

“Mein Körper gehört mir!”

*A replication effect study about a German child
sexual abuse prevention program*

**Master Thesis
Clinical and Developmental Psychology**

*Henning Heck
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rijksuniversiteit
groningen

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abuse prevention program*

„Mein Körper gehört mir!“

*Een replicatie van een effectstudie over een Duits
preventieprogramma tegen seksueel misbruik van
kinderen*

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„Mein Körper gehört mit“

Eine Effektstudie über ein Präventionsprogramm gegen sexuellen Kindesmissbrauch

In Kooperation mit dem Jugendschutz der Stadt Nordhorn und dem Jugendschutz des Landkreises Grafschaft Bentheim wurde das Projekt organisiert durch:



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Authors note

When I started the research project for my master thesis, an evaluation of a German child sexual abuse prevention program, a lot of interesting and varied work lay in front of me. There are several ways to evaluate a prevention program. My employer, the *Beratungsstelle Hobbit*, an advice centre for victims of (sexual) abuse in Nordhorn, Germany, gave me a free hand in most things concerning the planning and implementation of the evaluation. However, such a project can never be done without the help and support of many others. I greatly acknowledge the support from all schools that were involved in the project. I also greatly thank Nadine Huisken and Theresa Meyering from the *Beratungsstelle Hobbit* for assisting the interviews, Nick Schoemaker and Tina Begemann for correcting the proofs, and Lissi Völker who created lovely comics for the questionnaires. Furthermore, I thank Marieke Boelhouwer and Wieke Dalenberg from the Rijksuniversiteit Groningen. Marieke introduced me into different approaches that can be applied in order to evaluate prevention programs, and Wieke gave me constant feedback on my writing. I found both very helpful. Last, but not least, I thank all the children without whom the project could not have been carried out - it was a pleasure to work with you!

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Summary

“Mein Körper gehört mir!”, a German child sexual abuse prevention program, was evaluated with a first group-randomized study in 2007. The study used simple questions as measure tool. It found the program effective in teaching children self-protective skills. The present study replicates the first study with a different measure tool. A vignette questionnaire was elaborated. Overall effectiveness as well as the effects of the core concepts of the play were measured with the vignette questionnaire. 137 third grade children (mean age = 9.44, SD = 0.49) participated as experimental and control group. A follow-up measure (2 months) was conducted to evaluate if effects were sustained.

There was a significant higher increase of self-protection skill scores in the experimental group compared to the control group. The intervention was effective especially with regard to core concepts that address sexual abuse directly. Future studies on the program might focus on mediator variables (e.g. more elaborate analyses of the core concepts) or moderator variables (e.g. personal traits or cultural background of the participants). Longitudinal designs that are able to test the transfer from cognitive protective skills into real life situations are also highly desirable. Furthermore, the vignette questionnaire of the current study could be evaluated and validated in future research, so that a standardized measurement material for German CSAP programs would be developed.

Samenvatting

Het Duitse preventieprogramma tegen seksueel misbruik van kinderen, „Mein Körper gehört mir!“, werd in 2007 voor de eerste keer wetenschappelijk onderzocht. Het onderzoek maakte gebruik van eenvoudige vragen om het effect te meten. De belangrijkste conclusie was dat het preventieprogramma bijdraagt aan een hogere cognitieve weerbaarheid van kinderen tegen seksueel misbruik. Dit huidige onderzoek onderzoekt of de resultaten uit het eerdere onderzoek gevalideerd kunnen worden met behulp van een andere methode. Er werd een vragenlijst ontwikkeld die korte scenario's bevatte. Met behulp van deze vragenlijst werden zowel de algemene effectiviteit van het programma als ook de effecten van de afzonderlijke elementen (core concepts) van het programma geëvalueerd. In totaal namen 137 kinderen (gemiddelde leeftijd = 9.44, standaarddeviatie = 0.49), opgesplitst in een experimentele en een controle groep, deel. Er vond een follow-up (2 maanden) plaats. Kinderen uit de experimentele groep toonden een hogere weerbaarheid tegen seksueel misbruik nadat de interventie had plaats gevonden dan kinderen uit de controle groep. De resultaten ondersteunen de bevindingen uit het eerdere onderzoek. Verder bleek dat de interventie vooral effectief was op elementen uit het programma, die direct betrekking hadden op het onderwerp “seksueel misbruik”. Vervolgonderzoek over “Mein Körper gehört mir!” zou zich op moderator variabelen (b.v. persoonlijke eigenschappen of culturele achtergrond van de deelnemers) en mediator variabelen (b.v. uitgebreider onderzoek over de bijdrage van de enkele elementen van het programma) kunnen concentreren, zodat het programma op basis van wetenschappelijk onderzoek verder ontwikkeld en aangepast kan worden. Bovendien zijn in de toekomst longitudinale designs wenselijk die de toepassing van cognitieve weerbaarheid in de praktijk meten. De vragenlijst met de korte scenario's uit dit onderzoek zou in de toekomst onderzocht en gevalideerd kunnen worden, zodat er een gestandaardiseerde meetmethode voor Duitse preventieprogramma's tegen seksueel misbruik van kinderen ontwikkeld kan worden.

Zusammenfassung

Das Deutsche Präventionsprogramm gegen sexuellen Kindesmissbrauch "Mein Körper gehört mir!" wurde zum ersten Mal im Jahr 2007 nach wissenschaftlichen Maßstäben evaluiert. Die damalige Studie verwendete einfache Fragestellungen, um einen Effekt zu messen. Die Resultate ergaben, dass Kinder nach Teilnahme am Präventionsprogramm erhöhte Fähigkeiten hatten, um sich gegen sexuellen Missbrauch zu wehren. Die vorliegende Studie untersucht, ob die Resultate der ersten Studie über "Mein Körper gehört mir!" bestätigt werden können. Zur erneuten Evaluation wurde ein Fragebogen mit kurzen Szenarien entwickelt. Mit diesem Fragebogen wurden sowohl die allgemeine Effektivität des Programms sowie die Effektivität der einzelnen Elemente des Programms getestet. Insgesamt nahmen 137 Kinder an der Studie teil (Durchschnittsalter = 9.44, Standardabweichung = 0.49). Die Kinder waren aufgeteilt in eine experimentelle und eine Kontrollgruppe. Eine zweite Nachmessung wurde zwei Monate nach der Intervention durchgeführt. Die Ergebnisse zeigen, dass Kinder der experimentellen Gruppe durch Teilnahme am Programm einen höheren Zuwachs an Selbstverteidigungsstrategien gegen sexuellen Missbrauch erwarben als Kinder aus der Kontrollgruppe. Die Resultate unterstützen somit diejenigen der ersten Studie über "Mein Körper gehört mir!". Darüber hinaus hat sich gezeigt, dass das Präventionsprogramm vor allem effektiv ist in Bezug auf solche Inhalte, mit denen das Programm sexuellen Kindesmissbrauch direkt thematisiert. Zukünftige Studien können sich auf moderator Variablen (z.B. persönliche Eigenschaften oder kultureller Hintergrund der teilnehmenden Kinder) oder mediator Variablen (z.B. ausgedehntere und differenziertere Studien über die separaten zentralen Programmt Themen) konzentrieren, so dass das Programm auf der Grundlage von wissenschaftlichen Studien weiterentwickelt werden kann. Des Weiteren sind Langzeitstudien über das Programm wünschenswert, die die Anwendung der kognitiven Selbstverteidigungsstrategien in der Realität überprüfen können. Auch könnte der Fragebogen, der für diese Studie entwickelt wurde, in zukünftigen Untersuchungen evaluiert, validiert und weiterentwickelt werden, so dass eine standardisierte Messmethode für deutsche Präventionsprogramme gegen sexuellen Kindesmissbrauch erarbeitet würde.

1 Introduction

Prevalence and negative consequences of child sexual abuse

Child Sexual abuse is a widespread problem in every country that has been involved in research on that topic. Finkelhor (1994) reviewed data about child sexual abuse prevalence from 20 different countries. Though data can hardly be compared due to different methodology (e.g., definition of child sexual abuse or different ages of subjects used in the studies), the reviewed studies found prevalence rates ranging from 7% to 36% for girls and 3% to 29% for boys. In 2007, Pereda, Guilera, Forns, & Gómez-Benito also reviewed studies on child sexual abuse prevalence rates. Their review included data from 21 countries. Different from Finkelhor (1994), Pereda et al. (2007) included non western countries and countries other than North America and Europe into their review. The authors found a prevalence from 0%-53% for girls and 0%-60% for boys. Surprisingly, in one of the studies conducted in China no child sexual abuse was found. Almost all of the other 38 studies the authors reviewed found high prevalence rates. The results confirmed that child sexual abuse is an international problem.

Empirical studies confirmed that child sexual abuse has negative impacts on the victim's health. Kendall-Tackett, Williams, and Finkelhor (1993), for example, reviewed 45 studies about child sexual abuse. The reviewed studies included subjects that were 18 years or younger. They compared victims of sexual abuse with children that had not been sexually abused. All reviewed studies made use of quantitative data. The authors concluded that abused children show more psychopathological symptoms than non-abused children: “(F)ears, posttraumatic stress disorder, behaviour problems, and poor self-esteem occurred most frequently along a long list of symptoms noted”.

First prevention strategy against child sexual abuse

Given the prevalence as well as the harming nature of child sexual abuse, different strategies were formed to address this problem. Literature often describes three strategies (e.g., Marquardt-Mau, 1995): first prevention, second prevention and third prevention. Second and third prevention both concentrate on children who have been sexually abused in the past. First prevention, on the contrary, addresses all children in general. Table 1 lists the different strategies against child sexual abuse.

Table 1: The different prevention strategies against child sexual abuse. The first column lists the different strategies, the second column describes what the different strategies contain.

Strategies	Content of the strategies
First Prevention	Children are taught prevention strategies against sexual abuse. Generally, all children are addressed in this strategy.
Second Prevention	Children who were sexually abused are taught prevention strategies so they are better able to protect themselves against future abuse.
Third Prevention	Therapeutic intervention for victims of child sexual abuse to help them to cope better with the abuse.

The current study concentrates on first prevention strategy, which intends to empower children through child sexual abuse prevention programs (CSAP programs). These programs inform children about sexual abuse and teach them self-protective strategies so they become strong enough to protect themselves from possible abuse. As a result, children are hopefully prevented from becoming a victim of sexual abuse and costs can be saved through a reduced need for second or third prevention strategies (Topping & Barron, 2009).

Child sexual abuse prevention programs - weak points in evaluation

Given the above advantages of first prevention, a lot of school-based CSAP programs have been developed in the USA from the 1980s on (Finkelhor & Dziuba-Leatherman, 1995). The advantage of school-based programs is that they reach a great amount of children (Topping & Barron, 2009). In the meanwhile, a considerable amount of quantitative empirical studies tested if Anglo-American CSAP programs are effective in teaching children prevention strategies. Several systematic reviews and meta-analyses were written about these studies (e.g., Daro, 1994, Rispen, Aleman & Goudena, 1997, Topping & Barron, 2009). The reviews found the programs generally effective. However, several restraints are mentioned. Topping

and Barron (2009), for example, mentioned several weak points in research methodology. Eight of the 22 studies they reviewed did not use comparison/control groups. It cannot be ruled out that practice effects (subjects improve on the features they are measured on just because they underwent the measurement) are responsible for increases in the post-tests if a study does not use a comparison or control group. There is also a lack of replicate studies. The authors found that only two of the 18 programs they reviewed were evaluated more than once. The Task Force of Division 12 (Clinical Psychology) of the American Psychological Association (APA) advises that “(a)t least two good between-group design experiments” should be conducted in order to measure the effectiveness of children treatment and prevention programs (Chambless & Ollendick, 2001). Topping and Barron (2009) also criticised that the effectiveness of the single elements (also called core concepts) of the programs had not been evaluated. It is necessary to examine the contribution of program’s core concepts in order to refine and improve programs.

German child sexual abuse prevention programs – a lack of empirical evaluation

In Germany, there are still far less empirical studies about prevention programs compared to Anglo-American countries. CSAP programs started to develop in Germany in the 1990s. The programs followed the ideology of American programs, which is to empower children. Therefore, German programs adopted the core concepts of its Anglo-American models. Eck and Lohaus (1993), for example, developed a CSAP program on the basis of the core concepts that reoccur in different American programs. Table 2 lists the core concepts that Eck and Lohaus included into their program.

Table 2: Core concepts of the CSAP prevention program by Eck & Lohaus (1993). The first column lists the different core concepts, the second column describes what the core concepts contain.

Core Concepts	Content
My body belongs to me	The child is taught to own the right to decide over its body
Good and bad touches	The child is taught to differentiate between positive (e.g. gentle) and negative (e.g. aggressive and inappropriate) touches
Secrets	The child is taught that there are secrets (often referred to as “bad secrets”) that should not be kept
Trust your intuition	The child is taught to trust its inner feelings when it interacts with other people
Saying no	The child is taught to say no
Help	The child is educated about people, systems and institutions the child can refer to in case it needs help or support

Eck and Lohaus also evaluated the program they had developed. It was one of the first empirical evaluations of a German CSAP program (including a pre-test, post-test and a follow-up measure as well as a control group). The authors found that self-protective skills of preschool children increased with regard to every core concept after taking part in the program. Despite these early and encouraging results, Germany, however, neglected to evaluate its prevention programs subsequently. Kindler surveyed the evaluation of child sexual abuse prevention in 2003. In the prologue of his book, the author stated that the link between empirical research and practical work of sexual abuse prevention had only recently started to develop in Germany. He demanded to expand the cooperation between research and practical prevention work in order to optimize sexual abuse prevention.

One might ask why an evaluation of German programs is necessary when research indicates that its Anglo-American models are effective. In this regard, Marquard-Mau emphasized that it is necessary to evaluate how adoptions of American programs fit into a different cultural context. For example, countries might differ with regard to sex education.

Children who experienced a different level of sex education might not have the same benefit from the same or a similar sexual abuse prevention program. The author furthermore described that prevention programs develop differently in different countries, even though the underlying ideology (in this case: empowerment) is the same. With regard to increasing internet-initiated sex crimes, for example, some programs recently added the concept “Internet chatting” into their curriculum. With this concept, prevention programs teach children that adults might pretend to be a peer and use the internet to get into contact. When programs develop differently, these developments must be evaluated again so that empirical research remains up to date.

In conclusion, three points have been worked out above. (1) There is an international lack of replication studies on CSAP programs, (2) there is an international lack of evaluations with regard to the separate core concepts of CSAP programs, (3) there is a general lack of empirical evaluations with regard to German CSAP programs.

The CSAP program “Mein Körper gehört mir!”

In 1995, the *Theaterpädagogische Werkstatt* in Osnabrück, Germany, developed the CSAP program “Mein Körper gehört mir!”. It is an interactive theatre play conducted with third and fourth graders at primary schools. Today, it is one of the most widespread CSAP programs in Germany. In 2007, Bowi and Krause evaluated the program for the first time. The authors conducted an empirical effect study, including an experimental and a control group as well as a follow-up measure six months after the intervention took place. The experimental group was furthermore separated into two groups: one group with whom teachers discussed the content of the play during school lesson after the intervention, and another group with whom teachers did not rework the program. All children were interviewed with regard to their knowledge on sexual abuse before and after the intervention took place. They were, for example, asked “What is a secret?”, “What is a ‘no-feeling?’”, or “What is sexual abuse?”. Children were also asked how they found the play and if the play scared them. The authors found that knowledge about sexual abuse increased significantly from pre-test to post-test and follow-up in the experimental group. The control group also increased slightly from pre-test to follow-up. The intervention however had a significant influence on the increase within the experimental group. Only 2% of the children stated that the play scared them and 90% stated that the play made them strong. The results with regard to the separate groups in the experimental group furthermore indicated that refreshing the play’s educational objectives during school lesson had a significant positive influence on children’s later knowledge about sexual abuse.

Context, research question and hypotheses of the present study

In 2010, the *Beratungsstelle Hobbit*, a counselling centre for victims of sexual abuse, organised for “Mein Körper gehört mir!” to be performed in the local region, the *Grafschaft Bentheim*. 28 schools registered for the prevention program. Finally, 2025 children took part. Within this context, the present study evaluates the program with a different research method than the one that the first study applied. Short scenarios (vignettes) are used in the questionnaire. Short scenarios can lead subjects to sensitive issues they have not experienced themselves (Barter & Renold, 2000). They are furthermore able to take the ambiguous relationship between perpetrator and victims of child sexual abuse into account. With the vignette questionnaire, the author hopes to test sexual abuse self-protective skills in children more realistically than simple questions can do.

Eck and Lohaus (1993) evaluated the separate core concepts of their program. They found that every core concept of their program is effective. However, lots of studies about prevention programs lack an evaluation of the separate core concepts. Thus the vignette questionnaire of the present study will furthermore be used to evaluate the effectiveness of the core concepts of the play separately. Table 3 lists the core concepts of “Mein Körper gehört mir!”.

Table 3: Core concepts of „Mein Körper gehört mir!“. The first column lists the titles of the core concepts, the second column describes what the core concepts contain.

Core concepts	Content
No-feeling	The children are educated about „yes-“, and „no-feelings“. Yes-feelings mean positive and good feelings, while no-feelings indicate a somehow odd and negative feeling
Saying no	Children are taught that they should say no when they have a no-feeling. E.g. when a friend brushes your hair in a way that it hurts so that it does not feel good anymore.
Internet chatting	Children are taught that someone they met in an internet chat might not be a peer but, in fact, an adult who wants to meet the child in order to sexually abuse it
Not to go with a stranger	Children are taught that they should not go with a stranger, unless they have a) a yes-feeling, b) their parents know where the child is, and c) the child would get immediate help in case it needs help
Blame	Children are taught that the perpetrator is to blame for the abuse, not the child
Bad secrets	Children are educated about good and bad secrets. Bad secrets are supposed to provoke a no-feeling and should, different from good secrets, not be kept.
Searching for help	In case a child is sexually abused, the program names different people or institutions to whom the child can disclose the abuse (e.g. teacher, police, crisis line) even when its parents do not believe the child.

The present study addresses the following question: Do children learn the self-protective skills of the program “Mein Körper gehört mir!” when they take part in the program? There are five hypotheses. The first three hypotheses refer to the overall effectiveness of the program, while the fourth and fifth hypotheses refer to the effectiveness of the separate core concepts. The hypotheses are listed in box 1.

Box 1: The five hypotheses of the present study. Hypotheses 1-3 refer to the overall effectiveness of the program, while hypotheses 4 and 5 refer to the evaluation of the separate core concepts.

- (1) Children have more overall self-protective skills one week after they participated in the program than one week before the intervention was conducted.
- (2) The higher overall self-protective skills of the children who took part in the intervention are sustained over a period of two months.
- (3) Children who took part in the program have more overall self-protective skills two months after the intervention was conducted than children who did not take part in the program.
- (4) Every core concept of the program is effective in increasing the self-protective skills of children who took part in the program.
- (5) The self-protective skills of children who took part in the program improve with regard to more core concepts two month after they took part in the program than the self-protective skills of children who did not take part in the program do.

2 Method

Participants

The sample consisted of 137 children, 73 boys and 64 girls, of two third grade classes (mean age = 9.44, SD=0.49). The classes belonged to two different primary schools in the region *Grafschaft Bentheim*, a rural area in the North West of Germany. The first school served as experimental group (four classes, N=76). The second school served as control group (three classes, N=61). The prevention program will be conducted with the pupils from the control group next year.

All participants were measured at baseline one week prior to the intervention (pre-test T1). The experimental group was measured one week after the intervention was conducted (post-test T2). Two month after the intervention a follow-up was conducted with all participants (T3). Table 4 illustrates the research design.

Intervention

Two professionals from the *Theaterpädagogische Werkstatt* perform the play in front of a third or fourth grade class. The play consists of three sessions. Each session endures one school lesson (45 minutes). There is a pause of one week between the sessions, so that the performance of the complete play extends over a period of two weeks. While the first two sessions address general self protective concepts, the third performance addresses the topic of sexual abuse more directly. At the end of each session role plays are conducted with some of the children (volunteers). The program has been constantly developed and improved. Recently, the providers of the program integrated the concept “Internet chatting” in the play. Table 5 lists the core concepts that are addressed in the different sessions.

Table 4: Research Design

	T1	Intervention	T2	T3
Experimental group	X	X	X	X
Control group	X	0	0	X

Table 5: Setup of the prevention program “Mein Körper gehört mir!”

Session	Core concepts
Session 1	- No-feeling - Saying no
Session 2	- Not to go with a stranger - Internet chatting
Session 3	- Blame - Bad secrets - Searching for help

Measurement of self-protective skills

The author elaborated a vignette questionnaire in order to measure the effect of the intervention. To find out if the short scenarios and questions are understandable for third graders, several short scenarios and questions were put to the test with third graders before conducting the effect study. Following these pilot studies, the author decided with professionals of the *Beratungsstelle Hobbit* which scenarios and questions to be used for the effect study. A questionnaire for the effect study was formed. Simple cartoons accompanied the short stories of this questionnaire. Box 2 gives an example of a short scenario.

Box 2: Example of a short scenario and subsequent question of the questionnaire

Sports Teacher

Imagine:

You really enjoy gym class. Your teacher is very kind to you. He also gives you presents – a tennis racket, for example. But after the lessons, your teacher sometimes touches you at your belly, back or bottom. It does not feel good at all. Your teacher says: “You don’t have to tell anyone about it! It’s our secret. Otherwise, you don’t get any presents and I won’t be kind to you, anymore.”

What do you think? Please choose only one answer.

- ثف It’s a good secret. I will tell.
 - ثف It’s a good secret. I won’t tell.
 - ثف It’s a bad secret. I won’t tell.
 - ثف It’s a bad secret. I will tell.
-

The questionnaire consists of six vignettes. Two vignettes were used twice, followed by a different question. Both vignettes refer to two core concepts of the play. The core concept “No feeling” was tested with two vignettes, both followed by the same question. The remaining three vignettes each cover one core concept of the play. Table 6 lists the titles of the vignettes, the core concept the vignettes are referring to, and the questions that follow each vignette. In appendix 1, the complete questionnaire can be seen.

In order to reduce practice-effects, the author developed three parallel versions of the questionnaire. The different versions were accompanied with different cartoons. Parallel reliability was tested with two third grade classes (N=52) within two school lessons. Correlations between the parallel versions are significant. Cronbach’s Alpha also confirmed that parallel reliability is satisfactory and even good. Table 7 shows the correlations and Cronbach’s Alpha with regard to the three versions of the questionnaire.

Table 6: The first column lists the titles of the vignettes. The vignettes are represented in the same order as in the questionnaire. The second column shows the core concepts of play where the vignettes refer to, and the third column shows questions that children were asked following the vignettes

Title vignette	Core concepts	Questions
Playground	No-feeling	“How do you feel?”
Playground	Saying no	“What do you do?”
Schoolyard	Internet chatting	“What do you do?”
Fokko	No-feeling	“How do you feel?”
Fokko	Not to go with a stranger	“What do you do?”
Martin	Blame	“Who is to blame?”
Sports Teacher	Bad secrets	“What do you think?”
Uncle Werner	Searching for help	“What next?”

Table 7: Correlations and Cronbach's Alpha between the three parallel versions of the questionnaire. The first rows of each version describe the correlation. ** indicates that correlations are significant at the 0.01 level (2-tailed). The second rows describe the Cronbach's Alpha.

	Version 1	Version 2	Version 3
<hr/>			
Version 1			
<hr/>			
<i>Correlation r</i>		0.61**	0.63**
<i>Cronbach's Alpha</i>		0.76	0.76
<hr/>			
Version 2			
<hr/>			
<i>Correlation r</i>			0.77**
<i>Cronbach's Alpha</i>			0.87
<hr/>			

Coding

The author, together with professionals from the *Beratungsstelle Hobbit*, decided how to code the answers of the questionnaire. Subjects were able to reach two points in the questionnaire with regard to every core concept of the play. Some answers were categorized in right or wrong (0 or 2 points), other answers were differentiated between 0, 1, or 2 points. These separate scores were used to measure the effect of the single core concepts of the program. Appendix 2 illustrates how answers to the different questions were coded. Adding the scores of the separate core concepts, subjects could reach a minimum of 0 and a maximum of 14 points in the questionnaire. These overall scores were used to measure the general effectiveness of the program.

A professional from the *Beratungsstelle Hobbit* and the author tested inter-rater reliability with 19 subjects of the effect study. Inter-rater reliability was high (Kappa=0.97, $p < 0.01$).

Procedure

The author and an employee of the *Beratungsstelle Hobbit* interviewed each class collectively. The interviews lasted one session (45 minutes). At the beginning of the lesson,

the subjects were asked to put a school bag between themselves and their neighbours. The questionnaires were delivered to the pupils. The author read out the questionnaire. Subjects were able to listen to the author and / or read the scenarios themselves. Only when every subject had written down its answer, the author read out the next scenario and question. The second interviewer controlled the process and was able to answer individual questions of the subjects.

Variables and hypotheses

The independent variable is the intervention “Mein Körper gehört mir!”. The variable consists of two conditions: Intervention / no intervention (see also table 4: Research design). The dependent variables are the self-protective skill scores measured with the questionnaire (on the pre-test, post-test and follow up measurement).

The question to be answered was: Do children learn the self-protective skills of the program “Mein Körper gehört mir!” when they take part in the program? Box 3 lists the operationalized hypotheses.

Box 3: The five operationalized hypotheses of the present study. Hypotheses 1-3 refer to the overall effectiveness of the program, while hypotheses 4 and 5 refer to the evaluation of the separate core concepts.

- (1) The experimental group has a higher mean overall self-protective skill score one week after participating in the program than it reached one week before the intervention was conducted.
- (2) The gain of the overall mean self-protective skill score in the experimental group is sustained over a period of two months.
- (3) Two months after the intervention was conducted, the experimental group reaches a higher mean overall self-protective skill score than the control group does.
- (4) Every core concept of the program is effective in increasing the mean self-protective skill score in the experimental group.
- (5) More mean self-protective skill scores with regard to the separate core concepts increase in the experimental group compared to the control group.

3 Results

Assumptions

ANOVA repeated measures was conducted to test hypotheses 1, 2, and 3.

Three assumptions must be met in repeated measures: (1) The observations are independent, (2) the observations on the dependent variables follow a multivariate normal distribution in each group, and (3) sphericity (Stevens, 2002).

The observations were made independently. Each pupil answered the questionnaires on its own. With regard to the second assumption, there are no statistical tests for multivariate normality, and graphical tests for multivariate normality are difficult to implement. Methods that analyse univariate normality on each dependent variable separately however detect joint multivariate (non)normality very well (Stevens, 2002). Appendix 3 shows that the dependent variables (self-protective skill scores on T1, T2 and T3) are (fairly) normal distributed. Enough observations ($N > 60$ per group) were made to correct for moderately non-normal distributions. The assumption was met. The third assumption, sphericity, requires that the covariances of the transformed $(k-1)$ dependent variables are 0, with equal variances. This is unlikely to be met perfectly. However, the covariance matrix deviates tolerably when Mauchley's $W > 0.5$, and the parameter epsilon is between 0.7 and one (Stevens, 2000). Stevens (2002) suggests to use the average of the estimators of the Greenhouse-e-Geisser's and Huynh-Feldt's Epsilon. The average of both estimators for epsilon were 0.995, and Mauchley's $W = 0.99$, $p=0.68$. The assumption sphericity was also met.

The data with regard to the separate core concepts did not follow a normal (or moderately non-normal) distribution. Thus, hypothesis 4 could not be analysed with ANOVA repeated measures. Instead, non parametric t-tests were conducted.

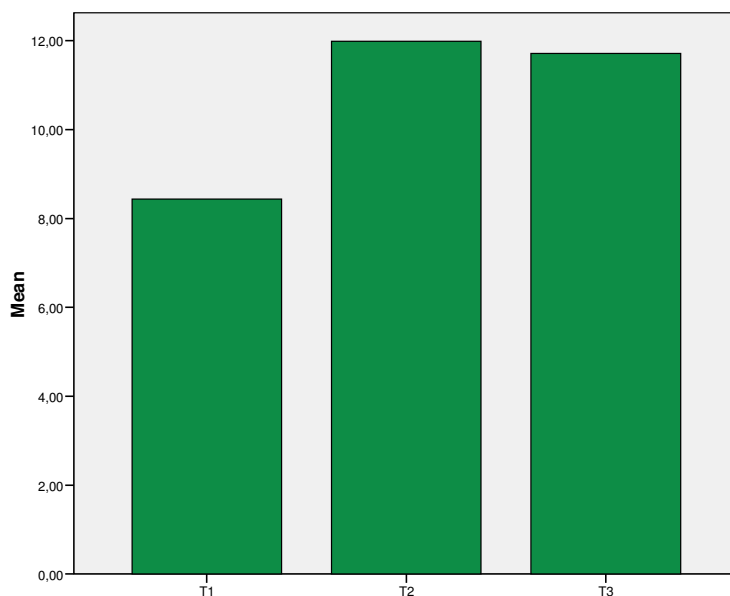
Experimental group

Hypothesis 1 and 2 predicted that participants of the program show a higher knowledge of self-protective skills one week and, respectively, two months after they took part in the program compared to one week before the intervention was conducted.

Figure 6 shows that the overall scores on the questionnaire in the experimental group increased from pre-test (M=8.43, SD=2.04) to post-test (M = 11.99, SD = 1.89). There was a slight decrease from post-test to follow-up measurement (M = 11.7, SD = 2.02).

A one (experimental group) by three (time of measurement: pre-test, post-test, follow-up) ANOVA repeated measure was conducted in order to examine if the differences between the times of measurement are significant. The effect for the factor time is significant, $F(2, 225) = 74.06, p < 0.001$. Tests of within-subject contrasts revealed that the difference between pre-test and post-test was significant, $F(1, 75) = 107.49, p < 0.001$, while post-test and follow-up measure did not differ significantly, $F(1,75) = 0.9, p = 0.347$. Participants of the intervention showed greater knowledge of self-protective skills one week after the intervention was conducted. The effect was sustained over a period of two months. Hypotheses 1 and 2 both were confirmed.

Figure 6: Mean overall self-protective skill scores of the experimental group on the factor time: pre-test (T1), post-test (T2) and follow-up (T3) measurement.



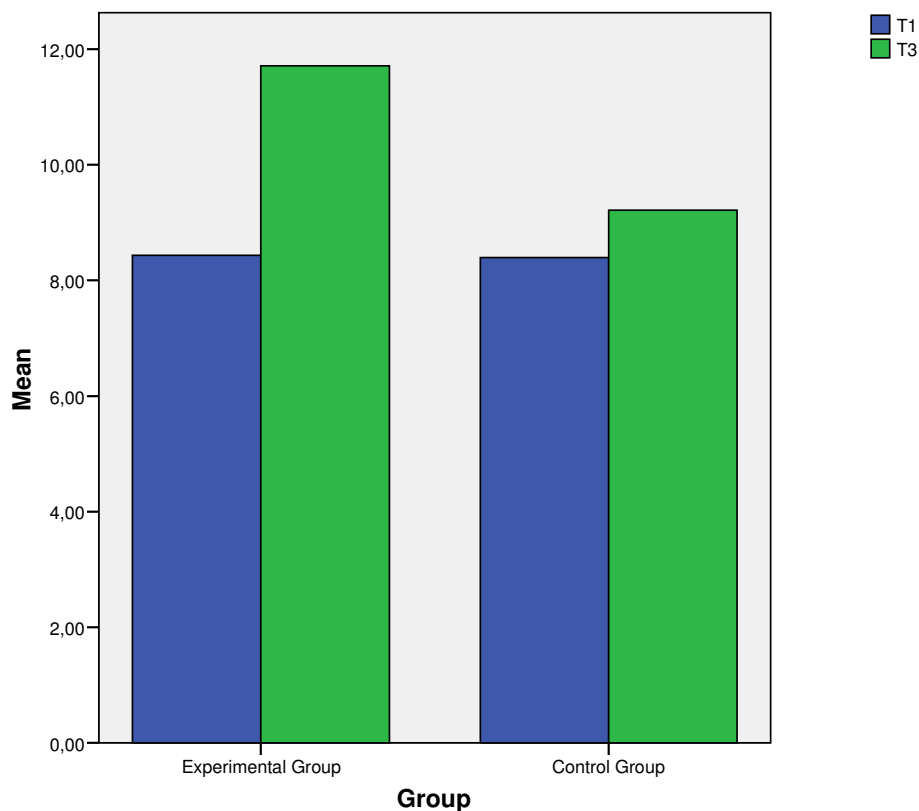
Experimental versus control group

Hypothesis 3 predicted that the gain of knowledge of self-protective skills after two months is greater for participants of the program (experimental group) than for subjects who did not take part in the program (control group).

An independent t-test was conducted to examine if both groups scored the same one week prior to the intervention. There was no significant difference between the pre-test of the control group (M=8.39, SD = 2.04) and the pre-test of the experimental group (M=8.43, SD=2.04); $t(135) = 0.11$, $p = 0.91$.

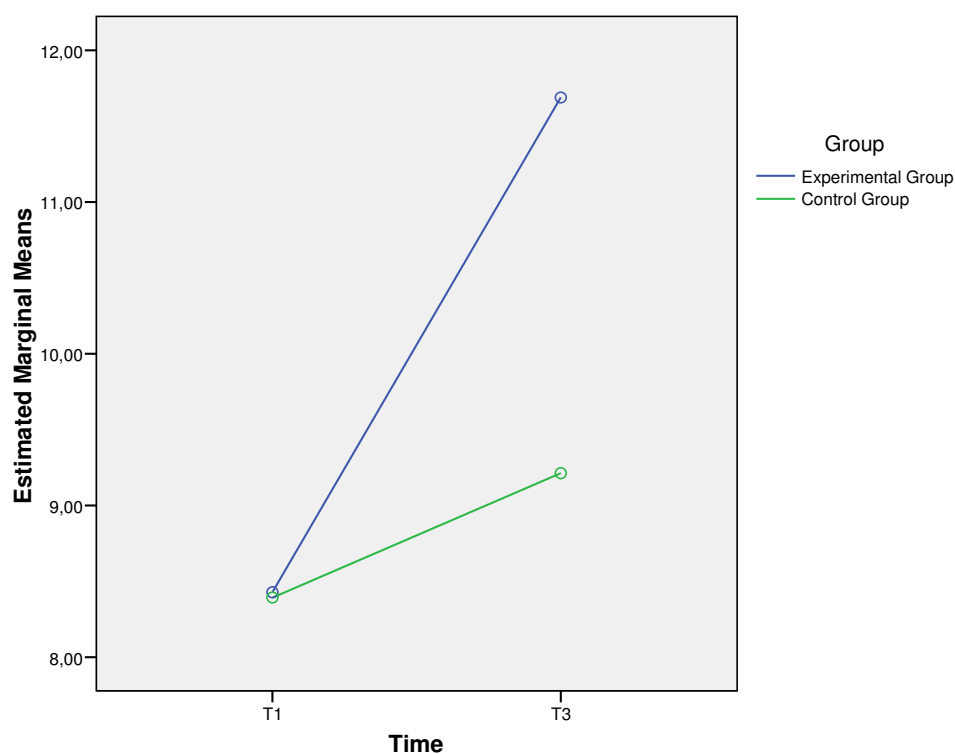
Figure 7 illustrates that overall skill scores increased in both groups from pre-test to follow-up measurement. The graphic also indicates that the increase was higher in the experimental group compared to the control group.

Figure 7: Overall self-protective skill scores on the questionnaire of the experimental and control group at the pre-test (T1) and follow-up (T3).



A two (group: experimental group, control group) by two (time: pre-test, follow-up) ANOVA repeated measures was conducted to examine if the experimental group scored significantly higher in the follow-up compared to control group. Firstly, the analysis revealed that (the average of) both groups increased significantly from pre-test to follow-up: There was a time main effect , $F(1, 75) = 64.94, p < 0.001$. The group main effect was also significant, $F(1, 75) = 23.7, p < 0.001$, meaning that the groups differed from each other on the skill scores when the average of both times of measurement is considered. More interestingly, a significant time by group interaction, $F(1, 72) = 23.36, p < 0.001$, revealed that both groups differ with regard to the follow-up measurement (given the fact that both groups scored the same on the pre-tests). The gain of knowledge of self-protective skills after two months is greater for participants of the program (experimental group) than for subjects who did not take part in the program (control group). Hypothesis 3 was confirmed. Figure 8 illustrates both main effects and the interaction effect.

Figure 8: The self-protective skill scores (y-axis) of the experimental and the control group at the pre-test T1 and follow-up T3 (x-axis).



Core concepts

Hypothesis 4 stated that each core concept of the program is effective in increasing self-protective skills in the experimental group. It was examined in how far the separate core concepts of the prevention program contributed to the overall effect of the program. Table 8 gives an overview of the self-protective skill scores in the experimental group with regard to the separate core concepts one week before, one week after, and two months after the children took part in the program.

Non parametric t-tests, based on Wilcoxon signed rank tests, were conducted. The results revealed that subjects from the experimental group increased significantly from pre-test to post-test and follow-up with regard to the core concepts “No-feeling”, “Internet-chatting”, “Blame”, “Bad secret”, and “Searching for help”. With regard to the concept “Not to go with a stranger”, subjects increased significantly (but only slightly) from pre-test to follow-up but not from pre-test to post-test. With regard to the concept “Saying no”, subjects showed no significant increases from pre-test to post-test and follow-up. In conclusion, the self-protective skills of children who took part in the program increased with regard to most but not all core concepts of the play. Hypothesis 4 was not confirmed.

Table 8: The means of the experimental group with regard to the core concepts at the pre-test (T1), post-test (T2) and follow-up (T3). “Min” describes the minimum score and “Max” the maximum score that participants could reach on the questionnaire with regard to each core concept.

Core concepts	Min	Max	Mean T1	Mean T2	Mean T3
No-feeling	0	2	1.49	1.74	1.76
Saying no	0	2	1.82	1.95	1.89
Internet chatting	0	2	0.33	1.37	1.38
Not to go with a stranger	0	2	1.80	1.92	1.95
Blame	0	2	1.08	1.76	1.42
Bad secret	0	2	1.45	1.91	1.91
Searching for help	0	2	0.47	1.34	1.39

Hypothesis 5 stated that children’s self-protective skills increase with regard to more core concepts two month after they took part in the program in comparison with children who did not take part in the program. Therefore, skill scores with regard to the separate core concepts were analysed in the control group, too. Scores in the pre-test were compared with scores in the follow-up. Table 9 gives an overview of the mean skill scores in the control group with regard to the core concepts.

Non parametric t-tests (Wilcoxon signed rank tests) revealed that subjects in the control group increased significantly with regard to the concepts “Internet chatting” and “Saying no” from pre-test to follow-up measurement. There was no significant change from pre-test to follow-up in any other concept in the control group. Thus, subjects from the control group increased with regard to two core concepts from pre-test to follow-up, while subjects from the experimental group increased with regard to six core concepts. Children who took part in the program showed a gain of self-protective skill scores with regard to more core concepts than children who did not take part in the program. Hypothesis 5 was confirmed. A more detailed description of the analysis of the separate core concepts can be found in appendix 4 (including p-values and standard deviations).

Table 9: The means of the control group regarding the core concepts at the pre-test (T1) and follow-up (T3). “Min” describes the minimum score and “Max” the maximum score that participants could reach on the questionnaire with regard to each core concept.

Educational Objective	Min	Max	Mean T1	Mean T3
No-feeling	0	2	1.51	1.46
Saying no	0	2	1.8	1.84
Internet chatting	0	2	0.23	0.62
Not to go with a stranger	0	2	1.59	1.98
Blame	0	2	1.18	0.92
Bad secret	0	2	1.49	1.67
Searching for help	0	2	0.59	0.72

4 Discussion

Overall effectiveness of the program

The program „Mein Körper gehört mir!“ proved to be effective in teaching cognitive skills that children can apply to protect themselves against sexual abuse. Children had more self-protective skills one week after they took part in the program compared to one week before the program was conducted. (Hypothesis 1). They still showed the same higher level of self-protective skills two month after taking part in the program (Hypothesis 2). Surprisingly, the skill scores of children who did not take part in the program also increased from pre-testing to follow-up measurement. However, the skill scores in the follow-up control group were still lower compared to the post-test and follow-up skill scores in the experimental group (Hypothesis 3). In conclusion, the intervention ensured an overall gain of knowledge with regard to self-protective skills against sexual abuse among third grade children.

Core concepts

In the experimental group, the self-protective skills increased with regard to many but not all of the play's core concepts through participation in the program. Thus, the core concepts differed with regard to their effectiveness. (Hypothesis 4).

Children showed higher prevention skills with regard to the concepts “Searching for help”, “Bad secret”, “Blame” and “Internet chatting” one week after taking part in the program compared to one week before the program was conducted. The effects were sustained over a period of two months. Children however scored already relatively high on the concepts “No-feeling”, “Saying no”, and “Not to go with a stranger” before the intervention was conducted. Consequently, with regard to these three concepts, children increased only slightly (“No-feeling” and “Not to go with a stranger”) or not at all (“Saying no”) after taking part in the program. All those three concepts (“No-feeling”, “Saying no” and “Not to go with a stranger”) do not address sexual abuse directly in the play. They rather mediate general protective skills. The concepts “Searching for help”, “Bad secret”, and “Blame”, on the contrary, do address sexual abuse more directly. Given these results, it is worth discussing if the concepts that do not address sexual abuse directly contribute to prevent children from sexual abuse. On the one hand, Tutty (2000) found in her review about sexual abuse prevention programs that children on average learn one or two concepts per program. Time and money could be saved if “Mein Körper gehört mir!” would be reduced to the concepts that address sexual abuse directly as these concepts proved to contribute more to children's

self-protective skills. On the other hand, the structure of the play can be characterised as a didactic one. Children are slowly lead to the topic “sexual abuse”. In the first session, children come into contact with the staff of the program and work on easier issues like “Yes- and no- feelings”. A positive learning environment is created, which has a positive influence on motivation and learning (e.g. Meyer & Turner, 2008, Immordino-Yang, Helen, Damasio, 2008). According to this, the structure of the play might be well chosen.

The control group also showed an overall gain of knowledge two months after the pre-test. Results with regard to the core concepts revealed that it were the concepts “Internet chatting” and “Not to go with a stranger” where children increased over time without taking part in the program. The short scenarios and questions in the questionnaire that refer to these concepts test if children would meet or go with someone they do not know personally. The teachers of the children in the control group confirmed that these concepts had not been covered in any of the lessons following the pre-test. Perhaps, the children of the control group discussed the topic with their friends after the interview and developed appropriate answers after discussion. Also, parents at home might have been able to give good advice around these two concepts. In conclusion, the results in the control group show that practice-effects of the questionnaire cannot be ruled out: Children might learn some self-protective strategies by just taking part in the interview.

In total, the self-protective skills of children who took part in the program increased with regard to more core concepts than skills from children in the control group did (Hypothesis 5). The concepts “Bad secret” and “Searching for help”, for example, increased in the experimental but not in the control group. Both elements ask children to disclose abuse. In a study from Budin and Johnson (1989), imprisoned child sexual abusers stated they would be most discouraged to abuse a child if the child was about to disclose the abuse. Self-protective skills with regard to the concept “Blame” also solely increased in the experimental group. This element teaches children that it is the perpetrator and not the victim who is to blame for child sexual abuse. On this subject, Filipas and Ullmann (2006) examined a group of 577 female college students who had been sexually abused as children. The subjects were split into two groups: one, that experienced re-victimization in form of adult sexual assault later in life, and one, that did not experience such a re-victimization. The group who experienced re-victimization had a higher degree of self-blame in relation to having been sexually abused as a child compared to the other group. The study from Filipas and Ullmann indicates the importance of children understanding that victims are not to blame for the abuse.

In conclusion, the results with regard to the separate core concepts confirm the importance of the play in teaching self-protective skills against child sexual abuse.

It is worth to discuss the element “Internet chatting”, which has recently been added to the program. The results of the present study show that children were inconspicuous to meet with a chat partner from the internet before they took part in the program. After the play, children were well aware of the fact that the chat partner might not be a peer but an adult who wants to harm the child. Literature (e.g. Beech, Elliot, Birgden & Findlater, 2008, Leander, Christianson, Granhag & Pär, 2008, Leonard, 2010) and media increasingly report about internet-initiated sexual abuse. In this regard, the particular results in relation to the concept “Internet chatting” are encouraging. However, in an overview on research related to internet-initiated sex crimes, Wolak, Finkelhor, Mitchell, and Ybarra (2010) raises doubt about the benefit of a concept like “Internet chatting”. The authors took the first and second Youth Internet Safety Surveys (Finkelhor, Mitchell, & Wolak, 2006) and the National Juvenile Online Victimization (N-JOV) Study (Wolak, Mitchell, & Finkelhor, 2003a) into account for the overview. The Youth Internet Safety Surveys included telephone interviews with youth internet users 10 to 17 years of age. The N-JOV Study surveyed 2,576 law enforcement agencies (mail survey followed by telephone interviews) about internet-initiated sex crimes where online molesters were arrested. The authors of the overview concluded that “the stereotype of the internet child molester who uses trickery and violence to assault children is largely inaccurate” (Wolak et al., 2010). It is argued that the reality of internet-initiated sex crimes is more complex: (i) Victims are underage adolescents but not children younger than age 12, (ii) online offenders do not pretend to be younger than they are, (iii) most of the times, online offenders do not deceive victims as to their sexual interest, (iiii) many victims profess love or close feelings for their offenders (Wolak et al., 2010). The authors clarify that such internet-initiated sex crimes are not acceptable. Young adolescents are vulnerable to online offenders due to immaturity and inexperience. However, perpetrators do not use the strategy that is assumed in the concept “Internet chatting”. Furthermore, the overview outlines that children younger than age 12 do not yet understand the social complexity of the internet (Yan, 2006). Consequently, according to the authors, they are not at risk of internet-initiated sex crimes (Wolak et al., 2010). We have seen that children take up the concept “Internet chatting” in “Mein Körper gehört mir!” very well. However, if the concept is not congruent with the reality of internet-initiated sex crimes, the concept is worthless even though the children take up its content very well. A counterargument is that children learn to use the internet at increasingly younger ages. Primary schools start to implement internet and

multimedia usage in their curriculum (Nuldan, 2002). It appears to be necessary to further observe the strategies of perpetrators as well as the internet activities of younger children in the future so that appropriate prevention strategies can be developed.

Limitations

Several limitations of the present study must be acknowledged.

Firstly, only two schools were used as a sample – one school for the experimental group and one school for the control group. Pupils of the same school share the same learning environment. Social interactions influence the cognitive development of children (Siegler & Alibali, 2005). Thus, the question can be raised if two schools represent the population ‘third grade children in Germany’ well.

Secondly, the control group was not chosen randomly; the school registered to take part in the program in the following school year. The research team chose that school for better comparison between the experimental group and the control group. Warden, Moran, Gillies, Mayes, and MacLeod (1997) used schools as control group that were not interested in the prevention program. The control group scored lower on the pre-test than the experimental group. The authors reasoned that the schools attitude toward sexual abuse prevention programs might influence the preventative abilities of the children independent from participation in such a program. In the present study, the pre-test scores were the same for both groups. Therefore, it can be seen as an appropriate choice to use a school as control group that is generally interested in child abuse prevention programs.

A third limitation of the present study is that only third graders were used as sample. Fourth graders would not have been available for a follow-up measurement after summer vacation. On the one hand, the program is designed for fourth graders as well. On the other hand, prior knowledge and cognitive skills generally seem to influence children’s knowledge gain through sexual abuse prevention programs positively (Topping & Barron, 2009). In this regard, fourth graders can be expected to learn even more from “Mein Körper gehört mir!” than third graders do.

Fourthly, the conclusions in relation to the separate core concepts in the present study must be drawn carefully. Only one or, in the case of “No-feelings”, two vignettes and questions were used per core concept. One or two vignettes might not be able to cover the different aspects of one core concept.

Fifthly, the follow-up measurement was conducted two months after the intervention took place. The study can not make a statement about a possible longer-term effectiveness of the program.

A final limitation is that the present study focused on testing the *cognitive* self-protective skills of the children. It is assumed that these cognitive skills enable children to prevent themselves against perpetrators in reality. However, like the majority of previous studies, the present study does not address the children's ability to transfer cognitive self-protective skills into real life situations. Fryer, Kraizer and Miyoshi (1987) developed and conducted role plays in order to test children's protective skills on a behavioural level. A stranger (a confederate of the research team) asked children to accompany him. They found that children from the intervention group resisted more often to accompany the stranger than children from the control group. Conte (1987), however, criticized that this approach may in fact "desensitize children to the very behavior most programs seek to sensitize children". Also, such an approach can hardly test situations like sexual abuse from family members. New research methods that measure behavioural changes more directly whilst still being ethical justifiable are highly needed.

Additionally to developing new research methods, Topping and Barron (2009) suggest that current methods must be improved. The 22 studies the authors reviewed usually developed and used their own measurement material, most of them of unknown psychometric properties. Only few methods were used in more than one study. Topping and Barron suggest for future studies to include previously used measures.

Future Studies

It is desirable to validate measurement materials of evaluations of CSAP programs. Standardized material would make evaluations more reliable and help to compare the effect sizes of different programs with each other (Topping & Barron, 2009). The vignette questionnaire of the present study brought practice effects along. It should be validated and improved in order to control for the practice effects. Following this, the questionnaire could be used as a reliable and valid measurement tool that future studies about German CSAP programs can include into their evaluations.

Future studies might also include more than two schools as sample in order to better represent the population.

The results of the present study are encouraging. They generally confirm the results of the first group-randomized study about "Mein Körper gehört mir!" (Bowi & Kruse, 2007)

which found that the program is effective in teaching cognitive self-protective skills against sexual abuse in primary school children. The program is now one of the very few CSAP programs worldwide that underwent more than one experimental effect study. Future studies can now concentrate on mediator and moderator variables so that the program can be developed and improved on the basis of scientific research. Such studies could, for example, evaluate if the program works differently for third or fourth graders, or if children with different cultural background, personal traits, or intelligence benefit differently from the program. It is also desirable to evaluate the separate core concepts of the program more extensively in order to validate the results found in the present study. Finally, a new and interesting approach that is now applied at the Rijksuniversiteit Groningen by Boelhouwer (2011) is suggested for future research. Children who underwent a prevention program are asked to keep a diary on a longer-term basis. With the diary, the researcher is able to trace back how children reacted in risky situations. This approach solves two limitations mentioned above: Firstly, the transfer from cognitive to real life situations is tested, and, secondly, children are followed on a longer-term basis than two or six months. Such an approach for “Mein Körper gehört mir!” would give interesting results on the program’s long-term and real life effectiveness.

Diskussion (deutsche Übersetzung)

Gesamteffektivität des Programms

Das Präventionsprogramm „Mein Körper gehört mir!“ erwies sich als wirkungsvoll, Kindern kognitive Fähigkeiten zum Selbstschutz vor sexuellem Missbrauch zu vermitteln. Die Fähigkeiten zum Selbstschutz war bei den Kindern eine Woche nach der Teilnahme an dem Programm höher als vor der Teilnahme. (Hypothese 1). Auch zwei Monate nach der Teilnahme an dem Programm zeigten die Kinder noch das gleiche erhöhte Niveau an Selbstverteidigungsstrategien. (Hypothese 2). Überraschenderweise stiegen auch die kognitiven Selbstverteidigungsstrategien der Kinder, die nicht an dem Programm teilgenommen haben, von der Prä-Messung zur Follow – Up Messung. Insgesamt erreichte die Experimentalgruppe sowohl in der Post- als auch in der Follow – up Messung höhere Fähigkeitswerte zur Selbstverteidigung als die Kontrollgruppe in der Follow-up Messung (Hypothese 3). Die Intervention „Mein Körper gehört mir!“ sicherte also einen Wissenszuwachs bei Drittklässlern, um sich gegen sexuellen Missbrauch zur Wehr setzen zu können.

Zentrale Programmmthemen

In der Experimentalgruppe stiegen durch die Teilnahme an dem Programm die Fähigkeiten der Kinder zum Selbstschutz im Hinblick auf viele, aber nicht alle Programmmthemen des Theaterstücks. Die verschiedenen zentralen Themen des Programms sind demnach unterschiedlich effektiv (Hypothese 4).

Die Kinder zeigten eine Woche nach der Teilnahme an dem Programm bessere Selbstverteidigungsstrategien in Bezug auf die Programmmthemen „Hilfe suchen“, „Schlechtes Geheimnis“, „Schuld“ und „Internet Chatten“ verglichen mit der Messung eine Woche vor der Durchführung des Programms. Die positiven Effekte blieben für die Dauer von zwei Monaten erhalten. Bezüglich der zentralen Programmmthemen „Nein-Gefühl“, „Nein sagen“ und „Nicht mit Fremden mitgehen“ zeigten die Kinder jedoch bereits vor der Durchführung der Intervention relativ hohe Selbstschutzwerte. Demnach verbesserten sich die Kinder nur leicht bezüglich der Kernthemen „Nein-Gefühl“ und „Nicht mit Fremden mitgehen“ bzw. gar nicht im Bereich „Nein sagen“ durch die Teilnahme an dem Programm. Diese drei Programmmthemen („Nein-Gefühl“, „Nein sagen“ und „Nicht mit Fremden mitgehen“) befassen sich nicht direkt mit sexuellem Missbrauch. Sie vermitteln stattdessen allgemeine Selbstverteidigungsstrategien. Im Gegensatz dazu beziehen sich die Programmmthemen „Hilfe

suchen“, „Schlechtes Geheimnis“ und „Schuld“ direkter auf sexuellen Missbrauch. In Anbetracht dieser Ergebnisse sollte diskutiert werden, ob die zentralen Programmt Themen, die sich nicht direkt auf sexuellen Missbrauch beziehen, zur Effektivität des Programms beitragen. Einerseits fand Tutty (2000) in ihrem Review über Präventionsprogramme zu sexuellem Missbrauch heraus, dass Kinder im Durchschnitt nur ein bis zwei Programmt Themen pro Präventionsprogramm erlernen. Möglicherweise wäre es ökonomischer, wenn “Mein Körper gehört mir!” sich auf die Programmt Themen reduzieren würde, welche sich direkt auf das Thema „sexueller Missbrauch“ beziehen und deutlich zur Effektivität des Programms beitragen. Andererseits kann die Struktur des Theaterstücks als didaktisch beschrieben werden. Die Kinder werden langsam an das Thema „sexueller Missbrauch“ herangeführt. In der ersten Einheit kommen die Kinder in Kontakt mit den Mitarbeitern des Theaterstücks und arbeiten an leichteren Themen wie „Ja- und Nein-Gefühlen“. Es wird ein positives Lernumfeld geschaffen, welches wiederum einen positiven Einfluss auf die Motivation und das Lernen haben (Meyer & Turner, 2008, Immordino-Yang, Helen, Damasio, 2008). Insofern mögen die Inhalte und der Aufbau des Theaterstücks gut gewählt sein.

Die Kontrollgruppe zeigte zwei Monate nach der Prä-Messung ebenfalls einen allgemeinen Wissenszuwachs an Selbstverteidigungsstrategien. Es handelt sich um die zentralen Programmt Themen „Internet Chatten“ und „Nicht mit Fremden mitgehen“, bei denen die Kinder ein höheres Niveau erlangten, ohne an dem Programm teilgenommen zu haben. Die kurzen Szenen und Fragen des Fragebogens, die sich auf diese zentralen Programmt Themen beziehen, prüfen, ob Kinder sich mit jemandem treffen oder mitgehen würden, den sie nicht persönlich kennen. Die Lehrer der Kinder aus der Kontrollgruppe bestätigten, dass diese Programmt Themen nicht in einer der Schulstunden nach der Prä-Messung behandelt wurden. Möglicherweise haben die Kinder in der Kontrollgruppe das Thema mit ihren Freunden nach dem Interview diskutiert und daraufhin angemessenere Antworten entwickelt. Außerdem könnten die Eltern mit ihren Kindern über die Programmt Themen gesprochen und den Kindern gute Ratschläge gegeben haben. Die Ergebnisse der Kontrollgruppe zeigen also, dass Übungseffekte des Fragebogens nicht ausgeschlossen werden können: Offensichtlich lernen Kinder bereits durch die Teilnahme an dem Interview einige Selbstverteidigungsstrategien.

Die Experimentalgruppe zeigte schlussfolgernd nach Teilnahme an dem Programm nicht nur ein insgesamt höheres Niveau an Selbstverteidigungsstrategien als die Kontrollgruppe, sondern auch einen Wissenszuwachs bezüglich *mehrerer* zentraler

Programmthemen als die Kontrollgruppe (Hypothese 5). Die Programmthemen „Schlechtes Geheimnis“ und „Hilfe suchen“ beispielsweise erhöhten sich in der experimentellen Gruppe, nicht aber in der Kontrollgruppe. Beide Elemente lehren Kindern, den Missbrauch mitzuteilen. In einer Studie von Budin und Johnson (1989) erklärten verurteilte sexuelle Kindesmissbraucher, dass sie vor allem bei solchen Kindern von dem Missbrauch zurückschrecken würden, welche den Anschein erwecken, den Missbrauch zu erzählen. Die Fähigkeiten zum Programmthema „Schuld“ erhöhten sich ebenfalls nur in der experimentellen Gruppe. Dieses Element bringt Kindern bei, dass der Täter und nicht das Opfer für den sexuellen Kindesmissbrauch verantwortlich ist. Hinsichtlich dieses Aspekts überprüften Filipas und Ullmann (2006) eine Gruppe von 577 weiblichen Studentinnen, die in ihrer Kindheit sexuell missbraucht worden waren. Die Studentinnen wurden in zwei Gruppen eingeteilt: eine, welche eine Reviktimisierung durch einen späteren sexuellen Übergriff im Erwachsenenalter erfahren hatte, und eine, die keine Reviktimisierung erfahren musste. Die Gruppe, welche in ihrem späteren Leben erneut Opfer von sexuellen Übergriffen geworden war, schrieb sich selbst bezüglich des erlebten Kindesmissbrauchs mehr Schuld zu als die Gruppe, die später keine Reviktimisierung erfahren hat. Die Studie von Filipas und Ullmann betont, wie wichtig es ist, dass Kinder verstehen, dass sie nicht für den Missbrauch verantwortlich sind. Es kann zusammengefasst werden, dass die Ergebnisse bezüglich der separaten Programmthemen von „Mein Körper gehört mir!“ die Relevanz des Theaterstücks zur Erhöhung der Selbstverteidigungsstrategien von Kindern gegen sexuellen Missbrauch unterstreichen.

Auch lohnt sich ein Blick auf das Programmthema „Internet Chatten“. Dieses Thema wurde erst kürzlich dem Stück hinzugefügt. Die Resultate der vorliegenden Untersuchung zeigen, dass Kinder sich unbedarft mit einem ihnen ansonsten unbekanntem Chatpartner aus dem Internet getroffen hätten, bevor sie an dem Präventionsprogramm teilgenommen haben. Nach dem Spiel berücksichtigten die Kinder die Tatsache, dass der Chatpartner kein Gleichaltriger, sondern ein Erwachsener sein könnte, der dem Kind Schaden zufügen möchte. Literatur (z.B. Buche, Elliot, Birgden & Findlater, 2008, Leander, Christianson, Granhag & Pär, 2008, Leonard, 2010) und Medien berichten immer häufiger über eine Zunahme von sexuellem Missbrauch im Internet. In dieser Hinsicht sind die Resultate bezüglich des Programmthemas „Internet Chatten“ sehr ermutigend. In einem Überblick über Forschungsarbeiten bezüglich sexueller Gewalt im Internet werfen Wolak, Finkelhor, Mitchell, und Ybarra (2010) jedoch Zweifel über den Nutzen eines Programmthemas wie „Internet Chatten“ auf. Die Autoren orientierten sich für ihren Überblick an der ersten und

zweiten „Youth Internet Safety Surveys“ (Finkelhor, Mitchell, & Wolak, 2006) und der „National Juvenile Online Victimization (N-JOV) Study“ (Wolak, Mitchell, & Finkelhor, 2003a). Die „Youth Internet Safety Surveys“ enthalten Telefoninterviews mit Jugendlichen Internetnutzern im Alter von 10 bis 17 Jahren. Die N-JOV Studie befragte 2.576 Vollzugsbehörden (eine schriftliche Befragung gefolgt von Telefoninterviews) über im Internet initiierte Sexualverbrechen, bei denen die Missbraucher festgenommen wurden. In dem Überblick kamen die Autoren zu der Schlussfolgerung, dass „the stereotype of the internet child molester who uses trickery and violence to assault children is largely inaccurate“ (Wolak et al., 2010) – das Bild des Onlinetäters, der Schwindel und Gewalttätigkeit anwendet, um Kinder anzugreifen, sei also weitestgehend unzutreffend. Es wird argumentiert, dass die Wirklichkeit der im Internet initiierten Sexualverbrechen komplizierter ist: (i) Die Opfer sind minderjährige Jugendliche, aber nicht Kinder unter 12 Jahren, (ii) Onlinetäter täuschen nicht vor, jünger zu sein, als sie sind, (iii) Onlinetäter leugnen gegenüber ihren Opfern in den meisten Fällen nicht ihre sexuellen Interessen, (iiii) viele der Opfer beschreiben Liebe oder Nähegefühle für ihre Täter (Wolak et al., 2010). Die Autoren machen deutlich, dass solche im Internet angeregten Sexualverbrechen nicht hinnehmbar sind. Junge Jugendliche sind für die Onlinetäter wegen ihrer Unreife und Unerfahrenheit anfällig. Jedoch verwenden Täter nicht die Strategie, von denen im Programmthema „Internet Chatten“ ausgegangen wird. Außerdem skizziert der Überblick, dass Kinder, die jünger als 12 Jahre sind, noch nicht die soziale Komplexität des Internets verstehen (Yan, 2006). Infolgedessen sind diese Kinder nach Ansicht der Autoren nicht gefährdet, Opfer von im Internet initiierten Sexualverbrechen zu werden (Wolak et al., 2010). Wir haben gesehen, dass die Kinder das Programmthema „Internet Chatten“ in „Mein Körper gehört mit!“ sehr gut aufnehmen. Wenn das Programmthema jedoch nicht mit der Wirklichkeit der Sexualverbrechen im Internet übereinstimmt, ist es wertlos. Ein Gegenargument ist, dass Kinder das Internet in zunehmendem Maße bereits im jüngeren Alter anzuwenden lernen, sodass Grundschulen beginnen, den Gebrauch von Internet und Multimedia in ihren Lehrplan aufzunehmen (Nuldan, 2002). Es scheint notwendig, die Strategien der Täter sowie die Internetaktivitäten der jüngeren Kinder zukünftig weiter zu beobachten, damit geeignete Präventionsstrategien entwickelt werden können.

Grenzen

Einige Grenzen der vorliegenden Untersuchung werden im Folgenden eingeräumt.

Erstens wurden nur zwei Schulen als Stichprobe genutzt - eine Schule für die experimentelle Gruppe und eine Schule für die Kontrollgruppe. Schüler der gleichen Schule teilen die gleiche Lernumgebung und soziale Interaktionen beeinflussen die kognitive Entwicklung der Kinder (Siegler & Alibali, 2005). So kann die Frage aufgeworfen werden, ob zwei Schulen die Population der dritten Grundschulklassen in Deutschland gut darstellen.

Zweitens wurde die Kontrollgruppe nicht nach dem Zufall ausgewählt. Die Schule wurde registriert, um am Programm im nächsten Schuljahr teilzunehmen. Das Forschungsteam wählte diese Schule zum besseren Vergleich zwischen der experimentellen Gruppe und der Kontrollgruppe aus. Wärter, Moran, Gillies, Mayes und MacLeod (1997) benutzten Schulen als Kontrollgruppe, die nicht am Präventionsprogramm interessiert waren. Die Kontrollgruppe wies hier in der Prä-Messung niedrigere Werte als die experimentelle Gruppe auf. Die Autoren begründeten, dass die Einstellung der Schule gegenüber Präventionsprogrammen gegen sexuellen Missbrauch die Fähigkeiten der Kinder zum Selbstschutz bereits beeinflussen könnte, unabhängig davon, ob sie an solch einem Programm teilgenommen haben. In der vorliegenden Untersuchung waren die Werte in der Prä-Messung für beide Gruppen gleich. Folglich kann eine Schule, die im Allgemeinen an Programmen zur Prävention von Kindesmissbrauch interessiert ist, als passende Wahl für eine Kontrollgruppe angesehen werden.

Eine dritte Grenze der vorliegenden Untersuchung ist, dass nur dritte Klassen als Stichprobe verwendet wurden. Viertklässler hätten nicht für eine Follow-up-Messung nach den Sommerferien zur Verfügung gestanden, da sie bereits eine weiterführende Schule besuchen. Einerseits wurde das Programm auch für vierte Klassen entworfen. Andererseits scheinen Wissensgrundlagen und allgemeine kognitive Fähigkeiten, den Wissenszuwachs der Kinder durch Programme zur Prävention von sexuellem Missbrauch positiv zu beeinflussen (Topping & Barron, 2009). In dieser Hinsicht kann erwartet werden, dass Viertklässler sogar noch mehr von „Mein Körper gehört mir!“ profitieren als Drittklässler.

Viertens müssen die Schlussfolgerungen über die unterschiedlichen Programmthemen in der vorliegenden Untersuchung mit Vorsicht betrachtet werden. Nur eine oder, im Falle der „Nein-Gefühle“, zwei Szenen und Fragen wurden zur Untersuchung der einzelnen Programmthemen verwendet. Ein oder zwei Szenen sind möglicherweise nicht in der Lage, die verschiedenen Aspekte eines Programmthemas zu erfassen.

Fünftens folgte die Follow-up-Messung zwei Monate nach der Durchführung der Intervention. Die Studie kann daher keine Aussagen über eine mögliche längerfristige Wirksamkeit des Programms machen.

Eine abschließende Begrenzung liegt darin, dass sich die vorliegende Untersuchung auf die Prüfung der kognitiven Fähigkeiten der Kinder zum Selbstschutz konzentrierte. Es wird angenommen, dass diese kognitiven Fähigkeiten es Kindern ermöglichen, sich gegen Täter auch in Wirklichkeit zur Wehr zu setzen. Jedoch untersuchte die vorliegende Studie, ebenso wie die Mehrzahl der vorangegangenen Studien, eben diesen Transfer in Situationen des realen Lebens nicht. Fryer, Kraizer und Miyoshi (1987) entwickelten Rollenspiele und führten diese durch, um Selbstverteidigungsstrategien der Kinder auf der Verhaltensebene zu überprüfen. Ein Fremder (Mitglied des Forschungsteams) fragte die Kinder, ob sie ihn begleiten würden. Sie fanden heraus, dass Kinder von der Interventionsgruppe häufiger dem Angebot widerstanden, den Fremden zu begleiten, als Kinder der Kontrollgruppe. Conte (1987) kritisierte jedoch, dass Kinder durch diese Annäherung genau für solches Verhalten desensibilisiert würden, wofür sie durch die Programme eigentlich sensibilisiert werden sollten. Auch könne eine solche Annäherung kaum eine Situation wie einen sexuellen Missbrauch durch Familienmitglieder untersuchen. Um den Transfer der kognitiven Selbstverteidigungsstrategien in die Realität zu überprüfen, sind neue Forschungsmethoden erforderlich, welche Verhaltensänderungen direkter messen und gleichzeitig ethisch vertretbar sind.

Zusätzlich zur Entwicklung neuer Forschungsmethoden schlagen Topping und Barron (2009) vor, dass gegenwärtige Methoden verbessert werden müssen. Die 22 Studien, welche die Autoren überprüften, verwendeten ihre eigenen Messmethoden, von denen die meisten unbekannte psychometrische Eigenschaften aufwiesen. Nur wenige Methoden wurden in mehr als einer Studie angewendet. Topping und Barron schlagen vor, in zukünftigen Studien auf bereits verwendete Messmethoden zurückzugreifen, um eine Vergleichbarkeit verschiedener Studien zu gewährleisten.

Zukünftige Studien

Es ist erstrebenswert, Messmethoden zur Evaluation von Präventionsprogrammen gegen sexuellen Kindesmissbrauch zu validieren. Standardisiertes Material würde Evaluationen reliabler machen und wäre hilfreich beim Vergleich der Effektstärken verschiedener Programme (Topping & Barron, 2009). Der Vignetten Fragebogen der vorliegenden Untersuchung bringt Übungseffekte mit sich. Es wäre vorteilhaft, diesen Fragebogen zu

validieren, so dass diese Übungseffekte kontrolliert werden können. Dann könnte der Fragebogen als ein reliables und valides Messinstrument in zukünftige Studien über deutsche Präventionsprogramme gegen sexuellen Kindesmissbrauch integriert werden.

Zukünftige Studien sollten außerdem mehr als zwei Schulen als Stichprobe nutzen, um die Population besser repräsentieren zu können.

Die Ergebnisse der vorliegenden Untersuchung sind sehr ermutigend. Sie bestätigen im Allgemeinen die Ergebnisse der ersten randomisierten Gruppenstudie über „Mein Körper gehört mir!“ (Bowi & Kruse, 2007), die herausfand, dass das Programm effektiv ist, um Grundschulkindern kognitive Fähigkeiten zum Selbstschutz gegen sexuellen Missbrauch beizubringen. Das Programm ist nun eines der wenigen Präventionsprogramme weltweit, das von mehr als einer experimentellen Effektstudie evaluiert wurde. Zukünftige Studien können sich jetzt auf Mediator- und Moderatorvariablen konzentrieren, so dass das Programm auf der Basis von wissenschaftlicher Forschung weiterentwickelt werden kann. Solche Studien könnten zum Beispiel evaluieren, ob das Programm anders bei Viertklässlern als bei Drittklässlern wirkt oder ob Kinder mit unterschiedlichem kulturellen Hintergrund, Persönlichkeitszügen oder Intelligenz unterschiedlich vom Programm profitieren. Es ist außerdem wünschenswert, die unterschiedlichen Programmt Themen genauer zu evaluieren, um die Ergebnisse aus der vorliegenden Studie zu validieren. Abschließend schlägt der Autor einen neuen und interessanten Ansatz vor, der inzwischen an der Rijksuniversiteit Groningen von Boelhouwer (2011) angewendet wird. Kinder, die an einem Präventionsprogramm teilgenommen haben, führen über einen längeren Zeitraum hinweg ein Tagebuch. Mit Hilfe des Tagebuchs ist es dem Wissenschaftler möglich, zurückzuverfolgen, wie Kinder sich in riskanten Situationen verhalten haben. Dieser Ansatz löst zwei der oben erwähnten Einschränkungen: Erstens wird der Transfer von der kognitiven Ebene zum echten Leben überprüft und zweitens werden die Kinder über einen längeren Zeitraum als zwei oder sechs Monate hinweg beobachtet. Solch ein Forschungsansatz für „Mein Körper gehört mir!“ würde interessante Ergebnisse über die Langzeiteffekte des Programms sowie dessen Wirksamkeit im realen Leben liefern.

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Appendix

Appendix 1: Vignette Questionnaire (version 1 used in the pre-tests)

Haltstelle

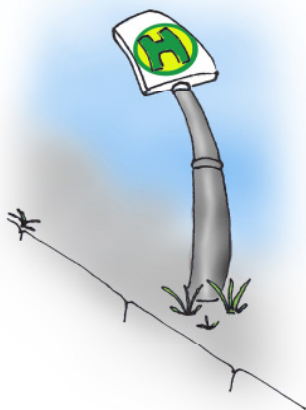
Stell dir vor:

Du wartest nach der Schule auf den Schulbus. Zwei Schüler oder Schülerinnen aus deiner Klasse kommen zu dir. Aus Spaß schubst euch ein bisschen. Das macht Spaß. Aber dann fangen die anderen beiden an dich doller hin und her zu schubsen. Das macht keinen Spaß mehr und tut weh.

Es kommen gleich zwei Fragen. Beantworte zunächst die erste Frage.

Was für ein Gefühl hast du?

Schreibe deine Antwort auf die Linien.



Stell dir vor:

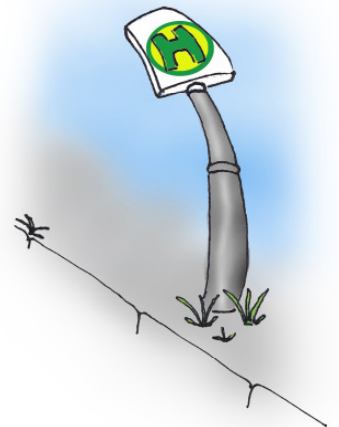
Du wartest nach der Schule auf den Schulbus. Zwei Schüler oder Schülerinnen aus deiner Klasse kommen zu dir. Aus Spaß schubst ihr euch ein bisschen. Das macht Spaß. Aber dann fangen die anderen beiden an dich doller hin und her zu schubsen. Das macht keinen Spaß mehr und tut weh.

Jetzt kommt die zweite Frage.

Was tust du?

Mache bei nur einem Kästchen ein Kreuz. Wenn du dein Kreuz beim letzten Kästchen machst, schreibe auf die Linien was du machen würdest.

- Gar nichts. Ich bin doch kein Baby.
- Ich sage „Nein! Das tut weh.“
- Ich sage oder mache etwas anderes, und zwar:



Die erste Situation hast du schon beantwortet!
Aber warte noch mit dem umblättern. Hab noch kurz Geduld.
Erst wenn alle Kinder ihre Antwort aufgeschrieben haben,
blättern wir gemeinsam um.



Schule

Stell dir vor:

Beim Chatten hast du einen total guten Freund oder eine total gute Freundin kennen gelernt. Ihr habt genau die gleichen Hobbies, und hört auch die gleiche Musik. Schnell findet ihr heraus, dass ihr gar nicht weit auseinander wohnt. Mit dem Bus kannst du in seine oder ihre Stadt fahren, dort könnt ihr euch bei der Schule treffen. Du möchtest ihn oder sie unbedingt mal treffen. Was tust du? Schreibe deine Antwort auf die Linien.



Und schon zwei Situationen beantwortet. Klasse! Aber warte noch mit dem umblättern. Wenn alle Kinder ihre Antwort aufgeschrieben haben, blättern wir gemeinsam um.



Focco

Stell dir vor:

Du siehst bei euch in der Siedlung auf der Straße einen Mann mit einem ganz süßen Hund. Der Mann spricht dich an. Er sagt dir der Hund heißt Focco, und lässt ihn dich auch streicheln. Voll nett! Dann sagt der Mann, dass er zu Hause noch einen Hund und zwei Katzen hat, und nur ein paar Straßen weiter wohnt. Er sagt, dass du gerne mitkommen kannst. Du kannst dir die Tiere alle anschauen. Du möchtest die Tiere unbedingt mal sehen.

Es kommen wieder zwei Fragen. Beantworte zunächst die erste Frage.

Was für ein Gefühl hast du?

Schreibe deine Antwort auf die Linien.



Stell dir vor:

Du siehst bei euch in der Siedlung auf der Straße einen Mann mit einem ganz süßen Hund. Der Mann spricht dich an. Er sagt dir der Hund heißt Focco, und lässt ihn dich auch streicheln. Voll nett! Dann sagt der Mann, dass er zu Hause noch einen Hund und zwei Katzen hat, und nur ein paar Straßen weiter wohnt. Er sagt, dass du gerne mitkommen kannst. Du kannst dir die Tiere alle anschauen. Du möchtest die Tiere unbedingt mal sehen.

Jetzt kommt die zweite Frage.

Was tust du?

Schreibe deine Antwort auf deine Linien.



Jetzt hast du schon drei Situationen beantwortet! Aber warte mit dem umblättern. Erst wenn alle Kinder ihre Antwort aufgeschrieben haben, blättern wir gemeinsam um zur nächsten Situation.



Peter

Stell dir vor:

Seit einiger Zeit unternimmt Peter, ein guter Freund deines Vaters, ganz viel mit dir. Ihr geht zum Beispiel zusammen Schwimmen, oder er nimmt dich mit zum Eis essen. Das macht Spaß. Dein Vater ist auch froh, dass Peter sich um dich kümmert. Dein Vater hat nämlich nicht so viel Zeit, weil er ganz viel arbeiten muss. Manchmal seid Peter und du aber auch in der Wohnung von Peter. Dort sagt er zu dir, dass du dich ausziehen sollst. Du möchtest das nicht. „Gut“, sagt Peter dann, „wenn du dich nicht ausziehst unternehme ich auch nichts mehr mit dir. Du bekommst dann auch kein Eis und keine Geschenke mehr von mir.“ Dann ziehst du dich doch aus, und Peter fasst dich an.

Pass gut auf, jetzt kommt die Frage:

Wer ist Schuld, dass es dazu gekommen ist?

Schreibe deine Antwort auf die Linien.



**Super, du hast schon vier Situationen beantwortet! Aber warte
mit dem umblättern. Hab noch kurz Geduld.**

**Wenn alle Kinder ihre Antwort aufgeschrieben haben, blättern
wir gemeinsam um.**



Musiklehrer

Stell dir vor:

Der Musikunterricht macht dir großen Spaß. Dein Lehrer ist immer besonders nett zu dir, und hat dir auch schon einige Geschenke gemacht - Musik-CDs, zum Beispiel. Aber nach dem Unterricht streichelt dein Lehrer dich manchmal an deinem Bauch, Rücken und Po. Das fühlt sich gar nicht gut an. Dein Lehrer sagt: „Davon darfst du niemandem erzählen! Das ist unser Geheimnis. Sonst bekommst du keine Geschenke mehr von mir und ich bin nicht mehr nett zu dir.“

Was denkst du? Mache nur ein Kreuz.

- Das ist ein gutes Geheimnis. Ich werde es erzählen.
- Das ist ein gutes Geheimnis. Ich werde es für mich behalten.
- Das ist ein schlechtes Geheimnis. Ich werde es erzählen.
- Das ist ein schlechtes Geheimnis. Ich werde es für mich behalten.



Jetzt hast du fast alle Fragen beantwortet. Ganz toll! Aber hab noch kurz Geduld. Wir blättern erst gemeinsam zur letzten Situation um, wenn alle fertig sind.



Opa

Stell dir vor:

Du hast einen tollen Opa. Der ist noch richtig fit, und hat schon viele Sachen mit dir unternommen. Als du noch kleiner warst ist er immer mit dir in den Tierpark gegangen, und heute fährt er oft mit dir Boot. Aber in letzter Zeit bringt er dich dazu Sachen zu machen die du nicht möchtest. Du sollst seinen Penis anfassen und daran reiben. Du hast deinem Opa schon gesagt, dass du das nicht willst. Aber er hört nicht auf damit. „Das darfst du deinen Eltern nicht erzählen!“, sagt er. Irgendwann erzählst du es trotzdem deinem Vater. Aber dein Vater glaubt dir nicht. „Red nicht so einen Unsinn!“, sagt dein Vater. Dann gehst du zu deiner Mutter. Aber auch sie will nichts davon hören. Mit deinen Eltern kannst du also nicht darüber reden, und gegen deinen Opa kannst du dich nicht wehren.

Was nun?

Schreibe deine Antwort auf die Linien.



Appendix 2: Coding of the Questionnaire

Table 1: The table lists the maximal scores that children could reach on each question in the vignette questionnaire

# Vignette	#Question	Core Concept	Maximal Score
#1	#1	“No-feeling”	1
#1	#2	“Saying no”	2
#2	#1	“Internet chatting”	2
#3	#1	“No-feeling”	1
#3	#2	“Not to go with a stranger”	2
#4	#1	“Blame”	2
#5	#1	“Bad secret”	2
#6	#1	“Searching for help”	2

Table 2: The table describes how the different answers were coded

# Vignette	#Question	Coding
#1	#1	<p>1 point was given when the answer indicated that there is a feeling which can be categorized into a “yes- or no-feeling”. E.g., “I have the feeling they don’t like me” (feeling rejected = no-feeling), or -“I don’t like it” (=no-feeling)</p> <p>0 points were given when the answer does not refer to an inner feeling. E.g.: “It hurts.” (this is a physical experience; above, it only repeats what is written in the short scenario), “It’s not nice of them” (cognitive assessment which does not refer to an inner state; it also repeats what is written in the short story)</p>
#1	#2	<p>2 points were given when the answer shows that clear limits are set. E.g., “I say ‘No! It hurts.’”, “I go away.”, or “I push them back.”</p> <p>0 were given when the answer did not indicate that clear limits are set. E.g., (I do) “Nothing. I’m no baby, though.”, “I propose we play something else.”</p>

(table continues)

# Vignette	#Question	Coding
#2	#1	<p>2 points were given when:</p> <ul style="list-style-type: none"> -the child does not meet the chat partner -the child asks his parents to accompany it to a meeting with the chat partner -the child asks its parents if it is allowed to meet with the chat partner <p>1 point was given, when:</p> <ul style="list-style-type: none"> -the child lets its parents know that it will meet the chat partner <p>0 points were given when</p> <ul style="list-style-type: none"> -the child meets the chat partner without telling an adult -the child asks the chat partner to visit it at home
#3	#1	The same coding as with vignette #1, question #1
#4	#1	<p>2 points were given when:</p> <ul style="list-style-type: none"> -the child blames the abuser -the child blames the abuser and his parent (<i>this is not really a preferably answer as parents are actually not to blame; however, the play only makes a difference between the abuser and the victim; we cannot expect the child to fully exclude the parent from blame; in this regard, this vignette has possibly been too complex for third grade pupil</i>) <p>0 points were given when:</p> <ul style="list-style-type: none"> -the child blames itself -the child blames its parent alone -the child blames the abuser and itself
#5	#1	<p>2 points were given for the answer “That’s a bad secret. I will tell.”</p> <p>1 point was given for the answer “That’s a bad secret. I won’t tell.”</p> <p>0 points were given for the answers “That’s a good secret. I will tell.”, and “That’s a bad secret. I won’t tell.”</p>
#6	#1	<p>2 points were given when the child makes clear it will disclose the abuse to an adult</p> <p>1 point was given when the child says it will continue telling about the abuse until someone believes the child (without specifying to whom it will disclose the abuse)</p>

(table continues)

# Vignette	#Question	Coding
#6	#1	0 point was given when the child: -tells a friend -continues telling its parents about the abuse (who did not belief in the abuse) -tries to defend itself against the abuser (and does not tell anyone) -tries to prove the abuse with the help of a video camera (instead of telling an adult)

Appendix 3: Distribution of the overall prevention skill scores of the experimental and control group on the pre-test, post-test, and follow-up.

Figure 1: Normal PP Plot of the experimental group at the pre-test. The x-as shows the observe cumulative probability of the data, the y-as shows the expected cumulative probability. The data are perfectly normal distributed when the residuals lie on the 45° axis. The plot shows that the data of the pre-test follows almost exactly a normal distribution.

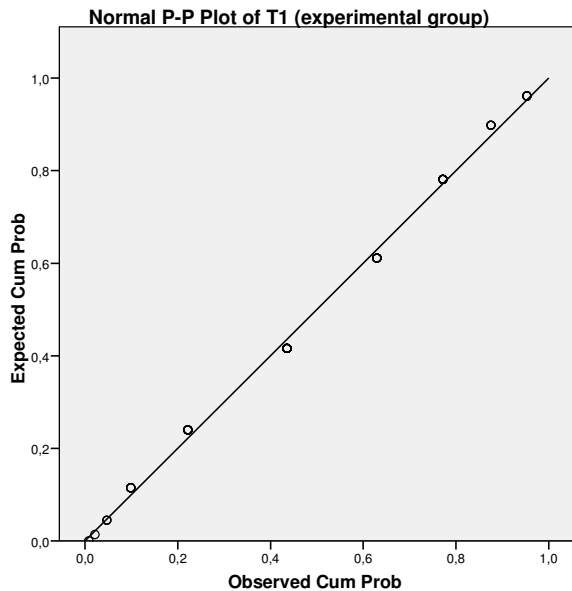


Figure 2: Normal PP Plot of the experimental group on the post-test. The data are not perfectly normal distributed. The deviation, however, is not serious.

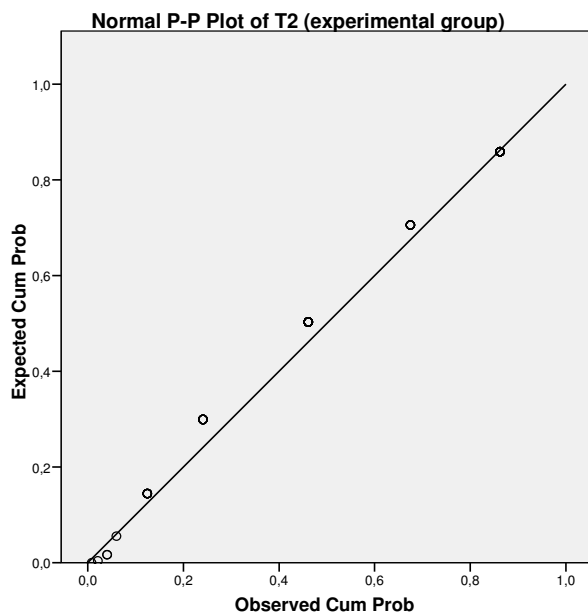


Figure 3: Normal PP Plot of the experimental group on the follow-up. The data are not perfectly normal distributed. The deviation, however, is not serious.

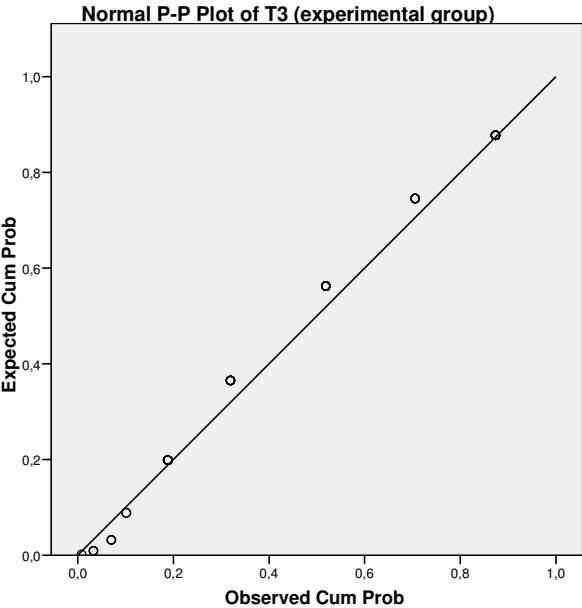


Figure 4: Normal PP Plot of the control group on the pre-test. The data are fairly normal distributed.

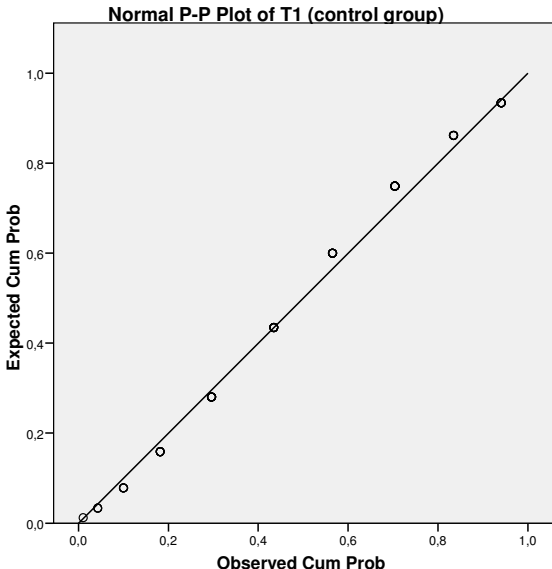
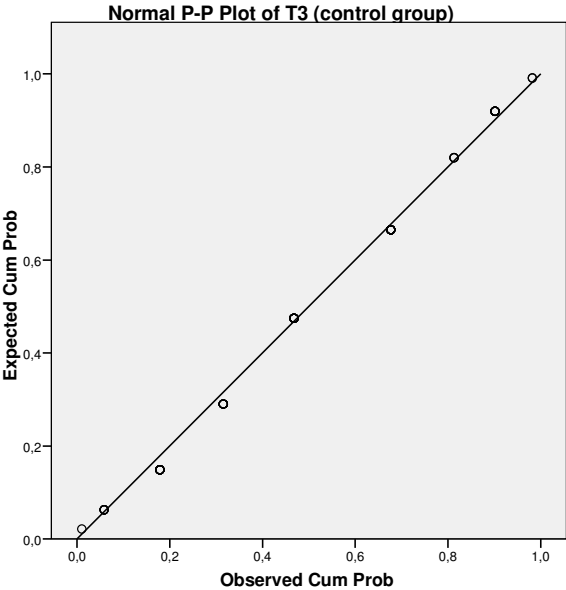


Figure 5: Normal PP Plot of the control group at the follow-up. The data are almost perfectly normal distributed.



Appendix 4: Detailed description of the analysis of the core concepts

In the experimental group, the core concept “No-feeling” increased significantly from pre-test (M=1.49, SD=0.62) to post-test (M=1.74, SD=0.5), $p < 0.01$. The increase was sustained in the follow-up (M=1.76, SD=0.49); $p < 0.01$. The concept “Saying no” did not increase significantly from pre-test (M=1.82, SD=0.6) to post-test (M=1.95, SD=0.32), $p = 0.1$, or from pre-test to follow-up (M=1.89, SD=0.45), $p = 0.37$. “Internet chatting” increased clearly and significantly from pre-test (M=0.33, SD=0.74) to post-test (M=1.37, SD=0.9), $p < 0.001$. The effect was sustained in the follow-up (M=1.38, SD=0.91), $p < 0.001$. “Not to go with a stranger” increased slightly but not significantly from pre-test (M=1.8, SD=0.59) to post-test (M=1.92, SD=0.36), $p = 0.14$. The concept, however, increased slightly but still significantly from pre-test to follow-up (M=1.95, SD=0.28), $p = 0.05$. “Blame” increased significantly from pre-test (M=1.08, SD=1.0) to post-test (M=1.76, SD=0.65), $p < 0.01$. The effect decreased significantly from post-test to follow-up (M=1.42, SD=0.91), $p < 0.01$. However, there increase from pre-test to follow-up was still significant ($p = 0.04$). “Bad secret” increased significantly from pre-test (M=1.45, SD=0.72) to post-test (M=1.91, SD=0.33), $p < 0.001$. The effect remained exactly the same in the follow-up (M=1.91, SD=0.33), $p < 0.001$. “Searching for help” increased also clearly and significantly from pre-test (M=0.47, SD=0.86) to post-test (M=1.34, SD=0.95), $p < 0.001$. The effect was sustained in the follow-up (M=1.39, SD=0.93), $p < 0.001$.

In the control group, the concept “No-feeling” did not increase significantly from pre-test (M=1.51, SD=0.7) to follow-up (M=1.46, SD=0.7), $p = 0.75$. “Internet chatting” increased significantly from pre-test (M=0.23, SD= 0.64) to follow-up (M=0.62, SD=0.9), $p < 0.05$. “Not to go with a stranger” also increased significantly from pre-test (M=1.59, SD=0.78) to follow-up (M=1.98, SD=0.13), $p < 0.01$. “Bad Secret” did not increase significantly from pre-test (M=1.49, SD=0.65) to follow-up (M=1.67, SD=0.6), $p = 0.17$. “Searching for help” also did not increase significantly from pre-test (M=0.59, SD=0.92) to follow-up (M=0.72, SD=0.97), $p = 0.43$. “Blame” decreased slightly but not significantly from pre-test (M=1.18, SD=0.99) to follow-up (M=0.92, SD=1,0), $p = 0.17$. “Searching for help” did not increase significantly from pre-test (M=0.59, SD=0.92) to follow-up (M=0.72, SD=0.97), $p = 0.4$