anger management unit, stress reduction techniques are taught as part of a constructive approach to managing frustration and anger. This unit's lessons do not attempt to deny or suppress the reality of negative emotions such as rage and annoyance. Rather, antisocial and damaging behaviour is channelled in a more socially acceptable direction. In order to achieve prosocial behaviour, the affective components of physical relaxation are connected to cognitive strategies of self-instruction and problem solving. In summary, Second Step teaches children to manage their feelings competently, to solve problems constructively and to manage anger effectively. In doing so, the curriculum fosters and consolidates the conflict competences of children and their self-esteem.

European adaptations of Second Step

The European versions of the programme were translated, adapted to the respective cultural background and evaluated through a process of ongoing interaction and feedback with educators, teachers and instructors. In the course of the adaptation processes, it became clear that the pre-existing lesson structure and content could remain in a similar form. Only some minor changes concerning the 'look' were done. In the German version, for example, pictures and text were separated (in the original version the lesson text is printed on the back of the photos) and all pictorial materials were renewed. Materials required for the implementation of the programme include a manual, an instruction booklet and pictorial materials (photographs). The kindergarten kit also includes two puppets, which are the most important child-oriented facilitators in many lessons. The materials and lesson contents have been designed according to developmental and psychological theories and adapted in a developmentally appropriate manner. The theoretical background of the programme is described in the manual, which also provides relevant information for the programme application. The lesson booklet contains detailed information on all the lessons as well as the sequence of their administration. The instructions are divided into distinct sections: (1) preparation, (2) teaching of lesson (including discussion questions, and role play activities), and (3) other exercises for the transfer of learning. The instruction booklet and the photos are the basis for the work. In the photos, representative social situations are presented according to the topic of the respective lesson, each of which becomes increasingly more complex. Each lesson is based on a photograph of a social situation, which allows for teaching relevant skills. Subsequent to the initial discussion of the situation presented, applied learning activities, such as role plays, are carried out. Finally, a discussion is held that addresses the ways in which children can transfer their learning to real-life situations.

In addition to a wide range of didactical approaches (e.g., a combination of cognitive, emotional and practical learning phases, ludic training of social competences, continuous transfer of learning to everyday life), the programme realises the basic conditions for effective prevention: it starts early, it is a long-term approach, it is scientifically evaluated, it reaches lots of children because it works with schools and kindergartens (as opposed to offering it via therapists or counseling) and the users are trained before implementing the programme in order to ensure that the curriculum is implemented both reliably and effectively. The importance of consistent implementation of prevention programmes was stressed by Wilson, Lipsey and Derzon (2003), who found in their meta-analyses that the strength of the effect sise depends on the implementation fidelity. Ideally, the entire team would participate in the advanced training course to support transfer of learning to the children's everyday activities and experiences on a lasting basis. Moreover, it should

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be ensured that users are available to work over a longer period of time with a group of children and have a background in education (they should not be laypersons).

Objectives

A mandatory component of curricula such as Second Step are effectiveness studies. The programmes are therefore evaluated in the developmental and adaptation phases, respectively (e.g., Beland 1988; Hahlweg et al. 1998), and also during the implementation phase. An extensive review of the literature (supported by the Committee for Children) identified a huge number of published and unpublished evaluation studies of Second Step programmes. The following section introduces the outcomes of the currently available evaluation studies on Second Step and its European adaptations published in peer reviewed journals (research reports and dissertations were not included). First, the findings for the middle school version are outlined. Afterwards, the outcomes for the elementary school and kindergarten versions are presented.

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Evaluation of the Second Step programme for middle schools

Orpinas et al. (1995) evaluated students prior to implementing the programme, immediately upon concluding the programme and three months after programme completion. Results showed that the boys who participated in Second Step demonstrated significantly less aggressive behaviour than their control counterparts and that the pupils in the intervention group had greater violence-prevention knowledge than those in the comparison group. However, these effects were not observed at follow-up. A particularly interesting aspect was that positive programme effects were observed only in classes in which instructors had a positive attitude toward the programme. Attitudes and 'defaults' – both of the instructors and of the pupils – concerning violence and the prevention of violence thus proved to be central 'moderators' of the effectiveness of Second Step. A second study, by Orpinas et al. (2000), examined the effectiveness of Second Step as part of the multi-level approach 'Students for Peace'. In this investigation, no effects could be found. This result was put down to the fact that there was unsatisfactory dedication to the programme in the school system (again, a motivational factor) and the simultaneous implementation of intervention methods (e.g., mediation) in comparison schools. Sprague et al. (2001), however, found that the middle school programme, in combination with other prevention efforts that were examined, resulted in increased social competence and fewer disciplinary referrals in the participating group. Furthermore, in the McMahon and Washburn (2003) study the Second Step programme was also proven effective. Pupils who had participated in the programme knew more about violence prevention and respective competences. Moreover, their empathy towards others and pro-social behaviour improved. However, the results of this study are limited, since a comparison group was not included.

Van Schoiack-Edstrom, Frey and Beland (2002) examined the effects of Second Step on the attitudes of fifth and sixth grade children and found clear preventive effects. Results indicated that fifth grade students in the control group rated peer rejection of schoolmates more positively in the post-data collection than with the pre-data collection, yet attitudes toward peer rejection remained stable in the experimental group of children that was receiving the Second Step programme. The effects of the Second Step intervention were more marked in the sixth grade class, where only Second Step participants changed their positive attitudes toward physical aggression, verbal devaluation and social exclusion. The girls in

the sixth grade control group, however, evaluated social exclusion in the post-data collection more positively than at the pre-data collection and the boys in the comparison group rated physical aggression after the intervention as more positive than before. Moreover, the pupils in the Second Step group indicated that they anticipated fewer social difficulties in their everyday lives.

Evaluation of the Second Step programme for elementary schools

Grossman et al. (1997) examined programme effectiveness in 12 matched primary schools and a total of 49 classes. A total of 12 students were selected from each group for behavioural observations. In the intervention groups, 30 curriculum lessons were presented during the course of 16–20 weeks. Data collection took place before programme implementation, two weeks after the programme's conclusion and six months subsequent to programme completion. Data sources included teachers, parents and repeated behavioural observations. Based on behavioural reports of teachers and parents, no curricular effects could be found. The objective behavioural observations, however, indicated that children who participated in Second Step demonstrated reduced physical and verbal aggression. Behavioural observations in the canteen and on the playground further showed that children who participated in Second Step demonstrated increased neutral/prosocial behaviour as compared to students who were not involved in the programme. The group differences in aggressive behaviour remained stable six months subsequent to post-test evaluations. Whereas Grossman et al. (1997) failed to find effects relying on the behavioural assessments of teachers and parents, the study of Taub (2001) clearly shows effects not only by means of behavioural observations but also through assessments from teachers. According to teacher reports, the authors found a significant increase in social competences in the intervention group, while the comparison group showed no change. Furthermore, teachers indicated that aggressive behaviour was only less in the Second Step intervention group. Behavioural observations showed that solely the Second Step children complied in a prosocial manner with increasing frequency to adult instructions. These positive effects may reflect the motivation and commitment of the adults involved because in this study, as recommended by the developers of the programme, a 'support team' was formed. This team consisted of, among others, the school principal. Also, Frey et al. (2005) found clear positive outcomes of the curriculum in their very complex study on the efficacy and the theoretical basis of Second Step. Students who were taught Second Step showed reduced aggression, more pro-social goals, improved abilities to negotiate conflicts through structured discussions and, in the case of girls, greater cooperation. The students were also more content with the results of their social negotiations and sought adult assistance with less frequency. Thus, Second Step not only had positive effects on the children's behaviour, but also on their attitudes and goals. As the study of Edwards et al. (2005) shows, Second Step also improves knowledge on empathy, impulse control and anger management and promotes positive coping strategies with bullying, whereas negative coping strategies are reduced. Moreover, report card data revealed modest gains in prosocial behaviour. Cooke et al. (2007), by contrast, report quite inconsistent findings (e.g., significant improvements in caring behaviour on the one hand, a significant decrease in impulse control on the other hand). As both research groups just examined pre-post-effects in an intervention group (no control group was recruited), the validity of these findings, however, is very limited.

The first study on 'Faustlos' (Cierpka 2011; Schick and Cierpka 2010), the German-language version of the Second Step curriculum, also proves that an adapted version of Second Step maintains its effectiveness. As a result of receiving Faustlos, children

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demonstrated reduced anxiety according to both parent and self-report (Schick and Cierpka 2005). Gender-specific analyses showed that Faustlos had a particularly positive effect on the perspective-taking and cooperation of girls, whereas a reduction of aggressive behaviour could be found neither for girls nor for boys. In the latest Faustlos study, however, the curriculum proved especially effective in reducing aggressive behaviour in boys and in promoting empathy (Bowi, Ott, and Tress 2008). The Norwegian version of the programme – Steg for Seg – also shows positive effects. It resulted in significant increases in social competence for both boys and girls across the fifth and sixth grades and only for girls in seventh grade (Holsen, Smith, and Frey 2008). A second set of findings showed, that low-socioeconomic status students reported greater improvement in social competence, school performance and satisfaction with life compared to their middle- and upper-socioeconomic status peers (Holsen, Iversen, and Smith 2009).

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Evaluation of Second Step for preschool/kindergarten

While the elementary school and the middle school version of Second Step has been examined thoroughly in the research, the preschool/kindergarten curriculum has not been studied to the same extent. However, those studies that do exist, demonstrate moderate positive effects. McMahon et al. (2000) found an increase in knowledge relating to means of violence prevention, and the children in their study were less aggressive after concluding the programme and showed fewer behavioural disorders, however the interpretation of these results is limited by the lack of a control group. The first study of the effectiveness of Faustlos, the German-language Second Step programme for kindergarteners, which used a control group, indeed confirms the above-mentioned results. Faustlos led to significant improvements in social-cognitive competences, central for violence prevention. Thus, the Faustlos participants demonstrated improved ability to identify and differentiate between emotions, to solve social problems in more creative ways and to react to conflicts in a more socially competent manner, and they anticipated more negative consequences of aggressive behaviour. They also demonstrated a larger repertoire of calming techniques. Additionally, their increased social cognitive knowledge was shown through visible changes of behaviour in the kindergartens, as the assessments of educators and trained observers proved. Educators indicated that the children would negotiate disagreements more frequently with others and that more constructive suggestions would result from these negotiations. Furthermore, increased turn-taking was observed. Behavioural ratings demonstrated a reduced tendency for Faustlos children to respond in a verbally aggressive manner (Schick and Cierpka 2006).

Discussion

A review of the international evaluation studies on Second Step shows that in the majority of studies, Second Step children are more socially and emotionally competent and less aggressive than peers who did not receive the programme. In accordance with the outcomes of different meta-analyses (e.g., Wilson and Lipsey 2007), the effect sizes are mostly moderate and not completely consistent. In addition to the programme effects in focus, teachers and educators reported various positive side-effects of the programme, such as a noticeable improvement in the overall learning climate and a remarkable increase in verbal competence of the children (e.g., Bowi, Ott, and Tress 2008). It is particularly important to note that educators themselves reported benefiting from the programme.

The present results should now be extended in future studies for their ability to generalise and remain stable. In order to accomplish this, it is necessary to develop and

utilise specific measurement instruments for the outcome and process evaluation. Future research requires that 'contextual factors', for example the motivation of individuals implementing the programme or supporting transfer, are to be investigated as well as detailed investigation of the teacher reported side-effects like the promotion of verbal competence and the positive effects on their own professional work. Especially in European countries, the correlations and connections between school achievement and social-emotional knowledge should be explored more intensively. Here we see a promising research field, not least due to discussions of educational reforms, as US studies have demonstrated a close relationship between school success and social-emotional competences (Zins et al. 2004). Future studies on Second Step should also explore gender-specific effects of the programme, as they haven't been considered intensively enough in past studies. Moreover, there is a striking research deficit in the area of effectiveness of violence-prevention programmes on the question of how the gender of the instructors moderates the (gender-specific) effects of the programmes (interaction effects). Relevant research results would illuminate the gender-specific impacts of the programme and should allow for the development of gender-specific programme modules and/or a 'gender-aware' conceptualisation of the trainings. Besides conducting further studies on the above-mentioned issues, existing studies should be used for a meta-analysis on the effectiveness of Second Step and its various international versions.

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