

4. Discussion

Evaluation studies in the area of educational drug abuse prevention require the design realization of a necessary quasi-experimental cross-section study with test and control groups, examined cross-section activity, and curriculum-matching implementation of the primary preventive teaching materials in order to determine the acceptance and effectiveness of the program that is being used. The objective of this project was to gather information about the acceptance and effectiveness of the "Life Skills" Lions-Quest program. We selected an intervention school, where the majority of the teachers, who work there, had attended the Lions-Quest training workshop in November 2000, and who agreed to implement this program into their curriculum. We also selected a control school, where the program was not to be used. The effectiveness of the preventive measures was to be determined through a comparison of the two schools before and after the application of the program. In both schools the study included grades 7 through 9.

The quasi-experimental design applied to this study met the requirements of the objective. The study was based on a random sample of 398 students at measuring point 1. At the beginning of the study (December 2000), these students belonged to grades 7, 8 and 9. At the completion of the study in 2001, the psychometric statistics included three measuring points. The number of students present at each of the three data collection times was 290. 150 students were enrolled in the intervention school. The partial random sample at the control school included 81 students. Key aspects of the cross-sectional representation were controlled statistically: gender assignment, drop-out/drop-in quote, completeness of data at each measuring point, and the reliability of the data.

As a result of the study, epidemiological data about the use of tobacco, alcohol and illegal drugs by students of grade 7-9, and the results of the personality surveys are available (see also Table A.1 in the appendix).

During the implementation of the study design we encountered throughout the entire intervention period difficulties in motivating the teachers to document the preventive education in the form of a classroom-hour log, sorted by abuse-preventive topic. Despite motivating support by the people involved in the project (see 2.1.2), only two seventh-grade classes reached the number of preventive classroom hours required for effective intervention. The random sample of the intervention group did therefore only include 26 seventh-grade students of both genders. From this situation resulted serious problems in determining the effects of the intervention.

1. Contrary to the objective, no differential statements regarding the effectiveness of the program in different grades can be made. All of the statements referenced in this report do only apply to the use of the program in the seventh grade.

2. The small number of random samples did not allow the formation of sub-groups. We were unable to determine differential influences of the characteristics "gender" or "family background". This is especially regrettable, since the Lions-Quest program explicitly includes participating work of the parents in regard to abuse prevention.

The results of the evaluation accompanying the intervention (formative intervention) and the determination of the effectiveness of the Lions-Quest program can be summarized in the following items:

1. The formative evaluation of the program (see chapter 3.2) indicates a high acceptance with the teachers at the test school. Overall, the teaching proposals and suggestions were rated as extremely helpful, and only very few supplements or changes were found to be necessary. The overall behavior of the students during the lessons (in regard to "interest", "active participation", "quality of contributions", and "social conduct") was rated very high as well.
2. As suspected in the "Life Skills" approach, the personality types of the juveniles are a major determinant in the explanation of substance use (see chapter 3.4). As our findings have shown, we were able to identify a sub-group of juveniles characterized by low extroverted activity as well as strong reserve and shyness in social contacts, which we consider at a relatively high risk for tobacco use. This is the personality type we were going to focus on in our subsequent application of the program. This includes extra-curricular project work in order to offset the described life skills deficits (risk group-oriented program application).
3. The implementation of the Lions-Quest curriculum resulted in a significant increase in social activities, while fear, depression and aggressive behavior in comparison to the control class decreased significantly. This means that even though the random sample was small and only restricted to the seventh grade, we were able to prove the positive effect of the Lions-Quest program. The findings of this report show that the stable personality traits (like self-esteem and expected self-effectiveness) cannot be modified to a great extent by the program. It is rather the characteristics of psychological well being that are being improved (see also chapter 3.2.2).

The present findings lead to two conclusions for any future evaluations as well as for the practical application of the program:

1. The analysis of the effectiveness of the program should focus more on characteristics that are sensitive to change (e.g. psychological well being). The reason for this is the high stability of personality traits. The extent of the stability differs dependent on the personality trait being focused on. Even though the personality traits analyzed in this study, like self-esteem, expected self-effectiveness, etc. are some of the least stable traits (intelligence and temperament are clearly more stable), they usually don't change substantially throughout the year. School programs for the development of life skills are

reaching far indeed by trying to increase such stable personality traits. To do this, we need in addition to the work at school also the support of other social organizations, including the family home and recreational groups. These measures are actually part of the Lions-Quest program. Future studies about the effectiveness of the program should increase their focus in this area.

2. The usual methodical procedure used to verify abuse-preventive intervention with hourly classroom protocols has made the following clear. Only a small number of teachers actually included the knowledge about the prevention of substance abuse they had gained at the Lions-Quest training workshop into their daily classroom procedures. It is therefore important to increase the focus on the motivation to conduct abuse-preventive classroom education after having attending the training seminars.

In this regard, we believe two aspects are especially important:

- (1) The teachers, who participated in this study cited restrictions in the curriculum as the reason why the program isn't used more often. Following this line of thought results in a request to the school administration to increasingly include classroom teachings about substance abuse into the curricula to indicate how important these issues are to the school administration. The administrative regulation of the Saxonian State Ministry for Culture, which requires the promotion of life skills as part of the curriculum equal to the teaching of scientific knowledge, needs to be applied more readily.

- (2) The topic of motivation for the continuous application of abuse-preventive classroom teachings by the teachers should also be developed in more detail at the training workshops for the Lions-Quest program. The argument in favor is the number of documented abuse-preventive classroom hours in this report. Even if the described difficulties with the curriculum are being taken into consideration, it is strange that with more than ten teachers at the intervention school having attended the Lions-Quest training workshop, in a time period of four months only 47 classroom hours for the prevention of substance abuse were actually taught.

6.3 The Impact of the Program from the Teachers', Principals' and Students' Perspective

Impact on School Level

The implementation of preventive measures into the daily school routine could be much simplified and (partially) even made possible, if the teachers would receive support from the faculty and the school administration. Workgroups primarily focusing on the “Life Skills” program, its areas of application and distribution would provide a good forum for this purpose. 25% of the teaching staff reports that such a workgroup has already been put together at their school. In addition, more than two thirds of the teachers indicate that the school administration supports their efforts to implement a “Life Skills” program at their schools.

“Life Skills” has not only a positive effect on the atmosphere in the classroom (see below), but also on the atmosphere at the school, and furthermore promotes the image of the school in the public eye. This impact on the outside world is being verified by the teachers as well as the principals. Principals estimate this positive impact to be much higher (50%) than teachers (30%). This is probably due to the fact that principals (must) have an overview over the entire school. Teachers, on the other hand, (must) mostly focus on individual classes.

Participants' Acceptance of the Program

A preventive school program will only be successful, if it is accepted by all people involved, starting with the teachers and students. Low acceptance by the students may be reflected in the classroom through (emotional) rejection, inattentiveness and inappropriate behavior during class. Low acceptance by the teachers may even negatively affect the quality of the teaching sessions. This would make the successful implementation of the program nearly impossible.

The results of the study show that the “Life Skills” program is being accepted to a high degree by all parties involved. The large majority of teachers and students characterize the application of the program with the following statements: the classes are fun, necessary and interesting. Far more than 90% of the teachers would like to teach the “Life Skills” program repeatedly. The students as well show great interest in these classes, since 70% would like to see “Life Skills” classes more often. The students are especially happy with the opportunity to freely voice their opinions, to solve problems in small groups, and the fact that they are not forced to only listen, while the teacher only lectures.

Personal Evaluations of the Impact

According to statements by the teachers, the “Life Skills” program has multiple effects, namely on the practical everyday teachings as well as on the atmosphere within the classroom, and on various skills and capabilities of the students. 75% of the teachers have learned new teaching methods, which they are also using in their regular classes. Four out of five teachers report good teamwork and a better relationship with their students. Also important are the positive effects of the program on the cooperation between teachers and parents as well as school administrators and faculty, a fact that has already been pointed out earlier.

The “Life Skills” program has an especially positive effect on the atmosphere in the classroom, and this from the teachers’ as well as the students’ perspective. Far more than 80% of participants believe this to be the most successful part of the program. The results are improved teacher-student relationships, and better teamwork between teachers and students. A positive classroom atmosphere is especially important for the success of preventive measures (Leppin, Hurrelmann & Freitag, 1994; Freitag, 1998). If the students sense little social support from the teacher, and/or if there is no basic trust, the person teaching the life skills is in danger of being perceived as not credible, and the content will be experienced as incongruent.

The results introduced in this report illustrate the positive effects of the “Life Skills” program on the capabilities and competencies of the students as seen by the teachers. The program does not only change specific attitudes towards oneself, but the interacting and communication skills are also improved. According to statements by the teachers, the students display more tolerance towards their classmates, are more considerate, and are more likely to help one another. All of these factors combined promote a positive classroom atmosphere and a constructive learning environment. The results also show that a life skills program can improve capabilities and behaviors required in other classes as well, which in the end makes the teacher’s job easier. Students attending “Life Skills” classes pay better attention in “regular” classes, and try to solve problems on their own. In contrast to students, who have not attended the program, difficulties arising from these tasks are usually much less of a problem for students, who have attended the program. Students, who have experienced the “Life Skills” program, display much greater self-confidence, plan their tasks, and carry them through.

Many teachers consider the first month it takes to set up the “Life Skills” program to be very work and time-intensive. However, the time and work invested up front should be considered in relation to the above listed positive results and the improved working conditions overall.

In summary, the following can be stated: Based on the data that have been collected, the objective to use the “Life Skills” program to improve the atmosphere in the classroom and at the school, to strengthen capabilities and skills of the students, to positively influence mutual interaction, and to improve the image of the school to the public has definitely been met.

Results of the Cross-Section Analysis

The results of the cross-section analysis indicate that the “Life Skills” program has a positive effect on the development of self-esteem and social competence. In addition, substance-specific self-evaluations have been changed, e.g. certainty of resistance and willingness to quit. It has, however, also become clear that the program doesn’t have the same effect on all children and juveniles, but that especially girls have benefited from the program. This does not apply to the use of cigarettes: we were able to verify a preventive effect in 5th grade students: girls and boys in the intervention class exhibited lower starting rates regarding the use of tobacco than male and female students in the control classes.

After the implementation of the “Life Skills” classes, girls estimated their self-esteem to be higher, and, according to their own statements, were more likely to assert themselves against other people. In contrast, the boys at this age already indicate such high self-esteem that an increase is not verifiable. A similar difference between the sexes is apparent in the development of social competence (assertiveness), “certainty of resistance”, and “willingness to quit”. Differences in the effects according to sex have also been verified in other studies (Graham et al, 1990; Mittag & Jerusalem, 1997; 2000; Walden, 2000; Leppin et al, 1999). The explanation for the different effects of the program is that girls are more open to specific elements of the programs, especially in the areas of communication and emotional competence. These are the key aspects of the teaching program. The different effects the program has on girls and boys clearly illustrate the necessity of a gender-specific approach and/or to supplement the program with elements tailored for boys.

In regard to “certainty of resistance” and “willingness to quit” the “Life Skills” program cannot only be used to verify primary preventive measures, but, in the case of the group of smoking girls, also positive secondary preventive effects.

The data illustrate furthermore that the increase in tobacco use associated with age and development as seen in the control group, can be reduced with the “Life Skills” program. In this case, girls and boys benefit equally. The fact that this effect could only be verified for the 5th-graders and not for the 7th-graders is not surprising. Students in the 5th grade (average age 10 years) do not consider “Smoking” a relevant topic. While viewing tobacco use as an age-related issue, they view it critically and disapprovingly, which is reflected in the low willingness to try and the high certainty of resisting a cigarette being offered to them. This makes them the ideal target group of primary preventive measures. 7th grade-students offer a completely different picture. The smoking rate in this age group is approx. 5 times as high as in the 5th grade⁴.

⁴ When comparing smoking rates, in addition to age it is important to differentiate that the students in the 7th grade were enrolled in a public school, while the 5th –grade students were enrolled in the other three types of schools. Kelip (2000) has shown different using behavior for the four types of schools (grades 7 to 9), where the respective numbers of regular and occasional smokers were higher at the public school than at the other three types of schools.

With the start of puberty, the meaning of the use of psychoactive substances changes for the adolescents, and becomes highly functional since it is connected with desired target images like the establishment of contact to same-age peers or relationships with the opposite sex (Hurrelmann & Bründel; 1997).

Most teenagers smoke the first cigarette between the 13. and 14. year of their life (BzGA, 2001). At the beginning of the program, the 7th-graders are therefore at a much higher risk of tobacco use, and therefore harder to reach by a primary preventive program like “Life Skills”. Although the above described effects on substance specific cognition could be verified, effects on the using behavior itself in this age group and/or on juveniles, who are already strong smokers, can only be expected to kick in, if the primary preventive class components are supplemented with secondary preventive programs tailored for this target group. Other studies as well have shown that it is easier to influence expectations and attitudes than actual behavior (Tobler & Stratton, 1997; Rundall & Bruvold, 1988).

In conjunction, we would like to explicitly point out that the program methods used by the intervention teachers were not substance-specific. This means that they did not provide any developmentally adequate information about psychoactive substances, neither do the program methods used for this evaluation contain “resistance training”, e.g. role-plays to practice resistance against the persuasion of peers to accept psychoactive substances. The teaching and especially the practicing of correct behavior, like the rejection of a cigarette, are a vital and necessary part of preventive measures (Hansen, 1992; Tobler & Stratton, 1997). A follow-up evaluation should consider especially this aspect, and integrate different substance-specific topics already offered by “Life Skills” into the corresponding teaching program. Even though the data of the 5th-grade students and the 7th-grade students cannot be compared directly, it seems to make sense to start these exercises early on in order to counteract the developmental trend.

Another issue to be explored is the question of different effects occurring in correspondence the evaluation of the program by the students. As already mentioned, the “Life Skills” program is a type of material that is very popular with the students, a material they consider to be important, and which delivers in many cases vital encouragement. Despite certain differences in gender and age, the students evaluate the program as positive. Since none of the student groups rated the program as bad, a corresponding group comparison could not be provided. The data prove that students, who submitted a less positive rating still benefited from the program.

In summary, the “Life Skills” program – despite its restrictions – can lead for many children and juveniles to the desired changes.

6.4 Recommendations for the further development of the “Life Skills” program

In conclusion of this analysis, we have the following recommendations for the further development of the Lions-Quest “Life Skills” program:

Teacher’s Manual

- The materials of the teacher’s manual should be revised in regard to the speech, content and scope.
- The working materials should be made available to the teachers in digital form.
- It would be practical to supplement the “Life Skills” program with the American “Skills of Action” program. However, the application of this program does, of course, require a corresponding revision of the materials and the adaptation to central European culture.
- The program should deal in much greater depth with gender-specific aspects. It should also be revised to include the unique features of different ethnic groups.
- The different effects of the program on girls vs. boys clearly illustrate the necessity to include supplemental teaching units just for boys.

Parent’s Manual

- The Parent’s Manual should be revised in regard to speech, content and scope.
- As supplements to the Parent’s Manual, additional sources of information compiled in the form of brochures should be provided to the parents. The translation of these brochures into several languages (e.g. Russian, Turkish) is recommended.

Student’s Manual

- The Student’s Manual should be revised in regard to speech, content and scope.
- The Student’s Manual should not be distributed in the form of a book, but rather in the form of handouts (leaflets). As an alternative, the contents of the Student’s Handbook may be supplied to the teachers in digital form.

Teacher Training

- Follow-up workshops to the topics “Gender-Specific Prevention” and “Working with Parents” are desired.