Evaluation of the model project

Peer Education

commissioned by the BZgA

Prof. Dieter Kleiber and Elke Appel

ABRIDGED VERSION

Published by the
Bundeszentrale für gesundheitliche Aufklärung
Evaluation of the model project
Peer Education

commissioned by the BZgA

Prof. Dieter Kleiber and Elke Appel

Published by: Bundeszentrale für gesundheitliche Aufklärung
Contents

Preface 5
Digression 6
Introduction 7

The intensive training course 9

The learning successes of the peer-educators 9
Assessment of the peer-educators by the peer-groups 11
Peer education and the readiness to change behaviour 16
The learning success of the peer-groups 19
Peer education and the teaching of facts 25

The short training course 29

A useful option for out-of-school peer projects 29

Appendix 32

Abridged versions of studies, model projects and repeat surveys of BZgA 32
The most important prerequisite for successful health promotion is quality assurance. Measures taken by the Bundeszentrale für gesundheitliche Aufklärung (BZgA) are therefore carefully planned on the basis of the current state of knowledge; their implementation is as a rule monitored by academics working in the field, and the results are critically assessed. The BZgA uses regular representative surveys to reveal the current state of indicators on knowledge, attitudes and behaviour. These surveys are supplemented by quantitative and qualitative studies on specific issues, secondary and meta-analyses of existing research results, surveys of professional opinion, and commissioned expert assessments.

Model projects are always monitored by academics working in the field. The quality-assurance measures include process evaluations in the form of pre-tests, participatory observation, post-tests and follow-up investigations. The model project “Peer education – an approach by young people for young people on questions of love, sex and contraception” was the subject of academic monitoring during the first project phase, which lasted from 1994 to 1997. This monitoring was all the more necessary insofar as the peer-education approach is not very widely used in Germany, and there are hardly any soundly-based data on its effectiveness and applications.

The experience gained with the BZgA model project and in particular the results of the academic flanking research are in demand internationally and have been adopted as quality-assurance standards in the EU “Europeer” project. Under the Internet address www.europeer.lu.se further information on peer education is available, including some provided by the BZgA, e.g. a “European guide to peer education for young people on AIDS”.

These steps represent the laying of a foundation both for Europe-wide networking and for a professional exchange of views. The BZgA intends to continue its work in this field, and use synergy effects to make a promising approach more widely known.

Bundeszentrale für gesundheitliche Aufklärung
Department of Sex Education, Contraception and Family Planning
October 2002
Digression

The German school system

Issues relating to the school system, teaching plans and guidelines are the responsibility of the Länder in the Federal Republic of Germany. The responsible ministers of these 16 federal states meet in the Standing Conference of Ministers of Education and Cultural Affairs to coordinate their respective school systems and curricular as far as possible. The basic aim of the work of the Kultusministerkonferenz where schools are concerned is to ensure that school careers are based on a uniform and comparable structure. The main points of emphasis are issues relating to the mutual recognition of school certificates, classroom teaching and teacher training.

The structure of the school system

The school system is divided into the Primary level (classes 1 to 4), Secondary level I (classes 5 to 10) and Secondary level II (classes 11 to 13). In Germany, children start school from their seventh year. After a uniform four years at primary school (in two states, six years), secondary school careers differ according to school types, known in the majority of Länder as

- *Hauptschule* = secondary modern
- *Realschule* = intermediate secondary
- *Gymnasium* = grammar school
- *Gesamtschule* = comprehensive school.

All Länder also have schools for children with learning difficulties – special schools or special needs schools or schools for the disabled as well as a variety of vocational technical colleges.

Features of the different school types and school careers

After the uniform primary school education, the various types of school set individual points of emphasis and aim at an achievement-oriented education. An important criterion here is also flexibility so that after a period of orientation, pupils have the opportunity to transfer to another type of school.

The Hauptschule, or secondary modern, provides a basic, general education which enables pupils to continue their education, especially in career-oriented courses. An above-average leaving certificate, however, enables pupils to attend a school which qualifies for a university education.

The Realschule, or intermediate secondary school, provides an extended general education and qualifies pupils for vocational training. If they have above-average capabilities, however, a transfer is also possible to a type of school that qualifies for a university course.

The Gymnasium, or grammar school, provides a deeper general education and qualifies pupils to pursue a course of higher education.

In addition to these school types, however, there are also schools offering several flexible schemes which usually work according to the course system. A classical example is the comprehensive school which pedagogically and organisationally unites the Hauptschule, Realschule and Gymnasium. The pupils are streamed in a course system according to abilities. The leaving certificate is awarded according to the performance achieved.
Introduction

In the search for promising concepts for promoting healthy life-styles in childhood and adolescence the deployment of young people of similar age and outlook to educate, advise and support their peers on youth-specific questions and problems is increasing in importance.

These peers are trained as “peer-educators” before they start work on their own account as multipliers providing targeted advice to their peer-groups.

There are good theoretical foundations for assuming that the peer-education processes thus initiated will provide an experience which would not be possible, or not in this form, in other interactive systems, such as the family, or in confrontation with teachers at school. The closer proximity which young people can establish between themselves, and the common linguistic codes they share, are regarded as favourable preconditions for the initiation of processes which allow for social learning and maximise the credibility of the processes of exchange. They would thus seem to represent an appropriate means of influencing attitudes and behaviour in a positive fashion.

At the same time we should not forget that our knowledge of the educational potential of peer-approaches is still very limited. Neither has a systematic evaluation of the effectiveness and the potential of peer-education approaches hitherto been possible at the international level. Thus we have the situation where high, theoretically plausible expectations regarding the effectiveness of peer-education approaches on the one hand are not matched by very much in the way of empirical evidence on the other. The Bundeszentrale für gesundheitliche Aufklärung has therefore performed a useful service by helping to make possible a systematic evaluation of the model project “Peer education”.

The following report aims to describe the global effects and consequences the programme has had on multipliers and target groups. Process data was also collected on the organisation of the training courses and the implementation of the model programme in schools. To answer the various questions, both quantitative and qualitative methods were used. The illustration on the next page represents an overview of evaluation levels.

Prof. Dieter Kleiber
Elke Appel
Overview of forms and levels of evaluation

**Level 1: trainers (process evaluation)**

- Interview 1
- Interview 2
- Interview 3
- Interview 4

**Level 2: multipliers (result and process evaluation)**

- Training method 2
  - Short training
  - T1 = before the start of the training course
  - T2 = at the end of the training course
  - T3 = according to peer activities

- Training method 1
  - Intensive training
  - T1 = before the start of the training course
  - T2 = at the end of the training course
  - T3 = according to peer activities

**Level 3: target group (result evaluation)**

- Test group
  - Measurement before intervention
  - Measurement after intervention

- Control group
  - Independent measurement carried out at two different times

T1 = before the start of the training course
T2 = at the end of the training course
T3 = according to peer activities
The learning successes of the peer-educators

Over the period of their participation in the training course, the young people involved experienced an increase in their skills and in their positive self-assessment. During the subsequent phase of implementing the activities they had designed themselves, these skills did not increase any further (contrary to appearances) but stabilised at the existing level.

Fig. 1 (next page) relates to the effects of the programme on the trained multipliers. It shows the changes which occurred between the start and end of training, and the subsequent follow-up. The young people profited from the programme in four areas. There was an increase in factual knowledge in the areas of sex, contraception and sexually transmitted diseases, and there was an increase (on their own assessment) in their communicative competence. These changes can be interpreted as direct results of the training, as they were taken up as subjects or practised as such during the courses. In addition, the young people experienced an increase in their feelings of self-worth over the whole course of the programme. Likewise they saw an increase in “sexual self-confidence”. “Sexual self-confidence” supports the ability to “cope”, one of the most important developmental tasks during adolescence, as well as “engaging in intimate relationships”. It also promotes the self-determined and responsible use of contraceptives. No changes in any other indicators of well-being and subjective health were apparent. The individual comparisons carried out using difference contrasts showed that with the exception of “perceived communicative competence”, significant increases only occurred between the beginning and end of training.

The intensive training course

- was offered in schools,
- took place during the young people’s free time.

Ideally, groups were made up of around 12 children, preferably with an equal number of boys and girls.

The ideal age of the young people was around 15.

More detailed information about this form of training is available in: BZgA (2002): Peer Education – a manual for practitioners, in: Research and practice of sex education and family planning, Cologne

Order address by post – BZgA, 51101 Köln, Germany
by fax – +49 221. 89 92-257
by e-mail – order@bzga.de

Order number 133 007 21

1 cf. Dreher & Dreher, 1985
Fig. 1: Programme effects (intensive training) on multipliers during the training and implementation phases (n=21)

**Factual knowledge**

- Scale 1–20
- Before training
- After training
- Follow-up

**Perceived communicative competence**

- Scale 1–6
- Before training
- After training
- Follow-up

**Feeling of self-worth**

- Scale 1–6
- Before training
- After training
- Follow-up

**Sexual self-confidence**

- Scale 1–5
- Before training
- After training
- Follow-up

Statistical tests:

- $F_{process (2,40)} = 12.04^{***}$
- $F_{process (2,28)} = 8.15^{**}$
- $F_{process (2,38)} = 3.85^{*}$
- $F_{process (2,99)} = 5.90^{**}$
Lasting increase in competence

Following the end of training, the multipliers implemented their activities in school classes (implementation phase). During this time, the peer-educators had the opportunity to put into practice the methods they had learned and to gather new experience, in particular in dealing with groups. The changes in the young people in the four areas in question correspond to the difference (as shown in Fig. 1) between the end of training and the follow-up. There is an apparent further increase in every success indicator following the end of training, but this is not statistically significant. Even so, it must be counted among the successes of the programme that the acquired skills and the positive development of the young people’s self-image never fell back to the level they were at when training started. Training to be a peer-educator seems therefore to have a lasting effect on young people. The experience of success enjoyed by the multipliers with their events during the implementation phase doubtless also played a role here. Post-supervision by the team during the implementation phase may also have contributed to the young people’s drawing long-term benefit from the training programme.

This statement needs some qualification, however. The absence of a control group means that we cannot be sure to what extent the positive changes were due to the training programme alone. It is possible that natural maturation processes and new experiences also led to the increase in self-confidence and knowledge which the young people enjoyed.

Assessment of the peer-educators by the peer-groups

An assessment by audience or participants may be experienced and feared as more or less unpleasant depending on one’s own confidence in one’s presentational abilities. This is true not only of young people. The question of whether it was responsible to expose the young people to possible experiences of failure as a result of peer-group assessment was a matter of dispute within the training team. The decisive question was whether the young people in their role as peer-educators should have the assessment procedure carried out “externally” by the evaluation team, or whether they themselves should decide who was to ask the questions. Not least for pragmatic reasons, we decided to leave the survey to the young people themselves. To organise a feedback survey by the evaluation team during the sometimes very tight peer-education events would have been difficult in any case if only because of lack of time.
The survey
Consequently we asked the young people to take on this task themselves and to send the questionnaire back to us. In order to make it clear what it was we were trying to find out, we held a 90-minute information session at the end of the intensive training course, during which the results of the first survey by the peer-educators were presented. The young people had the opportunity to put questions to the evaluation team.

The feedback
The young people were allowed to dispense with a feedback survey at sessions which from their point of view had not gone well. They made use of this right for about 10% of the sessions. As a result, there may be some “positive” distortion in the feedback evaluation.

Fig. 2: Assessment of the peer-education events by the peer-educated
The questionnaire
The results are based on 1,581 two-page questionnaires which were completed immediately after a peer activity. The majority of activities assessed were sessions conducted with school classes. Just under one-third of the questionnaires (n=616) relate to the assessment of a play on the subject “bisexuality”. This figure may provide a first impression of the numbers reached by the programme in the period of the model project under review. When one remembers firstly that presumably not all the participants at the events completed a questionnaire, and secondly that not all feedback questionnaires were returned to us, an uptake by some 2,000 young people looks realistic.

The age of the participants
The mean age of the participants was 14.8 years. It can therefore be stated that the peer-educated on average were about one year younger than the peer-educators. To judge by the feedback survey, girls, at 57.3%, were rather more strongly represented than boys, at 42.7%. This can be taken as a first indication that the events appealed more to girls.

Acceptance of peer-educators by peer-educated
In general it can be said that the peer-educators were well or very well accepted by those they were educating. The overwhelming majority of participants (84%) confirmed that they found the event “great” or “pretty good”. Furthermore 78% felt “comfortable” or “very comfortable” in the group. The feelings at the end of the event can also be stated to be on the whole positive.

Peer-educated: assessment by school type and gender
Fig. 3 makes clear, the type of school is not irrelevant when it comes to a global evaluation of the event and the group atmosphere. Gesamtschule students are the most enthusiastic. There is however no difference in this respect between students from Hauptschule and Gymnasium.

Fig. 3: Assessment of the peer-educators by the peer-educated
How well could the peer-educator place him/herself in my shoes?

To what extent did the peer-educator take sufficient time?

There is a clear gender effect in the global assessment. Girls tend to award the events higher marks. This may well be connected with the fact that among the peer-educators, there were more girls than boys; boys in the group may have felt they were not being addressed so directly.

The assessment of the multipliers in respect of their presentational skills and the way they handled the group is particularly interesting. Fig. 3 comprises a selection of assessments using criteria of this kind, broken down by gender and school type. All the assessments are based on single items.

**The peer-educators’ leadership skills**

All the young multipliers were assessed positively rather than negatively on criteria which concerned their leadership skills (“place themselves in others’ shoes”, “deal with conflicts in the group”) and their knowledge.

We also asked for an assessment of qualities which according to theory help promote model learning processes. For example, experiments in observation-learning have shown that a positive relationship or perceived similarity between observer and observed leads to higher imitation rates. Perceived attractiveness should also have an effect. In our case, this last was assessed very highly (“found him/her great”).

The lowest marks were awarded in the category “perceived similarity”. Quite clearly the peer-educated perceived a difference between themselves and the peer-educators, which of course represents a contradiction with one of the basic principles of “peer” education. This may be connected with the (albeit small) age difference.
**The peer-educators’ school background**

A comparison of the marks awarded to peer-educators from different kinds of school shows that (analogously with the global assessment) students from Gesamtschule were more highly rated on every point than the others. This result is also confirmed by means of individual statistical comparisons using the *Scheffé*-Tests.

The Gesamtschule students also reported the greatest perceived similarity between themselves and the peer-educators. Gesamtschule girls were particularly enthusiastic about the ability of peer-educators to put themselves in their shoes. Here, though, it should be noted that the Gesamtschule groups only had girl educators, since all the boys had dropped out during training. The girl educators, simply by reason of being girls, were presumably better able to recognise and take account of the needs of girls.
This result should not be seen as a direct comparison of the presentation and leadership skills of the multipliers from the different types of school. Rather, it is an expression of the extent to which the “service” provided by the multipliers coincided with the expectations and needs of their own groups. In other words, one must assume an interactive view which includes and takes account of the abilities of the peer-educated as observers as well as the qualities of the peer-educators as models.

Peer education and the readiness to change behaviour

Peer-involvement programmes are designed not only to teach facts, but also to bring about changes in attitude and, ideally, long term changes in behaviour which make the attainment of the desired goals more probable.

As indicators of the effect of the programme, we chose attitudes, communicative intentions, and condom use. Because the questionnaire necessarily had to be short, only individual indicators were used. The particularly positive assessments of the peer-educators made by the Gesamtschule students are, however, not reflected here. According to our findings, young people, almost irrespective of the type of school attended, have a positive attitude towards the use of condoms. Readiness to talk openly about sex is somewhat less, but still clearly positive.

Girls want to talk about contraception

As expected, there are clear gender differences caused by differential socialisation. Girls are more highly motivated to talk about sex and to use condoms. However, they are no more ready than boys to report an unambiguous intention actually to use condoms. Either they are not motivated to do so, because they are already taking the Pill, or they judge their influence on their boyfriends to be relatively small. Unlike the Pill, the use of condoms for intercourse needs the agreement of both partners. Girls who think they cannot in any case persuade their boyfriend to use a condom may then never even begin to form any “intention” on the matter.
Fig. 5: Attitudes and intentions in respect of condom use on the part of the peer-educated

**attitude to condom use**

<table>
<thead>
<tr>
<th></th>
<th>Gymnasium</th>
<th>Gesamtschule</th>
<th>Hauptschule</th>
</tr>
</thead>
<tbody>
<tr>
<td>very good</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**attitude to communication about sex**

<table>
<thead>
<tr>
<th></th>
<th>Gymnasium</th>
<th>Gesamtschule</th>
<th>Hauptschule</th>
</tr>
</thead>
<tbody>
<tr>
<td>very good</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**intentions regarding condom use**

<table>
<thead>
<tr>
<th></th>
<th>Gymnasium</th>
<th>Gesamtschule</th>
<th>Hauptschule</th>
</tr>
</thead>
<tbody>
<tr>
<td>very likely</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**intentions regarding communication about sex**

<table>
<thead>
<tr>
<th></th>
<th>Gymnasium</th>
<th>Gesamtschule</th>
<th>Hauptschule</th>
</tr>
</thead>
<tbody>
<tr>
<td>very likely</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Fig. 6 confirms that girls think it more important to talk about contraception related topics. This behaviour accords with traditional gender roles. However they themselves do not judge their abilities in this respect to be any higher than boys.

Efforts to promote contraception which are based on promoting communication should take particular account of Hauptschule students. Their comparatively low assessments of their own abilities and their less apparent readiness to communicate point to a particular need among this group.

**Fig. 6: Perceived (own) communicative competence and importance of communication among peer-educated**

_How difficult is it to talk about love, sex and contraception?_

![Bar chart](chart.png)

<table>
<thead>
<tr>
<th>School</th>
<th>Girls</th>
<th>Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gymnasium</td>
<td>2.1</td>
<td>1.9</td>
</tr>
<tr>
<td>Gesamtschule</td>
<td>2.3</td>
<td>2.1</td>
</tr>
<tr>
<td>Hauptschule</td>
<td>2.8</td>
<td>2.6</td>
</tr>
</tbody>
</table>

*F* school (2,1372) = 8.41***
The learning success of the peer-groups

The following sections deal with the evaluation of the efficacy of the programme. In order to determine the effects of the intervention over time, variance analyses with repeat measurements were calculated. The treatment groups were taken as the grouping factor, while all the predictors of condom use and indicators of communication were regarded as dependent variables.

As the possibility could not be excluded that a global analysis across all the participating schools might produce a levelling-out of the effects, the results for the three types of school are presented separately. The two Gymnasien involved were grouped together in view of comparability of treatments. One treatment group, which had taken part in a theatrical performance (treatment 1a) was compared with a second treatment group, which had taken part in both a theatrical performance and a peer-education instruction programme (treatment 2) and a control group from a control Gymnasium.

The second sub-group analysis was carried out with the Gesamtschule students. An “information diffusion group” (treatment 1b) was compared with a group of young people who had taken part in a peer-education instruction programme (treatment 2), and with a control group from a different Gesamtschule. At the Hauptschule level, only two groups were compared: a treatment group and a control group.
The Gymnasium peer-groups

The Gymnasium students represented the largest group within the peer-educated sample. They comprise a total of 953 students from four schools. Compared with those from the other two types of school, the target-groups were offered a relatively broad range of activities and information by the peer-educators. Thus they had the opportunity either to attend a theatrical production by the peer-educators on the subject of bisexuality, or to take part in a discussion-cum-information session with the peer-educators within their school class, or both. On the one hand, this faces the evaluators with the problem that the effects of the peer-education theatrical production cannot be separated from those of the peer-education instruction, as virtually the whole of the Gymnasium sample saw the play. On the other hand, the possibility is also opened up of investigating whether the two treatments bring about effects of differing intensity in the sense of a dose-response relationship, in other words whether the peer-education instruction, on top of the theatrical performance, achieved a greater effect than the play alone.

Major post-treatment differences between the groups (5% significance level) could only be detected in respect of the indicator “attitude towards condom use”. The theatre groups were somewhat less positive towards condom use than the two other groups.

A total of 14 statistical analyses resulted in five significant interaction effects, and one tentatively significant effect, in the desired direction. Only one of these effects is related to condom use. The perceived difficulty of condom use declined in the case of both treatment groups, or put the other way, both treatment groups found it easier to use condoms following the intervention.

There were clear intervention effects in the case of communication promotion. As expected, young people who took part in the peer-education instruction talked more freely thereafter about subjects such as love, sex and contraception. This was not true of the group who only saw the play. However, it was this latter group in particular who evinced the greatest increase in their expectation of being able to express their needs and desires in the sexual sphere (“taking the initiative”). This result might possibly be explained by the model effect of the peer-educators, as the play included a scene where someone made a pass at someone else, which might have been seen as an example to follow. In line with this, both treatment groups evinced a reduction in the perceived difficulty of talking about intimate subjects. However, even young people from the control group said they were more ready to engage in conversation on such subjects than at the pre-test, so this result may simply reflect the fact that the young people were growing up. At the same time, the young people found it increasingly important to talk about subjects such as love, sex and contraception. Here too, we see an interaction between the treatment factor and the progress of time. Young people who took part in the peer-education instruction found it very important to talk to other young people on these subjects.

All in all, the highly-significant before-and-after effects for the group as a whole indicate that young people undergo natural developmental changes where the target quantities are concerned, and increasingly acquire behavioural skills which they need in order to cope with important developmental tasks such as embarking on intimate relationships. Accordingly, they judge themselves increasingly to be in possession of these skills.
Fig. 7: Effects of the peer-education model programme on Gymnasium students

intention to talk about sex

<table>
<thead>
<tr>
<th>Scale (1-7)</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>2.5</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>3.5</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>4.5</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>5.5</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

perceived difficulty of condom use

<table>
<thead>
<tr>
<th>Scale (1-7)</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>6.5</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

| F treat* time (2,916)=2.63 (*) |

perceived difficulty of communication

<table>
<thead>
<tr>
<th>Scale (1-4)</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>6.5</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

| F treat* time (2,928)=8.39*** |

own expectation of taking initiative

<table>
<thead>
<tr>
<th>Scale (1-5)</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>6.5</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

| F treat* time (2,915)=7.90*** |

perceived importance of communication

<table>
<thead>
<tr>
<th>Scale (1-4)</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>6.5</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

| F treat* time (2,927)=5.99** |

frequency of communication

<table>
<thead>
<tr>
<th>Scale (1-5)</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>6.5</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

| F treat* time (2,915)=7.90*** |

- control group
- play
- play + peer-instruction
The peer-education model programme led to more positive assessments of specific communication skills among Gymnasium students. The extent of the effect is dependent on the respective intensity of the treatment. The greatest increase was shown as expected, in most cases in groups which had undergone intensive treatment (play and peer-instruction). The possibility cannot be excluded that the single effect in respect of condom use – concerning the perceived difficulty thereof – had less to do with the actual use of condoms than with a general rise in self-confidence when implementing contraceptive practices.

**The Gesamtschule peer-groups**

Within the intervention Gesamtschule, too, we must distinguish between two groups: those who attended information sessions, and those who did not. We think that within the Gesamtschule, there was a chance that the young people were indirectly influenced by the intervention group. It is plausible to assume that an increase in conversation as a result of the programme (“information diffusion”) might lead not only to the actual peer-educated group profiting from it, but to similar effects in their immediate circle.

**Gymnasium and Gesamtschule students compared**

Compared with the Gymnasium students, those from Gesamtschule evinced somewhat different effects as a result of the programme, or at least there was a different emphasis. As with the Gymnasium students, we found treatment effects in respect of perceived difficulty of condom use (and less significantly in expectations of condom use), as well as in perceived communicative competence.

Students in the peer-education instruction group showed a clear increase in self-confidence in these areas, in contrast to the information-diffusion group. Unfortunately, the control group showed a comparable increase, so that the effect cannot be attributed unambiguously to the programme. The same pattern is repeated when we come to attitudes to communication. While both the control group and the intervention group who took part in the peer-education instruction had an increasingly positive attitude towards talking about sex, the information-diffusion group remained at their pristine level. The interaction effects therefore come about largely only to the extent that the information-diffusion group evinced no change, while the treatment and control groups both changed in the same desired direction.

In addition, we found effects in normative expectations regarding condom use, which increased among young people who took part in peer-education events. After the event in question, these individuals were more convinced that their boy/girlfriends would expect of them that they should use condoms. As described, the use of contraceptives, including condoms, was demonstrated at every peer-education information event. It may be that the peer-educators exerted an influence on the acknowledgement of social norms within their circle of friends. As young people, they put across normative expectations regarding condom use, which were then transferred to their circle of friends.
Fig. 8: Effects of the peer-education model programme on Gesamtschule students

perceived difficulty of condom use

<table>
<thead>
<tr>
<th>Scale 1–7</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5</td>
<td>3.3</td>
<td>3.1</td>
</tr>
<tr>
<td>3</td>
<td>3.0</td>
<td>2.9</td>
</tr>
<tr>
<td>2.5</td>
<td>2.7</td>
<td>2.5</td>
</tr>
<tr>
<td>2</td>
<td>2.3</td>
<td>2.2</td>
</tr>
<tr>
<td>1.5</td>
<td>1.7</td>
<td>1.5</td>
</tr>
</tbody>
</table>

F treatment *time (2,363) = 2.97 *

normative expectations of friends regarding condom use

<table>
<thead>
<tr>
<th>Scale 1–6</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.5</td>
<td>6.3</td>
<td>6.1</td>
</tr>
<tr>
<td>5.5</td>
<td>5.3</td>
<td>5.1</td>
</tr>
<tr>
<td>4.5</td>
<td>4.3</td>
<td>4.1</td>
</tr>
<tr>
<td>3.5</td>
<td>3.3</td>
<td>3.1</td>
</tr>
<tr>
<td>2.5</td>
<td>2.3</td>
<td>2.1</td>
</tr>
<tr>
<td>1.5</td>
<td>1.3</td>
<td>1.1</td>
</tr>
</tbody>
</table>

F treatment *time (2,335) = 3.29 (*)

perceived difficulty of communication

<table>
<thead>
<tr>
<th>Scale 1–4</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2.9</td>
<td>2.7</td>
</tr>
<tr>
<td>2.5</td>
<td>2.3</td>
<td>2.1</td>
</tr>
<tr>
<td>2</td>
<td>1.7</td>
<td>1.5</td>
</tr>
<tr>
<td>1.5</td>
<td>1.3</td>
<td>1.1</td>
</tr>
</tbody>
</table>

F treatment *time (2,370) = 2.97 *

normative expectations of teachers regarding condom use

<table>
<thead>
<tr>
<th>Scale 1–6</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.5</td>
<td>6.3</td>
<td>6.1</td>
</tr>
<tr>
<td>5.5</td>
<td>5.3</td>
<td>5.1</td>
</tr>
<tr>
<td>4.5</td>
<td>4.3</td>
<td>4.1</td>
</tr>
<tr>
<td>3.5</td>
<td>3.3</td>
<td>3.1</td>
</tr>
<tr>
<td>2.5</td>
<td>2.3</td>
<td>2.1</td>
</tr>
<tr>
<td>1.5</td>
<td>1.3</td>
<td>1.1</td>
</tr>
</tbody>
</table>

F treatment *time (2,358) = 2.27, p = .105

attitude towards communication

<table>
<thead>
<tr>
<th>Scale 1–7</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>6.5</td>
<td>6.3</td>
</tr>
<tr>
<td>6.5</td>
<td>6.3</td>
<td>6.1</td>
</tr>
<tr>
<td>6</td>
<td>5.8</td>
<td>5.6</td>
</tr>
<tr>
<td>5.5</td>
<td>5.3</td>
<td>5.1</td>
</tr>
<tr>
<td>5</td>
<td>4.8</td>
<td>4.6</td>
</tr>
<tr>
<td>4.5</td>
<td>4.3</td>
<td>4.1</td>
</tr>
<tr>
<td>4</td>
<td>3.8</td>
<td>3.6</td>
</tr>
</tbody>
</table>

F treatment *time (2,363) = 3.69 (*)

frequency of communication

<table>
<thead>
<tr>
<th>Scale 1–5</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5</td>
<td>3.3</td>
<td>3.1</td>
</tr>
<tr>
<td>3.3</td>
<td>3.1</td>
<td>2.9</td>
</tr>
<tr>
<td>3.1</td>
<td>2.9</td>
<td>2.7</td>
</tr>
<tr>
<td>2.9</td>
<td>2.7</td>
<td>2.5</td>
</tr>
</tbody>
</table>

F treatment *time (2,337) = 2.15, p = .117

Legend:
- Control group
- Peer instruction
- Information diffusion
The Hauptschule peer-groups

Fig. 9 shows that Hauptschule students formed the smallest of all the groups (n = 71). When the questionnaire was being developed, one of the criteria was that it should be completed not only by students from Gymnasium and Gesamtschule, but also by Hauptschule students in year 8, and that it should be completed during a single school period. Experience of collecting the responses showed that in spite of the brevity of the questionnaire, answering the questions still placed considerable demands on the concentration and comprehension of the Hauptschule students. The total group of Hauptschule students questioned took part in peer-education instruction sessions, so that in contrast to the other two categories, there is only one treatment group to be compared with the control group. (All in all, we found few intervention effects: see Fig. 9.)

Only one intervention effect can be shown to exist at the 5% significance level. This concerns the normative expectations of parents regarding condom use. Here the treatment group of Hauptschule students demonstrated a clear increase (see Fig. 9). This is surprising at first sight, as parents were not directly integrated into the intervention, nor presumably were parental points of view a subject of the information events. The programme may have stimulated family-internal discussions which extended to condom use, providing a context for parents to express their view on the matter explicitly for the first time. There is also (albeit only a trend) a desirable increase in frequency of communication among the intervention group, while communication frequency among the control group showed no change.

---

**Fig. 9: Effects of the peer-education model programme on Hauptschule students**

- **Normative expectations of parents regarding condom use**
  - Pre-test: 3
  - Post-test: 3.5
  - F treat* time (1,64) = 4.31 (*)

- **Frequency of communication**
  - Pre-test: 2.5
  - Post-test: 3
  - F treat* time (1,60) = 3.24 (*)

- **Normative expectations of teachers**
  - Pre-test: 2.5
  - Post-test: 3
  - Scale 1–6

- **Perceived difficulty of communication**
  - Pre-test: 2
  - Post-test: 1.5
  - Scale 1–4
Young people like to discuss their problems with their best mates or with their parents, but are more reluctant to seek the help of a counselling centre. The establishment of young people’s networks is among the declared aims of peer-involvement strategies, as is dissemination of knowledge about counselling centres and other instances providing advice. The training of young people as peer-educators therefore includes visits to, and presentations of, counselling organisations such as (in our case) pro familia, the Berlin AIDS counselling centre, Mann-o-Meter e.V. and “Subway”, this last being a counselling centre for rent-boys. However only the intensive training course had enough time for visits to these organisations. When questioning the peer-educated sample, we asked about knowledge of counselling sources principally for two reasons. Firstly we wanted to know whether peer-educators had passed on the knowledge they had acquired about these providers, in other words whether a programme effect (which was not originally intended) was apparent here. Secondly we wanted an overview of the extent of knowledge concerning organisations providing youth-specific advice. Knowledge of the existence of such organisations, while not a sufficient precondition, is nevertheless a necessary one if young people are to seek their help when they need it.

**State of knowledge before the peer-education event**

The young people’s knowledge of sources of counselling was assessed using two questions, one closed and one open. The closed question was “Do you know of one or more bodies dealing with young people’s problems?”. The possible answers were: “yes, one”, “yes, several” and “no, none”. Then the young people were asked to
list all the counselling bodies they knew. This allowed us to categorise those they named, and to present them in overview. The following diagram (Fig. 10) shows the frequency with which particular categories were named. By far the most frequently named – by somewhat more than 20% of the young people – was PRO FAMILIA. Also worthy of mention in this context are the problem pages of teenage magazines (4.5%), youth counselling centres (2.05%), women’s and girls’ counselling centres (2.76%), local authority young persons’ department and health departments (2.48%), school counselling services (2.33%) and the telephone hotline (2.12%). We presume that the percentages would have been higher in many cases if we had asked the young people whether they recognised the names of the bodies, rather than asking them to actively name the ones they knew. Of the 1,411 peer-educated young people

Fig. 10: Young people’s knowledge of counselling sources (N=1,411)
questioned (longitudinally), 54.9% said they knew of no counselling bodies dealing with young people’s problems, 31.5% said they knew of one, and 11.6% said they knew of several. (1.9% gave no answer.)

Fig. 11 shows that students from intervention schools knew more about counselling provision than did those from the control schools. This is possibly an indicator that the intervention schools were positively selected. Frequently such schools display a greater openness towards innovative programmes, and alongside their academic responsibilities allocate sufficient time to health promotion. This however applies only to Gymnasien and Gesamtschulen, not for Hauptschulen. A similar effect can be seen not just on the level of the intervention schools, but also on that of the intervention groups. Positive selection effects among intervention classes are quite conceivable, as it is precisely in Gymnasien and Gesamtschulen that peer-educators can be recruited by highly committed students.

Fig. 11: Knowledge of counselling sources on the part of young people from different types of school and different intervention groups

- **Knowledge of counselling sources (all young people)**
  - Pre-test:
    - Intervention school: 46.6%
    - Control school: 39.1%
  - Post-test:
    - Intervention school: 54.9%
    - Control school: 42.5%

- **Knowledge of counselling sources (Gymnasium students)**
  - Pre-test:
    - Control group: 40.7%
    - Play: 43.1%
    - Peer-instruction: 42.8%
  - Post-test:
    - Control group: 57.5%
    - Play: 42.8%
    - Peer-instruction: 53.7

- **Knowledge of counselling sources (Gesamtschule students)**
  - Control group:
    - Intensive training: 48.7%
    - Short training: 45.6%
  - Play:
    - Intensive training: 61.4%
    - Short training: 35.8%
  - Peer-instruction:
    - Intensive training: 53.3%
    - Short training: 25.0%

*note: knowledge of at least one counselling source*
State of knowledge following the peer-education event

Between the first and second measuring points (pre and post-tests), the Gesamtschule intervention group and both the Gymnasium intervention groups appeared to display an increase in knowledge about counselling sources which suggested that information about them had been put across by the peer-educators. It is also possible that following the peer-education event, the young people were more receptive to certain forms of information, or else actively sought information on counselling sources off their own bat. However the assumption that information about sources of counselling was conveyed directly is the most plausible explanation, especially if one considers the agreement between the counselling instances named by the peer-educated and those visited by the peer-educators. Thus we find for example an increase in the “active” familiarity of pro familia among intervention classes (with the exception of the Hauptschule). Among members of the Gymnasium intervention groups, 89 (i.e. about 35%) mentioned pro familia before the peer-education event, and 137 (app. 51%) afterwards. Among Gesamtschule students, eight (app. 14%) could name pro familia before, and 15 (25%) after the peer-education event.
The short training course
A useful option for out-of-school peer projects

The short training-course groups, unlike those who underwent intensive training, experienced a very wide variety of forms of training. In respect of duration, the form taken by peer-education events, and the sphere of application, the spectrum was far broader. Youth-club and school groups were trained, some single-sex and some mixed, some “supervised” and some “open” leisure-time groups. Any comparisons between the two training modes in what follows are made on the premiss that there was no typical short-training course or short-training group. In addition, the exercises and methods employed by the trainers in the respective modes were not basically different.

Even so, we do find differences between the two training concepts. Thus the intensive training course lasts on average six months longer. When we consider the assessments of the two modes by the young people themselves, it is clear that the intensive training puts across far more in the way of factual knowledge about sex and contraception.

The short training course
The short training course was based on experience gained from the intensive training course.

- was offered in schools,
- took place during the young people’s free time.

Ideally, groups were made up of around 12 children, preferably with an equal number of boys and girls.

The ideal age of the young people was around 15.

More detailed information about this form of training is available in:

Order adress
by post - BZgA, 51101 Köln, Germany
by fax - +49 221 89 92-257
by e-mail - order@bzga.de

Order number
133 007 21
Because of the brevity of the questionnaire on the short training course, a comparison between the two training concepts is not always possible, as the T2 questionnaire comprised, alongside assessment of the training, only the relevant areas of knowledge (reduced to 12 items) and perceived communicative competence. Indicators of a feeling of well-being were only recorded for T1 and T3 in the follow-up. In the long term, we find here no effects of participation on the multipliers who underwent the short training programme. On the other hand, the increase in feelings of self-worth already observed among the young people who took part intensive training was noticeable here too. As Fig. 12 shows, the short training course, like the intensive training course, brings about an increase in perceived communicative competence. This training effect however was not sustained (unlike that achieved by intensive training).
**Acquisition of knowledge**

The young people’s assessments regarding the putting across of information about sex and contraception is reflected in the question about factual knowledge. Here, there is no enrichment of knowledge as a result of the training. This seems plausible, since from the outset the focus was always on the planned peer-education events. Less easy to understand is the delayed increase in knowledge. Either external influences played a role here (as we presume), or else experience of the training stimulated the young people to think about new topics. In this case, the increase in knowledge would have to be interpreted as a kind of latency effect.

**Organisational problems**

All in all, there would appear to be no way of increasing the efficiency of the programme by using short-training groups. This can be seen by looking at the financial side on the one hand, but also by considering the efficacy of the programme on the other. Among the costs must be counted not only the working time spent by the trainers on the comparatively more time-consuming job of actually forming the groups, but also the training period itself, which, in order to be in any way realistic, had to be extended to at least seven or eight sessions. The effects of the programme on the multipliers are if anything short-term, and specific to certain areas. There was no evidence of any generalisation in the form of a strengthening of coping resources. It is however conceivable that long-term effects could have been achieved here too, for example if during the period of the model-project, peer-education events had been implemented more often. The planning, design and implementation of peer-education events were dogged in every case by practical difficulties, which could only be overcome by taking a deep breath and having a second go. Without support from supervisors, the young people did not show enough initiative to carry the project forward. In view of the youth of the multipliers, any other expectation was unrealistic.

**Recommendation**

If it is desired to retain the short-training alternative, the only promising recipe seems to be to work with supervised groups. Perhaps a concurrent in-service training course for the supervisors would be useful; this training course could then take the responsibility for the longer-term implementation of the project. By way of qualification, one should add that the identification of effects achieved by the programme was made difficult by the heterogeneity of the training, so that in individual groups a greater effect may well be possible.
Appendix

Kurzfassungen von Studien, Modellprojekten und Wiederholungsbefragungen der BZgA
Abridged Versions of Studies, Model Projects and Repeat Surveys of the BZgA

Sexualität und Kontrazeption aus der Sicht der Jugendlichen und ihrer Eltern, Wiederholungsbefragung, Kurzfassung
Bestellnummer/Order No. 133 110 10

Sexuality and Contraception from the Point of View of Young People and their Parents, Replication Study, Brief Summary of the Final Results 1994
Bestellnummer/Order No. 133 110 70

Jugendsexualität 1998, Endergebnisse, Wiederholungsbefragung von 14 - 17-Jährigen und ihren Eltern
Bestellnummer/Order No. 133 130 00

Youth Sexuality 1998, Final Results, Repeat Survey of 14 - 17-year-olds and their Parents
Bestellnummer/Order No. 133 130 70

Sexual- und Verhütungsverhalten 16- bis 24-jähriger Jugendlicher und junger Erwachsener
Bestellnummer/Order No. 133 120 00

The Sexual and Contraceptive Behaviour of 16 - 24-year-olds, Brief Summary of the Final Results 1996
Bestellnummer/Order No. 133 120 70

frauen leben – Eine Studie zu Lebensläufen und Familienplanung
Bestellnummer/Order No. 133 140 00

women’s lives – A Study of Life Histories and Family Planning
Bestellnummer/Order No. 133 140 70

Forschungs- und Modellprojekte der BZgA
Bestellnummer/Order No. 133 021 00

Research and Model Projects commissioned by the BZgA
Bestellnummer/Order No. 133 021 70

These publications are available free of charge from the following addresses:
by post: BZgA, 51101 Cologne, Germany
by fax: +49 221 8992-257
by e-mail: order@bzga.de