

Prevention of Social Anxiety Disorder in Children and Adolescents: Necessary or Needless?

Sigrid Kühl^a Caroline Bender^b Hanna Kley^c Martina Krämer^b Brunna Tuschen-Caffier^b

^a Vitos Hospital Lahnhöhe, Marburg/Lahn,

^b Psychology Institute, Albert Ludwig University Freiburg,

^c Department of Psychology, University of Bielefeld, Germany

Keywords

Social anxiety · Social phobia · Social anxiety disorder · Children and adolescents · Prevention

Summary

With respect to the symptoms and course of social anxiety and social anxiety disorders, the following review shows that there is a strong need for programs that may prevent social anxieties or social anxiety disorders. The review summarizes the research literature regarding the effectiveness of different approaches aimed to prevent social anxiety or social anxiety disorders.

Schlüsselwörter

Soziale Angst · Soziale Phobie · Soziale Angststörung · Kinder und Jugendliche · Prävention

Zusammenfassung

In dem vorliegenden Überblicksbeitrag wird zunächst anhand der Symptomatik und des Verlaufs sozialer Ängste und sozialer Phobien vom Kindes- und Jugendalter bis hin zum Erwachsenenalter deutlich gemacht, dass es notwendig ist, wirksame Präventionsprogramme zu entwickeln, um soziale Ängste von Kindern und Jugendlichen bereits frühzeitig zu reduzieren bzw. einer Chronifizierung und Verschlimmerung entgegenzuwirken. Darauf aufbauend wird der Stand der Forschung zur Prävention sozialer Ängste bzw. sozialer Phobien im Kindes- und Jugendalter vorgestellt und bewertet.

Introduction

Certain forms of social anxiety (e.g., stage fright before a school theatrical performance) are part of a child's normal development. But for something like 1–5% of school-age children, many social situations arouse such strong anxiety or are so embarrassing, that the children cannot or can barely engage in age-appropriate activities such as going to school, sleeping over with friends, playing with children their own age, or talking to strangers – or they can endure these activities only with great anxiety [Kearney, 2005]. This is clearly exemplified in the following case study:

Typical symptoms of anxiety in social situations are described in this case study. They involve anxiety about negative evaluation by others and anxiety about being devalued in so-

Case study

Ten-year-old Mark (not his real name) is described by his parents as a child who has always been a bit timid and shy. It has always taken him longer than his siblings to settle into new social situations (e.g., in kindergarten or at the start of the school year), to the point that he could not go to class without coming down with stomachaches and anxiety. As time went by, this discomfort developed into such strong anxieties, that he would never raise his hand in class. If called on by the teacher, he would be so anxious that he could not think of the answer, even though he knew it. Writing something on the board in front of the class became simply impossible for him. He becomes completely numb with fear and unable to say a word. He withdraws from his classmates and is hardly ever invited to any extracurricular activities. If he were ever invited, he would not go, fearful of acting embarrassed and being ridiculed by the others.

cial situations. It is not easy to classify such anxiety disorders. There are basically three different diagnostic categories involved: the *social phobia (social anxiety disorder)* of the DSM-IV [300.23, DSM-IV-TR, American Psychiatric Association (APA), 2000; Saß et al., 2003], the *social phobia* described in the ICD-10 [F40.1, ICD-10, World Health Organization (WHO), 1992; Remschmidt et al., 2006] and the *social anxiety disorder of childhood* [F93.2, ICD-10, WHO, 1992].

A *social phobia* (300.23) fits the current classification criteria of the DSM-IV-TR [APA, 2000; Saß et al., 2003], a severe and persistent anxiety in social or performance situations, in which the person is afraid of being negatively evaluated by others or of acting embarrassed. Those affected therefore try to avoid such situations as much as possible, or find being confronted with such triggers very unpleasant. The diagnosis should only be made if the anxiety or avoidance results in significant distress or serious functional damage to school or job performance or social life. These criteria apply to adults as well as to children and adolescents. According to the additional diagnostic criteria for children, the child must be able to establish and maintain contact with people known to him or her. Furthermore, the child must have at least one age-appropriate social relationship outside the family. This allows a diagnosis to be made that is differentiated from other disorders that are characterized by abnormal social interaction, such as autism. The anxiety must be evoked not only by contact with adults, but also with age-mates. This takes account of the requirement for clinical relevance of the disorder, since it is common for children to be withdrawn around adults they do not know, and this does not necessarily have a pathological character.

Unlike in adults, anxiety in children and adolescents can be expressed by crying, temper tantrums, freezing up, or clinging to familiar people. In adolescents and adults, to distinguish from it from delusions, it must also be ascertained that the anxiety is seen as exaggerated and unfounded. This criterion may not be applicable to children, due to their lower level of cognitive development. For children and adolescents <18 years of age, the symptoms must have lasted for at least 6 months. This rules out the diagnosis if the social anxiety is only a temporary trait in a phase of development.

The criteria of *social phobia* according to ICD-10 [F40.1, DIMDI, 2009, WHO, 1992] are similar to those of the DSM-IV-TR. However, the operationalization of the ICD criteria is less detailed than in the DSM, and the presence of physical signs of anxiety is a mandatory classification criterion for the ICD-10, unlike for the DSM-IV-TR. On the last point, our experience with children shows that this is not always the case, as children do not always report their physical symptoms of anxiety.

The ICD-10 diagnosis of *social anxiety disorder of childhood* (F93.2) also covers anxiety in the social context. This is understood as consistent or recurring fear of unknown age-mates or of adults, associated with the avoidance of such con-

tacts. Prerequisites for the diagnosis are also that age-appropriate connections exist with caregivers, that the avoidance or fear exceeds what is typical for that age, and that significant social impairment is associated with the anxiety. The disorder must be manifest before age 6 and the symptoms must last for at least 4 weeks. At the same time, there should not be a generalized anxiety disorder of childhood (F93.80) [cf. Schneider and Döpfner, 2004]. These criteria are similar to the child-specific indications in the DSM-IV-TR. However, the DSM's subsumption of children's social anxiety under the adult diagnosis assumes a continuous development of the anxiety, while in the ICD, the division into child- and adult-specific anxieties arises from the assumption that these are qualitatively different manifestations. The assumption of continuity, in our view, fits better with current empirical research findings. Döpfner [2000] recommends, however, the criteria of social anxiety in childhood, over the ICD criteria for adults, since, for example, the strong weighting of physical criteria for social phobia ignores the fact that children report less about their physical symptoms than adults do. This is certainly an important aspect to be considered in the diagnosis of social anxiety in children and adolescents.

Furthermore, a number of proposed changes have been made for, among other things, the classification of social phobia in childhood and adolescence for the DSM-V version of the classification system that is currently in preparation [Bögels et al., 2010]. It is recommended that instead of the term *social phobia*, the term *social anxiety disorder* be used, since the disorder is rarely caused by clearly defined, specific stimuli, and those affected also do not consistently show avoidance behavior, as the concept of social phobia suggests. It is also recommended that the coding of a *generalized subtype* of social phobia be abandoned, in favor of showing the severity of the social phobia (or anxiety disorder) on a continuum (for one thing, because the subgroup classification is imprecise and ultimately the coding itself is based on a *quantitative* criterion [being anxious in *most* social situations]). It is further recommended that a subgroup encoding be approved that is supposed to be selected when the anxieties are exclusively related to public speaking and performance.

On the question of whether test anxiety should form a separate diagnostic category, or should be classified as a form of anxiety respecting negative evaluation in the context of social anxiety disorder, the experts point to the need for empirical research on this type of anxiety, and advocate not making any change right away, but leaving the relevant passage the way it is for now ('Individuals with social phobia often fear indirect evaluation by others, such as taking a test.' [DSM-IV-TR, p. 413]). Furthermore, the experts suggest looking at *selective mutism* as a very severe avoidance behavior (not talking), mainly by younger children, in the context of a social anxiety disorder. They argue for giving up the diagnostic category of *selective mutism* and instead using a classification of *social anxiety disorder*. The experts also believe that the diagnosis of

social anxiety disorder can already be made reliable and valid in younger children (up to age 6), and that no age-related sub-classification is necessary.

The proposals to improve the DSM classification criteria are thought-provoking and should contribute to improving the classification. To what extent they will be adopted in the revision of the DSM remains to be seen.

Relevance and Basic Preventive Measures

In addition to treating already manifest anxiety disorders, the need to preventively counteract the development of anxieties is often stressed [e.g., Albano, 2000; Bayer and Sanson, 2003; Hirshfeld-Becker and Biederman, 2002; Müller, 2002; Spence, 1994]. In favor of such an approach is the high proportion of children with an anxiety problem, the frequent persistence into adulthood of untreated problems, and the massive damage to the social, cognitive, and emotional development of the children. Especially with an early onset of the disorder, there is less likelihood of remission and higher risk of comorbid disorders such as depression or a substance disorder. Since early intervention can reduce or even prevent the formation of devastating impairments, the person affected is thus spared considerable suffering and the health-care system saves money. The need for preventive programs is also suggested by the observation that a large number of children with mental health problems did not receive the necessary therapeutic treatment or received it very late. A study by Nauta [2005] concluded that therapeutic success declines in anxiety problems of longer duration.

The goal of preventive measures is generally the reduction of psychopathological symptoms and the improvement or stabilization of mental health [Heinrichs et al., 2002]. Various classifications have been proposed to differentiate between intervention and prevention. According to Caplan [1964], primary, secondary, and tertiary prevention can be distinguished in the classic way. Primary prevention applies to at-risk populations, with the goal of reducing the incidence of disease by eliminating risk factors. With respect to social anxiety disorder, primary prevention programs could give special attention to families with massively occurring anxiety disorders or extremely inhibited children, in the sense of 'behavioral inhibition.' For secondary prevention, measures are taken to alleviate the severity or duration of an existing illness, thus reducing its prevalence. This form of prevention is today equated with curative therapy, i.e., the treatment of a disorder. Tertiary prevention includes interventions that attempt to minimize the effects of an illness, so as to maintain physical, psychological, and social functioning. Since the three levels of prevention are not always clearly distinguished from each other and from interventions, Gordon [1983] suggests the division into universal, selective, and indicated programs. This was accepted in 1994 by the Institute of Medicine. Universal

measures apply to the general population, without regard to risk factors; an example relating to social anxiety disorder would be school-based measures to promote social skills. Selective programs are aimed instead at risk groups with increased likelihood of developing a disorder – in our context, for example, children of parents who have anxiety disorders. Indicated measures are intended for individuals who already exhibit prodromal signs of a disorder, but not yet to the extent of a clinically relevant disorder. Here, the aim is to prevent the development or persistence of a manifest disorder, including comorbid problems.

To achieve these goals, prevention programs should satisfy various requirements [Heinrichs et al., 2002]. A theoretical foundation should ensure that the contents of the programs are linked to proven strategies to reduce the problem. Apart from reducing the incidence of the childhood behavior disorder and the burden it imposes, consideration should be given to the stability of the results. In addition, the programs should be reasonably priced and easily accessible, and well accepted by those concerned. Last but not least, empirical validation of the programs is required, using the same criteria as are used for the evaluation of interventions [e.g., Kendall and Flannery-Schroeder, 1998; Reinecker, 2000].

Need for Prevention of Social Anxiety Disorders

According to retrospective statements by adult patients, social anxiety disorder begins in early to middle adolescence, which means between the ages of 10 and 17 [Davidson et al., 1993; DeWit et al., 1999; Faravelli et al., 2000; Magee et al., 1996; Müller, 2002; Schneier et al., 1992]. The generalized subtype of that seems to be an average age of 11–12 years, appearing earlier than the specific subtype of 14–17 years [Mannuzza et al., 1995; Wittchen et al., 1998]. In clinical sampling, the data on onset of illness show strong scattering. There is data on occurrence at 8 years of age [Beidel and Turner, 2007]; on the average, social anxiety disorder occurs in the clinical context between ages 11 and 12 [Strauss and Last, 1993]. About 47% of the affected persons also indicate that even before age 10, they had suffered with at least sub-clinical social anxieties and had been shy since early childhood [cf. Rapee, 1995]. According to Asendorpf's two-factor theory [1989], the social apprehensiveness of shy children develops from about the beginning of the second grade, while the characteristic temperament of social inhibition may have existed since early childhood.

The diagnosis of anxiety disorder in childhood and adolescence, overall negative affectivity of the child, and high levels of childhood behavioral inhibition were found to be predictors of social anxiety disorder in adulthood [Hirshfeld-Becker et al., 2008].

Overall, the untreated course of social anxiety disorder is described in the literature as chronic [Beidel et al., 1996; Juster and Heimberg, 1995; Schneier et al., 1992; Wittchen et

al., 1992]. Thus in a retrospective study of over 1,000 people between the ages of 15 and 64, regarding the lifetime prevalence of social phobia according to the DSM-III-R, an average 25-year duration of the disorder was reported, with half of those affected also meeting the criteria for the disorder at the time of the study [DeWit et al., 1999]. Other retrospective studies in the general population show similar findings [e.g., Davidson et al., 1993], and in clinical samples too, a very long duration of the disorder was reported, with an average of 10–21 years [e.g., Lelliot et al., 1991]. The results of prospective studies are comparable, such as the Harvard/Brown Anxiety Research Program (HARP), which, among other things, studied the course of social anxiety disorder in 176 people over a period of 11–13 years [Keller, 2003]. 6 months after the first test, only 8% of the sample was in remission; after 2 years, 20%; after 5 years, 27%; and after 8 years, 36%. For less than 50% of the initial sample, after 8 years the disorder was partially in remission. The prognosis for social anxiety disorder as a whole is thus less favorable than for panic disorder or major depression, which were also investigated in this project. Furthermore, nearly 30% of those whose social anxiety disorder had gone into remission, suffered a complete relapse within 4–5 years.

Initial studies with socially anxious children and adolescents yield the following results: In the Bremer Jugendstudie (Bremen Adolescent Study) [Essau et al., 1998], according to statements made retrospectively, more than a quarter of the adolescents were still suffering from social anxiety or avoidance behavior for months or years afterwards. In about 7%, their subclinical anxieties deteriorated to the point of full-blown social anxiety disorder [Müller, 2002].

Risk factors for chronic social anxiety disorder have been identified as early onset, comorbid mental or physical disorders, and low educational level [Davidson et al., 1993; DeWit et al., 1999; Müller, 2002]. The study by DeWit and colleagues [1999] showed that onset of a disorder before age 7 reduced the chance of remission by more than 8 times, compared to onset after age 13.

Thus we can draw the following conclusions concerning the need for preventive interventions for social anxieties or social phobias in children and adolescents:

1. 1–5% of all children and adolescents suffer from a manifest social anxiety disorder, and 1 out of every 3–5 children has a subclinical form of the disorder – i.e., is very shy.
2. The quality of life of those affected is particularly diminished at school and in job training. They also suffer from lack of social contact and low acceptance by peers. At school, they are often conspicuous in class for poor performance or absenteeism. Retrospective findings on the low socio-economic status of adults with social anxiety disorder suggest that there are long-term impairments. Moreover, in both manifest and subclinical social anxiety disorder, there is a high risk of sequelae such as depressive disorders or disorders involving psychotropic substances.

3. The low treatment rate in children and adolescents with mental health problems generally; the silent suffering of those afflicted with social anxiety disorder, compared to those with externalizing disorders; and the barely awakened research interest in childhood social anxiety disorder, mean that those concerned rarely receive adequate professional support. Given the early age of onset and the chronic course of the untreated disorder, there is a particularly great need for early intervention.
4. International studies show the effectiveness of cognitive-behavioral therapies for treatment of social anxiety disorder in childhood and adolescence, with cognitive-behavioral therapy programs being the ones that have primarily been evaluated up to now [e.g., In-Albon and Schneider, 2007; Silverman et al., 2008].
5. First results from Australia also show the applicability of the proven methods of therapy for this prevention area, even though they have hitherto only been tested for groups of children with various different anxieties. Although there is overlap between the social and other anxiety disorders, the differences – e.g., in appearance, typical age of onset, or relevance of caregivers to perpetuation of the disorder – mean that a disorder-specific treatment still seems reasonable [Dadds et al., 1997; Lowry-Webster et al., 2001].
6. In the German-speaking world, there are currently no empirically proven approaches to the treatment of social anxiety in children and adolescents. Moreover, evidence-based prevention is limited to a few universal programs for improvement of education skills or coping with stress.

The State of Prevention Research on Social Anxiety in Childhood and Adolescence

Prevention research has received greater attention in recent years. Thus four meta-analyses of childhood behavior disorders have been published in the USA, two of which are devoted to preventive training for parents [Serketich and Dumas, 1996; Taylor and Biglan, 1998], one on prevention of externalizing disorders [LeMarquand et al., 2001], and one on school-based prevention programs [Greenberg et al., 2001; cf. Heinrichs et al., 2002]. Greenberg and colleagues [2001] also address in their summary the prevention of internalizing disorders, with the majority of programs being those that pertain to prevention of depression and reduction of stress. Regarding anxiety prevention, evidence of efficacy is mentioned for only one project: Dadds and colleagues [1997], in their school-based ‘Queensland Project on Anxiety Prevention,’ using the same manual as for their intervention studies (‘Coping Koala’), discuss cognitive, behavioral, and physiological coping strategies for children between the ages of 7 and 14. Another goal is to use a short training program to counter negative family influences on anxiety formation. This means an indicated prevention program or an early intervention,

since both children with minor disorders and children with a severe anxiety disorder are included. The children are contacted in the school setting and groups of at-risk children are formed. At the end of the program, according to their evaluation study of 128 children, there was no difference in the rate of manifest anxieties between the intervention group and the untreated control group. However, 54% of the children in the risk group with subclinical anxieties developed a manifest anxiety disorder during the 6-month waiting period, compared to 16% in the intervention group. Moreover, the rate of severe anxiety disorders was also more clearly reduced in the intervention group than in the control group. After 12 months, there was no longer any difference between the groups, whereas after 24 months, there was a significant difference in diagnostic status: 20% of the intervention group, compared with 39% of the control group, met the criteria for an anxiety disorder [Dadds et al., 1999]. Furthermore, the parents of the intervention group report less avoidance by the children at this point in time, than the parents of the control group; the clinical evaluation was also more favorable for the intervention group. Although the results vary from one time to another, this is still a quite promising approach.

Another empirically studied program is the 'FRIENDS for children' project of Lowry-Webster, Barrett, and Dadds [2001]. This is intended for the universal prevention of anxiety and depressive symptoms in children between the ages of 10 and 13. The 10-week program, with two refresher sessions, is also oriented toward the 'Coping Koala Intervention Program'; it is conducted in a school setting and supplemented by 4 parents' evenings. The authors demonstrate a reduction of anxiety symptoms in a sample of 594 children, as well as a reduction of depressive symptoms in a risk group with an elevated anxiety level before the program. Barrett and Turner [2001] also show the feasibility of the method with teachers as team leaders, in the fifth through seventh grades. Essau [2002] investigated the applicability of a German version of the FRIENDS program in elementary schools. The first results, in 124 children between the ages of 8 and 12, showed reduced symptoms of social anxiety disorder, obsessive-compulsive disorder, and generalized anxiety disorder. The children's social skills also improved. Eimecke and colleagues [2010] are studying the effectiveness of a complementary parent training program, as part of a modified version of the FRIENDS program for the indicated prevention of anxiety and depressive disorders in 8- to 12-year-old children. The parent training program had no additional effect on symptom reduction in the post-test. Controlled studies are pending to assess the long-term effectiveness of the FRIENDS program in the German-speaking world.

Melfsen and colleagues [2003] have developed and evaluated a small-group cognitive-behavioral training program for children of ages 9–12. It includes cognitive interventions, exposure exercises, and training in social skills. Initial findings of a pilot study in a wait list-control group design, with $N = 10$

children (training group) and $N = 10$ children in the waiting group, indicates improvement in the training group at the 3-month follow-up.

Ahrens-Eipper and Leplow [2004] have developed a cognitive-behavioral training program ('Mutig werden mit Til Tiger,' or 'Be Brave with Til the Tiger'), designed for children aged 5–10 who suffer from social insecurity. In 2 individual sessions and 9 group sessions, socially effective behavior is practiced with the children, step by step. They learn to systematically observe their own behavior and to try out alternative behavior. They also learn a relaxation technique (progressive muscle relaxation) to help them relax in stressful situations. Til, a shy tiger (in the form of a hand puppet), stays with the children as a role model throughout the intervention program. The training leader playfully uses this hand puppet to introduce the individual components of the intervention program. Topics of the intervention program include: making contact with other children; doing something in front of the group; making a legitimate request; saying no/rejecting something; going shopping alone; defending themselves against teasing, without violence. The interventions are made in a playful way and use lively graphics and child-friendly materials. The program was evaluated in a first pilot study of 93 children with social anxiety, from 5 to 10 years of age. Children in the intervention group showed a greater reduction of social insecurity than the control group without intervention. Self-esteem and social skills increased in the intervention group, but not in the control group. The results indicate that the program can be appropriate as an indicated prevention program for children with social anxiety.

For children between the ages of 8 and 14, Tuschen-Caffier et al. [2009] developed a cognitive-behavioral program designed for the indicated prevention of and therapy for social anxiety disorders. The program includes three intervention modules linking the diagnostic phase and the cognitive preparation for therapy (cognitive interventions, behavior-building interventions, exposure exercises), which focus specifically on social anxiety symptoms and social anxiety situations; the program is completed by a module for prevention of relapse and for self-management. The intervention program has so far been conducted and evaluated in a group format. Initial findings exist from two pilot studies on the effectiveness of indicated prevention programs [Kühl, 2005; Tuschen-Caffier et al., 2009]. 17 children from 8–13 years of age, mainly suffering from subclinical social anxiety or social phobia, participated in the first study, which was an untreated-control group design. Those who took the training program, compared to the waiting group, showed a clinically significant reduction of social anxiety, in the judgment of both parents and children. 53% of parents and 70% of children reported a significant improvement. The children described a clear decrease in their anxiety about being judged negatively by others; the effect sizes (Cohen's d) ranged from 0.42 to 0.85, a medium effect. The improvements were still evident 6 months after comple-

tion of training, and had increased to some extent. The training program in a second pilot study was a slightly modified version (notably with the extension of training to 5 sessions), using a wait list-control group design with 24 children from 8–13 years of age, with social anxieties up to social phobias [Kühl, 2005]. 78% of the parents and 83% of the children described a clear improvement in symptoms. In the parents' judgment, the effect sizes for individual symptom areas were between $d = 0.64$ and 1.74 , indicating a significant reduction of anxiety symptoms and also of depressive mood. In the children's judgment, there was also, at the end of training, a clear reduction in anxiety about being evaluated negatively ($d = 0.68$) and 6 months later ($d = 0.55$). The intervention program is therefore well suited to substantially reduce social anxiety. It was also recently shown in a randomized controlled treatment study of 55 children with a diagnosis of social phobia, that the program for treatment of social phobia is very effective [Tuschen-Caffier et al., 2010].

Furthermore, Petermann and Petermann [2006] developed a program to train socially insecure children, which is used for preschool children up to age 7 and for school children from 8–14 years of age. The training program consists of individual and group sessions in which the children learn techniques self-verbalization and self-instruction, as well as appropriate forms of emotional expression and other socially effective behaviors. Discussions were also held with the parents (partly with the children present) in order to reduce parental behavior that perpetuates social anxieties. The program was recently evaluated in a randomized intervention-group and waiting control-group design, with a total of 19 children, on the basis of parental judgments ($N = 10$, intervention group; $N = 9$, waiting-control group) [Ortbandt and Petermann, 2009]. The parents perceived good effects on reducing separation anxiety, generalized anxiety, and specific phobias; but, surprisingly, only weak effects on the reduction of social anxiety on which the program was thematically focused. This result makes clear that further randomized controlled trials are needed to assess the program's effectiveness.

In a recent randomized controlled trial in Norway, Aune and Stiles [2009] conducted an intervention program for prevention of social anxieties and social anxiety disorders, with 801 students, who were compared with 638 students in the control group. The program's interventions were aimed not only at the students, but also at the social environment (teacher, school staff, parents, social workers, pediatricians). The children's social environment in the experimental group received a special psychoeducational program for social anxiety and social anxiety disorders (e.g., for symptoms, etiology, therapy, and prevention). In addition to the psychoeducation, there was an opportunity for the children to build social skills through practical exercises. There were significant effects in the reduction of social anxiety in the experimental group; those children continued to develop, such that in the 1-year follow-up, they had significantly fewer symptoms of social anxiety disorder.

Von Marees and Petermann [2009] evaluated a school-based training program to promote social-emotional skills for children of elementary school age, in a quasi-experimental design. The training program consisted of 26 units of 45-90 min each, in which the children learned basal skills of emotional competence (e.g., to recognize and understand their own and others' feelings) and social competence (e.g., assertiveness); they also learned a problem-solving model for how to behave in conflict situations (such as to describe the problem adequately and to come up with possible solutions). The program was evaluated in 85 children from 5 classes, of which 3 classes belonged to the training group ($N = 58$) and 2 to the control group ($N = 27$). The results in pre-post comparison and in comparison to 1-year follow-up suggest, from the teachers' perspective, an increase of social skills and fewer social-emotional problems (e.g., aggressive and oppositional behavior) among the children who had received training. The children did not think there was such an effect, however. The program is therefore very promising in principle, although it is still unclear to what extent it can also help to prevent the formation of social phobias.

For adolescents in the German-speaking world, the program 'GO – Gesundheit und Optimismus' ('GO – Health and Optimism') was developed by Neumer et al. [2001] as a universal measure for prevention of anxiety and depression. Here, students were taught, in 16-h blocks, the elements typical of treatment for the disorder, such as modification of dysfunctional beliefs, and factors that promote health (e.g., social skills). The evaluation of the program included a sample of 612 adolescents between the ages of 15 and 17, who were randomly assigned by class to a treatment condition or a control condition. The values for the experimental group tended to improve overall, compared with the control group, although the effect sizes on individual cognitive scales were not in the significant range. The improvements were also no longer present at the 6-month follow-up [Manz et al., 2001]. The authors propose to optimize the program by extending it or having refresher sessions a few months after the intervention. They also surmise that the program takes effect gradually, and suggest follow-up examinations after 1-2 years. The authors classify their overall approach more as health promotion than as prevention. They also suggest, given the generally disappointing results of programs for selective groups outside the formal school framework, that because their program's content took place within the school class as a whole, there was a limitation of intimacy and inhibitions in bringing about the group processes.

Conclusions and Outlook

In summary, it can be stated that, despite the often-postulated need for preventive measures to reduce the incidence and consequences of anxiety disorders, little exists in the way of

empirically validated programs. The Australian projects on general anxiety prevention [‘Queensland Project’ or ‘FRIENDS for children’; Lowry-Webster et al., 2001] as well as the Norwegian Prevention Project, which concentrates on prevention of social anxiety disorder [Aune and Stiles, 2009], are exceptions, with their quite promising results. In Germany there are few comparable evidence-based programs that are explicitly devoted to the prevention of social anxiety disorder. However, the first findings for universal prevention, as for indicated prevention, are quite promising. But it is important that the programs found to be effective in the first pilot stud-

ies [e.g., Ahrens-Eipper and Leprow, 2004; von Marees and Petermann, 2009; Tuschen-Caffier et al., 2009], also meet the requirement of durability. This touches on the issues of implementing prevention programs, and thus also the (long-term) financing of such programs through individual research projects.

Disclosure Statement

The authors declare that there is no conflict of interest.

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