

2. METHOD

The Project “The evaluation of health promotion methods” [„Evaluation von Maßnahmen der Gesundheitsförderung”] was based on a school oriented longitudinal prevention program that was developed and executed between 1995 and 1997 in co-operation with the SFB [Sonderforschungsbereich] 227 “Prevention and intervention in childhood and adolescence” [Prävention and Intervention im Kindes- und Jugendalter] of the University of Bielefeld, and the youth welfare office [Jugendamt] and the local child and youth support office [Regionalen Arbeitsstelle zur Förderung von Kindern und Jugendlichen -RAA] in Dortmund, Germany.

The main goal of the project was to evaluate the effects and efficiency of the longitudinally designed school oriented health promotion and primary prevention program “The evaluation of health promotion” focusing on the promotion of social competences (life-skills). Moreover, the goal was to investigate the effect of that program in drug prevention.

2.1 THE LONGITUDINAL DESIGN

2.1.1 Subjects

The project started in 1995 with the participation of 48 school classes in 28 schools. These classes were sorted into two equally large groups of intervention (I) and control (C) classes. In the longitudinal evaluation over the three-year period, there were only 32 classes, because only those classes were evaluated where the prevention was fully completed.

All regular German school-types were represented at the beginning of the study, but in the longitudinal design only the “Gymnasium” (grammar school, 18 classes), “Gesamtschule” (comprehensive school, 8 classes) and “Realschule” (secondary school, 6 classes) remained. The classes from the “Hauptschule” (technical secondary school with practical job specification, 4 classes) broke from the program directly after beginning and therefore were not included in the longitudinal sample. The subject sample for the longitudinal study is

summarized in Table 1. Pre- and post-test measurements are called waves. Waves with an odd number are always the pre-tests, waves with an even number the post-test.

Table 1. Longitudinal sample characteristics of the project “Evaluation von Maßnahmen der Gesundheitsförderung”.*

	Measurements sequences - Waves											
	W1		W2		W3		W4		W5		W6	
Total	1293		1162		1192		1113		854		681	
Boys	634		591		616		558		397		305	
Girls	626		592		563		550		453		372	
Int./Cont.	609	684	523	639	523	656	514	594	370	480	303	374
Mean Age	10.92		11.14		11.81		12.15		13.01		13.27	
SD Age	.66		.68		.72		.71		.72		.64	

* In all cases the missing values are not included and *N* differs between the cells; W= Waves; Int. = Intervention classes, Cont. = Control classes.

In the three-year longitudinal period there was a dropout of 48 percent, which explains the decrease in the total number of participants in Table 1. This rather high level of dropout was due to the fact that many students failed in school in at least one of the measurements, changed school, moved away, and in certain cases, a class was not able to complete the program in time and, therefore, had to be removed from the subject-pool.

The largest school type group was the “Gymnasium” students (58%), followed by the “Gesamtschule” (24%), and the smallest group of students was from the “Realschule” (18%).

The largest majority of the sample for the first measurement (W1) were students of German citizenship (80%). In the group of students with foreign citizenship (20%), the largest subgroup were Turkish, with six percent.

2.1.2 Measures

The research team put a standard questionnaire together (see Appendix E). It differed slightly from grade to grade, but its major part remained the same throughout the period of three years. The questionnaire included both scale items and single item questions and can be grouped around five major theoretical topics:

1. Personal and social resources (self-efficacy, social support, social and emotional competencies, coping, and personality characteristics measured by the FFPI)
2. School specific aspects (school/class atmosphere, attitude toward school and achievement)
3. Health characteristics (stress resilience, psychosomatic problems, depression, aggression, fear, perceived current health status and expected health status)
4. Legal drugs, tobacco and alcohol (knowledge, consumption characteristics and frequencies by self, family and friends)
5. Socio-demographic aspects (socio-economical status, family structure, nationality)

An additional questionnaire booklet was administered to the intervention group to measure the acceptance of the prevention program. This booklet was administered during the post-test questioning in the classes meaning, altogether three times.

The questioning was completed in a maximum of two class hours (approximately 90 minutes). Later on, as the students got older, this time period was reduced to less than 60 minutes. In addition, the students apparently needed more time for reading and answering the questions after the summer break than later on during the school year.

2.1.3 Research design

The longitudinal questionnaire and the quasi-experimental study were administered following a pre-and posttest design (see Table 2).

Table 2. The longitudinal research design

Year	Grade	Intervention group	Measurement sequences/Waves	Control group
Sept./Feb.	GRADE 5	Pretest	Measurement/Inquiry-W1	Pretest
1995		INTERVENTION/ Prevention Program		No treatment
Jan./June		Posttest	Measurement/Inquiry-W2	Posttest
Sept./Feb.	GRADE 6	Pretest	Measurement/Inquiry-W3	Pretest
1996		INTERVENTION/ Prevention Program		No treatment
Jan./June		Posttest	Measurement/Inquiry-W4	Posttest
Sept./Feb.	GRADE 7	Pretest	Measurement/Inquiry-W5	Pretest
1997		INTERVENTION/ Prevention Program		No treatment
Jan./June		Posttest	Measurement/Inquiry-W6	Posttest

The intervention group was put together as follows: the teachers of the intervention classes contacted the research team after having been informed about the project by local educational workers and declared their participation for the whole duration over three years. The control classes were collected from several other schools in the city to prevent carry over effects and were chosen carefully to provide an adequate social-economical and structural match (school type, size of class, etc.) with the intervention classes. In both research groups, only those children, who were eager and whose parents signed an agreement of participation took part in the study. Both the intervention classes and control classes participated in the longitudinal study during a period of three school years, from grade 5 to grade 6 to grade 7.

The pre- and post-test questioning was conducted in the classrooms during regular tuition hours. The research group visited the schools twice each school year with an interval of approximately five months between pre- and post-test.

The intervention group participated in the prevention program between the pre- and post-tests and was questioned before and after the intervention; the control group was questioned in the same interval without any treatment.

The students filled out the questionnaire booklet anonymously. Where help was needed, the research assistants (two having always been present in the classroom) helped the students. It was agreed that the teachers would not help or interfere.

Due to the different time schedules and application deadlines of the intervention classes, in the majority of classes the prevention program took place in the second part of the school year, in the spring period (65%), and for some classes in the fall period (35%), between September and January.

2.1.4 The prevention program

The primary prevention program was based on the life-skills approach (Botvin & Tortu, 1988; see section 1.1.12). In the three grades, during which students were trained and questioned, the program started and ended with a brunch in the class prepared by the students at school. Additionally, special relaxation trainings with fantasy-trips and muscle relaxation accompanied all programs to facilitate individual stress reduction. The program-blocks lasted approximately 27 school-hours each year altogether, and were spread over an approximate five-month period.

5th Grade

The 5th grade was chosen as a setup for the first intervention. For this purpose, a life-skills training with a nonspecific prevention program had been put together. The promotion of social and emotional competencies was stressed and so the program incorporated blocks that dealt with coping with anger, conflict solving behavior, perception of emotions (self/others) and communication rules.

6th Grade

In this grade, the program was put together in close cooperation with the teachers, so that it was possible not only to address age relevant, but also actual class relevant problems (like norms and values). In comparison to the fifth grade, more emphasis was laid on the promotion of social competencies during the program period, and a drug specific topic, i.e. smoking, was

introduced through role-playing games and small experiments. The students were encouraged to learn to say "no" in group situations and so to be able to resist group pressure. Moreover, they practiced to develop trust and cooperation in peer groups through different games.

7th Grade

In addition to the social and emotional competence blocks, a new block was introduced in the seventh grade, namely, the promotion of communication and conflict solving skills. In this block the students practiced and tried out different ways of verbal and nonverbal conflict solving and they were encouraged to learn how differently a situation can be perceived from other points of view. The substance specific part of the program dealt with the psychophysiological and social effects of alcohol consumption.