DOCUMENT RESUME

ED 362 825 CG 025 095

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TITLE The Peer Leader AIDS Education Project.
PUB DATE Apr 93
NOTE 23p.; Paper presented at the Annual Meeting of the American Educational Research Association (Atlanta, GA, April 12-16, 1993).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Acquired Immune Deficiency Syndrome; Foreign Countries; Health Education; High Schools; *High School Students; *Peer Teaching; Sex Education; *Student Leadership
IDENTIFIERS *Australia

ABSTRACT

The Peer Leader AIDS (Acquired Immune Deficiency Syndrome) Education Project was developed, implemented, and evaluated in a rural high school in Australia. Student peer leaders, identified by sociometric methods, volunteered to attend a 6-day training camp to learn about health and sexuality, develop social and interpersonal skills, and participate in outdoor education activities. On return to their schools, peer leaders were monitored unobtrusively together with identified members of their peer group to determine whether peer leader influence diffused to other peer group members. One month later, semi-structured interviews were conducted with selected peer leaders, members of their peer group, parents, and teachers. A follow-up interview was conducted 8 weeks later. The project appeared successful in accelerating the processes of growth, maturation, and social development among peer leaders attending the camp. The extent to which changes in the peer leader group transferred to the wider school population, however, should be regarded more circumspectly and to this extent the protocols employed for the overall operation of the project cannot be regarded as efficient. (NB)

# THE PEER LEADER AIDS EDUCATION PROJECT

by

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Paper presented at the Annual Meeting of the American Educational Research Association, Atlanta, GA. April 12 -16

## Introduction

The high incidence of sexually transmissible diseases (STD's) in young people, and the advent of the Acquired Immune Deficiency Syndrome (AIDS) places a high importance on education as one of the principal means of containing the spread of these diseases. For schools, especially high schools, the AIDS pandemic itself provides an imperative and a justification for sexuality education, going well beyond biological functioning to include a whole range of social and interpersonal relationships that occur both on and off campus.

Even a cursory reference to the literature on the psychology of adolescence shows that, for teenagers, the peer group exerts a powerful influence on the behavior of its members. This is used to advantage in drug and alcohol health promotion campaigns targeting youth, for example, in getting the reference group to relate to, or identify with, the modeling behavior of significant others in their lives. The influence of peer leaders in affecting the behavior of others has a special significance when related to the work of schools, where the 'at risk' populations in the areas of safe sex, drug use and lifestyle choices and attendant morals and values are more readily identified.

Within the Peer Leader AIDS Education Project evaluation, the popular and mainly unexamined assumption that peer education offers the most promising solution to helping students acquire a range of behaviors, regarded as healthy, was subjected to close scrutiny. A fundamental aim of the Project was to trial and evaluate a methodology employing peer learning and leadership. This approach was adopted in order to gauge its effectiveness in predisposing high school students to adopt more healthy lifestyle behaviors, engendered by peer leaders interacting with their reference groups.

A rural high school was selected for this case study, since the curricular offerings would essentially be similar to other high schools those following state guidelines, but with smaller numbers of students than those to found in metropolitan areas thus simplifying the

monitoring and data collection tasks. The school setting in a rural town allowed for the geographical boundaries of the school and its community to be easily defined. Given the nature of country towns in Western Australia, where relationships between schools and their communities are generally close, tracking of the interactions between teachers, students and parents was more readily facilitated by selecting a country high school.

### The Evaluation Design

A group of peer leaders together with members of their peer group(s), was identified in the case study school using sociometric methods. In a setting quite different to and remote from that to which they were normally accustomed at school and home, peer leaders who volunteered for the training camp of six days duration, undertook a series of intensive and challenging learning experiences involving the acquisition of authentic health and sexuality knowledge; the development of social and interpersonal skills; outdoor education activities inviting personal challenge, and activities which promoted the formation of attitudes and values. The programme took place within an adult and open learning environment in which the promotion of mutual trust and dependence among all the participants assumed a high priority.

Through this peer leader intervention it was expected that those attending the camp would acquire an expanded repertoire of knowledge and skills designed to enhance their personal self-efficacy (Bandura, 1990). In particular it was anticipated that the peer leaders would become more self-aware of an expanded range of options available to them for handling highly personal social situations, and enhance their social skills in order to apply them as and when they were needed.

On return to their school and homes, the peer leaders were monitored unobtrusively together with the previously identified members of their peer group, in order to find out whether peer leader influence diffused to students within the immediate sphere of influence of their peer

group leaders. If this occurred it was important to draw out the curricular implications for subsequent programme development and the pastoral care system.

Antecedent conditions existing prior to the selection of the peer leader group and their departure for a training program focused on the climate, organisation and curriculum of the school. Data were collected by means of observation, supplemented with interviews and documentary survey and utilizing progressive refocusing on emergent issues and themes (Parlett and Hamilton, 1972). Key informants were identified within the school and the parent body, and interview and observation data were constantly iterated between informants and evaluators to ensure the veracity and authenticity of qualitative information before it was structured and ordered as data. One evaluator attended the peer leader training camp as a non-participant observer.

After the peer leaders returned to the school, one month elapsed, during which unobtrusive monitoring by teachers took place which was reported by means of critical incidents. At the end of this month semi-structured interviews of selected peer leaders, members of the peer group(s), parents and teachers were conducted by the evaluator. This exercise was repeated a further eight weeks later to establish, if there was an effect, whether it decreased, remained static, or increased. At the same time the AQUARIUS instrument (see Figure 1) was applied to a small sample of students, stratified by year group and randomly selected.

A quantitative dimension was added, subsequent to the initial evaluation proposal, in order to ascertain the extent to which a measurable transfer effect from peer leaders to the school population would occur. This dimension was included in order to meet public accountability standards required by public officials within the Health Department. It also complemented the internal logic of the evaluation design. The platform of the evaluators thus became a compromise between the requirements of a democratic evaluation, which were met in full, and a bureaucratic one only insofar as measurable outcomes were required by the main funding body (MacDonald, 1984).

## Case Study and Related Methodological Issues

The case study embraces a family of research methods (Guba and Lincoln, 1985; Simons, 1980; Erickson, 1986) having in common the decision to focus on inquiry around an instance i.e. the case. Given that the Project was conceptualized as a school-wide innovation, which, in its form and content, had not been attempted before in Australia, and one therefore in which the detailing of the processes observed needed to be described comprehensively for subsequent decision making, a case study was the most logical approach to adopt in these circumstances.

A further design consideration had been previously mentioned by LeCompte and Goetz (1987) who reported that when the problems and successes of program implementation have been reported, rarely has this been in terms of process data. They noted that, because of their higher internal validity (Denzin, 1978) ethnographic research strategies recently have been advocated to correct these deficiencies. As tends to be the case in many forms of social inquiry, the approaches and methods used represent a trade off between capitalising on their strengths and minimising their weaknesses.

While it may be considered unusual in case study research and evaluation, to integrate quantitative data within an interpretive frame, it does not compromise the former's underlying epistemology and philosophy. As alluded to above contractual arrangements with the main funding body required some measurable outcomes, whereas the stakeholders in the school and its community required a process orientation. The result was a 'nested' design in which pre and post administration of a questionnaire was conducted under an interpretative case study rubric (Erickson, 1986). In the latter stages of Project implementation there was a progressive reorientation from processes to outcomes. The two aspects of the design, however, were regarded as neither mutually exclusive nor discrete, but mutually reinforcing within the overall logic of the study. With multiple audiences in mind the qualitative data, after structuring and analysis, was reported using non-technical language in a form accessible to a wide readership with parents, teachers and the local community in mind (Carter, 1993a).

A separate report was raised for specialists and health-policy decision-makers (Carter, 1993b).

Baseline data for the school population were obtained initially using the Attitude Questionnaire Addressing Receptivity in Understanding Sexuality (AQUARIUS) described by Carter and Carter (1993). The instrument was readministered to the school population one month after the peer leaders returned. These data were used as indices of change within the school population and are presented in the following pages.

The uniqueness of the case itself, and the rich description of its problems and achievements are frequently documented in great detail, raising problems of reporting which are ethical in nature. Not the least of these is that, whereas research anonymises evaluation particularises, and by its very nature may expose people and incidents so that they become identifiable. In these situations the evaluator has had to balance the individual right to privacy against the public right to know. Another issue arising from this is documented by Simons (1980). She observes that one of the major issues facing responsive evaluation and/or case study research is the interactive and interpersonal nature of the exercise, making it difficult for an external evaluator to maintain social and professional distance from the Project. In this context the 'self' is the primary instrument of data gathering and reporting and mediating the exchange of information between different groups of people within and between institutions, placing a heavy responsibility for the exercise of judgement on the part of the evaluator. In confronting these inherent difficulties a number of strategies were undertaken in this Project to overcome these problems.

The first was to declare and make explicit personal biases. The evaluators bracketed their own personal values, beliefs and preconceptions to heighten self-awareness and to avoid imposing these during observations, interactions and analyses. Prior to any data gathering for the Project, self-interviews were conducted to circumscribe the evaluators' self-perceptions regarding the phenomena that were to become the subjects of the evaluation.

These were periodically referred to throughout the duration of the external evaluation component of the Project, and a conscious effort was made to minimise the intrusion of bias from this source. In addition, an on-going self- monitoring of methods and procedures, a diary was kept in parallel with field notes. This was used as a constant check against the contamination of raw data from extraneous sources of bias including those of the evaluators.

A further means of self-monitoring was through the triangulation of data sources. This is accomplished in data collection by drawing simultaneously on multiple measures hypothesised to overlap on theoretically relevant components. This counters some of the criticisms levelled at the use of single methods. Participant observation, for example, when used exclusively as a data collection method, may be criticised over sampling procedures, low construct validity and the acceptance of impressionistic accounts of behaviours difficult to verify. By using multiple data collection methods and combining these in a controlled way it is possible to minimise bias in qualitative research and evaluation. Consequently internal validity is preserved. For this evaluation, methodological triangulation of the between method type using participant observation, field reports and interviews was employed (Denzin, 1978).

Social Learning Theory provided the substantive theoretical framework which guided and informed the subsequent application of a case study methodology to the conduct of the evaluation. In essence the former states that children and adolescents have a tendency to emulate the behavior of those they like and admire. The underlying assumption is that, if the adolescent peer culture can be used to encourage the delay of initial sexual experiences, and/or that protected sex is the norm, then that is what adolescents will tend to put into effect.

Early reference to the literature showed a marked absence of any coherent body of research dealing with the exercise of adolescent peer leadership in influencing gender relationships. The attempt to characterise an adolescent peer leader using the relevant theoretical

literature proved to be unsuccessful, and so a stipulative definition was offered for the purpose of the Project as follows:

> **An adolescent peer leader is one who has, and exercises, an ability to influence the behaviours of others, positively or negatively, irrespective of adult wishes or norms.**

Using this definition as a guide, a cadre of peer leaders, together with members of their peer group(s) were identified using sociometry.

### The Qualitative Dimension

This is comprehensively reported by Carter (1993a). The transcribed qualitative data, after text analysis, showed evidence of the limited transference of peer leader influence, both content and process, to the wider school population, including parents and siblings in the home. The effect, however, was relatively short lived, and was not in evidence on the second round of interviewing which took place two months later. Partly this is attributed to an unintended effect, evident in the high degree of bonding noted between the peer leaders as a group as a result of their shared experiences beyond their 'comfort zone', on their return to school. This phenomenon was likely to have acted as a resistive factor in inhibiting the potential for transference of newly acquired peer leader knowledge and skills into the school community - counter to the intention of the Project.

Another unintended result was the revelation of a degree of homophobia evident in the families of some of the peer leaders on the part of fathers and older brothers, which had been grossly underestimated from early anecdotal data. Peer leader experiences transferred positively in health and human biology classes when sexuality related content was treated. Evidence of attitudinal change, on the part of both peer leaders and members of their peer groups, was reported by key informants who were teachers with a pastoral care role. Parent informants too noticed some change in the home, but not for all the students involved in the camp, or relevant peer group.

Teachers who attended the camp reported some informal re-education of their peers regarding their HIV knowledge when this was in error or otherwise misinformed. This

phenomenon of informal learning also transferred to the home, due to the influence of those peer leaders who discussed their experiences with their parents and re-educated them about sexuality and HIV related matters, to some extent, in the process.

### The Quantitative Dimension

Survey methods across the whole school population were used to give a further indication of the extent to which changes in knowledge and values may have transferred to the school population after the peer leaders returned to the school, and their experiences at the camp had had sufficient time to diffuse naturally to the wider school community.

A search of the literature revealed no suitable instrument, even with modification, was available for gaining evidence, or otherwise, on the success of this part of the Project, other than the AQUARIUS. This had been developed specifically out of the concerns of adolescents regarding the dimensions of adolescent sexuality and intimate personal relationships that were of immediate concern to them. The instrument is detailed by Carter and Carter (1993), and illustrative items from the 'understanding' and 'affects' dimension of the instrument are presented in Figure 1.

(a) 'Understanding' dimension

TRUST, for you, means

| | Strongly Agree | Agree | Disagree | Strongly Disagree |
|---|---|---|---|---|
| Knowing someone will keep your secret | ..... | ..... | ..... | ..... |
| Being able to rely on someone | ..... | ..... | ..... | ..... |
| Knowing people feel they can rely on you | ..... | ..... | ..... | .... |
| Being confident in your relationship with other people | ..... | ..... | ..... | ..... |
| People respect your rights to things, such as privacy | ..... | ..... | ..... | ..... |
| People believe in you and the choices you decide to make | ..... | ..... | ..... | ..... |
| Having faith in other people's decisions and actions | ..... | ..... | ..... | ..... |

(b) 'Affects' dimension.

TRUST is .....

| | | |
|---|---|---|
| An important part of my relationship with my parents | ⊔⊔⊔⊔⊔⊔⊔ | Not important in my relationslip with my parents |
| Not at all important between me and my friends | ⊔⊔⊔⊔⊔⊔⊔ | Very important between me and my friends |
| Essential between me and any sexual partner I may have | ⊔⊔⊔⊔⊔⊔⊔ | Not necessary between me and any sexual partner I may have |
| It is important to feel I can rely I people | ⊔⊔⊔⊔⊔⊔⊔ | It is not important to feel I can rely on people |
| I do not value other people's trust in me | ⊔⊔⊔⊔⊔⊔⊔ | I value other people's trust in me |
| Makes me feel strong | ⊔⊔⊔⊔⊔⊔⊔ | Can leave me feeling vulnerable |

**Figure 1: Illustrative items from the 'understanding' and 'affects' dimensions of the AQUARIUS instrument.**

In evolving the instrument, key concepts, considered to be essential to the teaching of sexuality education programs, were initially identified from an analysis of the literature, content surveys of health/human relations curriculum packages, syllabuses and associated learning materials, together with the purposive sampling of practising health and health education professionals.

A pilot group of high school students from within the target population comprised a further reference group which played a crucial role in instrument development. To effect the latter, a list of statements embodying the key concepts was compiled using words and phrases collected during preceding focus group discussions, within the three reference groups mentioned above. Since it was intended for use with 14-16 year old students (Carter, S. and Carter, D. 1993), it was important to ensure that the statements would be easily understood when respondents across a wide ability range completed the questionnaire.

Receptivity is a key concept believed to account for the different meanings attributed to sexuality and sexual relationships by adolescent high school students. It was defined constitutively by selected variables identified as being important to human sexuality programmes. Among others, the defining variables have been validated and incorporated into the AQUARIUS instrument.

After undergoing a series of iterations the key concepts embodied in the instrument reduced to:

* **relationships,**
* **communication,**
* **responsibility,**
* **choice,**
* **love**
* **sexuality,**
* **trust,**
* **risk.**

The draft instrument was tested in cross cultural settings with pilot samples (N = 89 and N = 109) within the 'at risk' population of adolescent high school students in Texas, and the U.K . as well as in Western Australia. Cross cultural data were used to confirm claims for the instrument's reliability and content and construct validity. From the instrument development procedures that were employed it was shown through the extensive piloting that it could provide useful data substantially free from the biasing effects of culture and SES (Carter and Carter, 1993). Prior to using the instrument with students in the case study school the Project Director confirmed all the variables contained in the instrument were important to the success of the Project and that each of them would be dealt with at the peer leaders' training camp.

**Survey Methods**

The AQUARIUS instrument previously described, was administered across the school under standardised conditions. This was effected one month before the departure of the peer leaders for their training camp, and one month after their return. A small sub-set of the school population, identified as the 'follow-up group', completed the instrument for a third time eight weeks later. Because of the comprehensive nature of the instrument and the intervening time periods between it's successive administration, it was considered that a parallel form of the instrument was not required. The timing of the data collection points for this instrument reflected a compromise between the need to gain baseline data before precipitating a Hawthorne effect once the peer selection process was initiated and the camp announced; wait time to allow for diffusion of peer leader influences to the peer group(s) on their return to school after undergoing training, and sufficient elapsed time to assess the stability of any effect that did occur until late in the school year.

Incomplete questionnaires, and those completed by students on only a single occasion, during the pre and post phases of the peer leadership camp were excluded from the data pool. The total number of respondents was 252 out of a school population of 345 giving an overall return rate of 73 per cent.

For the purpose of analysis the school was divided into a number of sub-samples as follows:

| | | |
|---|---|---|
| **Group 1** (N = 109) | Years 8/9 | "control" |
| **Group 2** (N = 68) | Years 10/11/12 | "residual" |
| **Group 3** (N = 50) | Years 10/11/12 | "peers" |
| **Group 4** (N = 25) | Years 10/11/12 | "peer leaders" |

Students in Years 8 and 9 (aged 13-14 years) were deemed to be insufficiently mature to benefit from the camp and consequently had minimal contact with the Project. Two older students in Year 9 went to the training camp, having been selected on the basis of need rather than leadership, but their data were excluded from the analysis. The Year 8/9 group, therefore, formed a *de facto* control group within the school.

The qualitative data showed that peer leaders and their groups showed an overwhelming tendency to identify and remain with their peers within their respective grade levels, and these social boundaries were relatively impermeable. The bonding of the peer leader 'in group' on return from the training camp has already been reported. Thus, for the purpose of grouped data, it is unlikely that any marked 'contamination' would have occurred between the Years 10, 11 and 12 students (aged 15-17 years) and those in the Years 8 and 9 sub- sample.

'Light sampling' of the school population was conducted late in the school year. A further 60 copies of the AQUARIUS instrument were administered to the "follow up" group, mentioned above, stratified by their initial membership in groups 1 to 4. Incomplete questionnaires were discarded leaving a sub sample of 38 respondents comprising 15 per cent of the main sample (N = 252) and comprising of 9 respondents in Group 1; 11 in each of Groups 2 and 3, and 7 in Group 4.

A one way Analysis of Variance was conducted on the survey data, including the search for significant differences on grouped data between the four sub-samples identified above, across the instrument's eight variables on each of the two dimensions of 'understanding' and 'affects'. The results are tabulated in the next section.

**Results**

Data reduction of the individual sub-scales was effected for each main variable of the AQUARIUS instrument using standard factor analytic methods to produce a factor score for each of the eight variables across the instrument's two dimensions of understanding and affects. Means and standard deviations for the sample (N = 252) and the follow up group (N = 38) are presented in Table 1 (a) and (b).

A one way Analysis of Variance was conducted with each group as the dependent variable and each of the eight instrument variables (Relationships, Communication, Responsibility, Love, Choice, Sexuality, Trust and Risk) as the independent variables. Tukey B was applied *a posteriori* since it does not require orthogonality of the data. Where there were significant differences between the groups these data are shown in Table 2 (a), (b), (c) and (d), and for the 'follow up' group in Table 3.

| | POST | | | | PRE | | | |
|---|---|---|---|---|---|---|---|---|
| | Understanding | | Affects | | Understanding | | Affects | |
| VARIABLE | Mean | s.d. | Mean | s.d. | Mean | s.d. | Mean | s.d. |
| RELATIONSHIPS | 23.47 | 2.55 | 27.00 | 3.75 | 23.23 | 2.31 | 26.95 | 4.11 |
| COMMUNICATION | 23.29 | 2.40 | 35.00 | 4.66 | 22.80 | 2.34 | 34.85 | 5.24 |
| RESPONSIBILITY | 24.38 | 2.41 | 22.75 | 4.22 | 23.87 | 2.55 | 22.56 | 4.36 |
| LOVE | 20.71 | 3.11 | 49.56 | 8.36 | 20.33 | 3.07 | 49.06 | 9.05 |
| CHOICES | 23.74 | 2.55 | 25.87 | 3.14 | 23.20 | 2.52 | 26.09 | 3.42 |
| SEXUALITY | 17.90 | 2.61 | 22.81 | 3.91 | 17.40 | 2.86 | 22.66 | 3.93 |
| TRUST | 24.87 | 2.64 | 18.57 | 3.47 | 24.89 | 2.74 | 18.63 | 3.79 |
| RISK | 22.01 | 3.34 | 27.56 | 3.76 | 21.22 | 2.96 | 27.42 | 3.52 |

**Table 1(a) : Means and standard deviations, (pre and post) for the 8 AQUARIUS variables in each of the dimensions of 'understanding and 'affects'( N=252)**

POST PRE

| | Understand | | Affects | |
|---|---|---|---|---|
| VARIABLE | Mean | s.d | Mean | s.d |
| RELATIONSHIP | 23.24 | 3.06 | 27.18 | 3.88 |
| COMMUNICATION | 22.47 | 2.95 | 36.05 | 4.75 |
| RESPONSIBILITY | 23.92 | 2.77 | 22.47 | 3.74 |
| LOVE | 20.68 | 3.31 | 50.63 | 8.56 |
| CHOICES | 23.37 | 2.68 | 26.53 | 3.09 |
| SEXUALITY | 17.61 | 2.85 | 23.50 | 2.33 |
| TRUST | 24.68 | 2.92 | 17.61 | 2.54 |
| RISK | 21.63 | 3.32 | 27.58 | 2.86 |

Table 1 (b) : Means and standard deviations, (pre and post) for the 8 AQUARIUS variables in each of the dimensions of 'understanding' and 'affects' for the follow-up group (N=38).

PRE

Variable-Relationships (understanding) N=252

| SOURCE | d.f. | s.s | m.s. | F. | p. |
|---|---|---|---|---|---|
| BETWEEN GROUPS | 3 | 86.2603 | 28.7534 | 3.4316 | 0.0177 |
| WITHIN GROUPS | 248 | 2077.9738 | 8.3789 | | |
| TOTAL | 251 | 2164.2340 | | | |

Tukey

| Mean | Group | 2 | 3 | 1 | 4 |
|---|---|---|---|---|---|
| -0.5294 | 2 | | | | |
| 0.080 | 3 | | | | |
| 0.5229 | 1 | | | | |
| 1.4400 | 4 | * | | | |

(* denotes pairs of groups significantly different > .05)

Table 2(a) : Analysis of Variance (1 tailed) on AQUARIUS variables showing significant differences between groups.

PRE

Variable - Choices (understanding) N = 252

| SOURCE | d.f. | s.s. | m.s. | F. | p. |
|---|---|---|---|---|---|
| BETWEEN GROUPS | 3 | 149.5336 | 49.8445 | 3.5182 | 0.0158 |
| WITHIN GROUPS | 248 | 3513.5458 | 17.1675 | | |
| TOTAL | 251 | 3663.0794 | | | |

Tukey

| Mean | Group | 2 | 3 | 1 | 4 |
|---|---|---|---|---|---|
| 2.5588 | 2 | | | | |
| 3.1400 | 3 | | | | |
| 3.6330 | 1 | | | | |
| 5.3200 | 4 | | * | | |

(* denotes pairs of groups significantly different > .05)

Table 2 (b): Analysis of Variance (1 tailed) on AQUARIUS variables showing significant differences between groups 1 -4.

PRE

Variable - Trust (understanding) N = 252

| SOURCE | d.f. | s.s | m.s. | F. | p. |
|---|---|---|---|---|---|
| BETWEEN GROUPS | 3 | 99.4037 | 33.1346 | 3.9347 | .0091 |
| WITHIN GROUPS | 248 | 2088.4535 | 8.4212 | | |
| TOTAL | 251 | 2187.8571 | | | |

Tukey

| Mean | Group | 2 | 3 | 1 | 4 |
|---|---|---|---|---|---|
| -1.0294 | 2 | | | | |
| 0.1600 | 3 | | | | |
| 0.3486 | 1 | | * | | |
| 0.7200 | 4 | | | | |

(* denotes pairs of groups significantly different > .05)

Table 2 (c): Analysis of Variance (1 tailed) on AQUARIUS variables showing significant differences between groups 1-4.

POST

Variable - Trust (understanding) N=252

| SOURCE | d. f. | s.s. | m.s. | F. | p. |
|---|---|---|---|---|---|
| BETWEEN GROUPS | 3 | 142.1404 | 47.3801 | 9.2679 | 0.0219 |
| WITHIN GROUPS | 248 | 3595.7128 | 14.4988 | | |
| TOTAL | 251 | 3737.8532 | | | |

Tukey

| Mean | Group | 2 | 3 | 1 | 4 |
|---|---|---|---|---|---|
| -0.9412 | 2 | | | | |
| -0.1743 | 1 | | | | |
| 0.5000 | 3 | | | | |
| 1.6400 | 4 | | * | | |

(* denotes pairs of groups significantly different > .05)

Table 2 (d): Analysis of Variance (1 tailed) on AQUARIUS variables showing significant differences between groups 1 -4.

POST

Variable - Communication (affects) N=38.

| SOURCE | d.f. | s.s. | m.s. | F. | p. |
|---|---|---|---|---|---|
| BETWEEN GROUPS | 3 | 56.9255 | 18.9752 | 3.0672 | 0.0409 |
| WITHIN GROUPS | 34 | 210.3377 | 6.1864 | | |
| TOTAL | 37 | 267.2632 | | | |

Tukey

| Mean | Group | 2 | 3 | 1 | 4 |
|---|---|---|---|---|---|
| -2.3333 | 1 | | | | |
| -0.7143 | 3 | | | | |
| -0.0909 | 2 | | | | |
| 1.0000 | 4 | | * | | |

(* denotes pairs of groups significantly different > .05)

TABLE 3: Analysis of Variance (1 tailed) on AQUARIUS variables for the follow-up group (N=38).

## Discussion

With reference to Table 1(a), taking the overall pattern of scores evident in these data, what characterises them is that there is little overall variation between pre and post scores across the variables as a whole. Some differences become apparent, however, on the individual variables of Communication, Love and Trust when related to the meaning and attitude dimensions of these variables. On both pre and post scores, there are quite large variations between the means on each dimension reflecting the higher concerns of respondents in their attitudes to communication as compared with their knowledge of it and its significance.

In the meaning dimension, the relatively low scores are recorded on the variable of Love (20.71, post; 20.33 pre) in the meaning dimension, while highest overall scores appear in the attitude dimension. Reference to the component scales in the instrument show that , on inspection of the raw data, love equated with sexual activity for many students in the sample. Again, the high scores for attitude (49.56, post; 49.06, pre) signify the importance of this variable in students' concerns., although there was a very high spread in the clustering of these scores. There are only minor variations in the group means of 17.9, post and 17.4 pre for the variable Sexuality. It is a rather abstract concept for some to grasp and misunderstandings may account, in part for the low scores, although these are offset by students' attitudes towards it.

For the follow up group (N = 38) much more variation is in evidence within the overall pattern - pre and post - across the two dimensions of the instrument. Since this group contains both peer leaders and members of their peer groups, increases in gain scores should be expected if the intervention of the camp had any effect. That this occurred in the meaning and attitude dimensions on each of the variables of Communication, Love, Sexuality and Risk is very encouraging, although the low score recorded on the mean of the attitude dimension of the Trust variable is difficult to account for. The follow up group, though stratified, is relatively small and some sampling variation is to be expected here.

For the Analysis of Variance data presented in Tables 2 and 3, it is important to remember that Tukey B is a stringent multiple non-sequential method for the comparison of means. It uses a single criterion value of the studentised range, regardless of the separation of means in the rank order. Thus it is important to remember that it is likely to lead to fewer significant differences showing up in the data, than when using other comparable forms of analysis.

In Table 2 (a) and (b), statistically significant differences occur ($p > .05$) between the peer leaders and those identified as 'residuals' on the meaning dimension of the variables Relationships and Choices. This is not attributable to any intervention effects, but has to be seen in the light of sampling variation, given the relatively small sizes of these groups - especially that of the peer leaders. Similar reasoning applies in accounting for the Trust variable in Table 2 (c). However, for the same variable on the post camp administration of the AQUARIUS a statistically significant difference is shown which can be referenced cautiously, to peer leader influence. In assigning individuals to the peer groups of particular peer leaders, it was sufficient to identify a few members of each peer group in order to establish that a group for each peer leader actually existed. No attempt was made to map the extent and membership of each peer leader's reference group. It is quite likely, therefore that some members for each of the peer leaders may have been assigned to the residual group, and therefore feasible that transference of experiences took place between peer leaders and 'residuals' ,on occasion, more so than with peer leaders and particular members of their peer groups who came under their influence.

The data in Table 3 register a significant difference between the 'control' group of Year 8 and 9 students and the 'residuals' group. It is difficult, in interpreting this result, to ascribe this result to any effect of the intervention, and its maintenance in the school population, other than to note that the disparity in the size of sample means may have had an influence on the data. In this respect it is important to keep in mind that the disparity in the sizes of the 4 sub-sets comprising the main sample ($N = 252$), especially between Group One ($N = 109$) when compared with the other three, may have also affected the restricted range of

AQUARIUS variables, presented in Tables 2 and 3, showing significant differences. The qualitative data, for example, shows a larger transfer effect of peer leader influence to peer groups than the tabulated data implies.

**Conclusions**

The qualitative data (Carter, 1993a) provided further evidence of limited transference of peer leader influence, both content and process, to the wider school population including parents and siblings in the home. The effect was short lived and was not in evidence on the second round of interviewing which took place two months later. Partly, this is attributed to an unintended effect, evident in the high degree of bonding noted between the peer leaders as a group as a result of their shared experience, on their return to school. This phenomenon was likely to have acted as a resistive factor in inhibiting the potential for transference of newly acquired peer leader knowledge and skills into the school community - counter to the main aim of the Project.

The main conclusion to be drawn from the evaluation was that the Project overall enjoyed a modicum of success insofar as it established that the experiences of the peer leaders at the camp and their changed knowledge, enhanced skill repertoire and values orientation *vis-a-vis* the treatment of people diagnosed as HIV positive by society did trans transfer to the school community. With further interventions to structure and direct this effect it is likely that it can be increased in size and made more pervasive within the school community, but research is needed to verify this assertion.

There is ample evidence to conclude that for many of those who attended the peer leader training camp, the Project was highly successful in accelerating the processes of growth, maturation and social development. The extent to which changes in the peer leader group transferred to the wider school population, however, should be regarded more circumspectly and to this extent the protocols employed for the overall operation of the Project cannot be regarded as efficient. There was evidence that some diffusion of peer leader experiences to

their peers occurred, and that this also transferred to the students' homes, where the effect was more subtle and less obvious.

The main curricular implication to be drawn from Peer Leader AIDS Project evaluation is that the utilisation of peer leader influence is likely to be a useful strategy if it can be amplified and maintained so that its effect becomes more significant and pervasive throughout the school community. It is contended that this is likely to occur when it is nurtured and incorporated into a comprehensive and fully articulated program of teacher development and parent education, purposely designed with this in mind, in order to increase the effectiveness of health and human relations related subjects and the pastoral work of schools.

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