Article

Identifying problems in community health promotion:

an illustration of the Nominal Group Technique in AIDS education

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Abstract Recognition of the extent and consequences of HIV/AIDS in Africa has resulted in many large scale health promotion programmes. These programmes usually provide information about how to avoid contracting HIV as well as information to dispel false beliefs about the virus. However there also exist anti-health promotion ideas about HIV/AIDS which often challenge the very premises on which health promotion messages are based. Such anti-health promotion ideas may represent reassuring benefits and these are likely to vary not only across cultures but also between different communities and 'at risk' groups within the same culture. The Nominal Group Technique (NGT) is a participative exercise which can be used with small groups to achieve a consensus concerning which anti-health promotion ideas are most influential in terms of encouraging people to ignore health promoting messages. The application of the NGT is illustrated with a group of Malawian students.

Introduction

'The strategy of prevention of HIV transmission through education and the modification of behaviours is clearly the most hopeful approach to the prevention of AIDS' (Albee, 1989). The past decade has witnessed a mammoth effort to promote people's knowledge about AIDS (acquired immunodeficiency syndrome) and its routes of transmission, in the hope that this will influence attitudes and encourage people to avoid or reduce behaviours which put people at high risk of contracting the human immunodeficiency virus (HIV) which produces AIDS.

With over a thousand studies published each year, psychologists continue to debate and investigate the idea that the relationship between knowledge, attitudes and behaviour is not a direct one (McGuire, 1985). Nonetheless most health promotion media (for example, pamphlets, posters and broadcasts) attempt to make AIDS a salient topic through giving of information. It has been recognised that, related to the need to give accurate health promotion information, is a need to disqualify disinformation about HIV/AIDS (Chimombo and MacLachlan, 1992). Thus health promotion packages often describe how you cannot get the HIV as well as how you can contract it (for example, Nyirenda and Jere, 1991).

However there is a special category of disinformation which has not been given sufficient attention. This information is not simply inaccurate with regard to routes or mechanisms of contracting HIV, it often challenges the basic premise that people ought to avoid or reduce certain 'high risk' behaviours. An example is the idea, common in many parts of Africa, that the notion of HIV/AIDS is really an 'American intervention to discourage sex' (Southern African Economist, 1992). What influence may such an idea have on how a person weighs up the information given them about HIV/AIDS? However direct or indirect the relationship between knowledge and behaviour, contradictory information is likely to reduce the chances of 'low risk' behaviours being adopted.

An additional problem is that conven-

tional health promotion information is often silent with regard to such anti-health promotion arguments. These arguments may have their origin in national or cultural attitudes, local folklore or social dynamics. They may be generated or perpetuated by individuals who have something to lose (influence, respect, money) if people start to behave differently. The point is, that national health promotion programmes cannot anticipate or address the anti-health promotion ideas at large in small communities.

For example one idea common in Central Africa is the one just mentioned that AIDS is an American intervention to discourage sex. If this is given credence, then it may well negate the impact of various ideas that suggest AIDS is a threat which justifies a change in behaviour. If you have been sexually active and you are feeling in good health then your own experience presents you with compelling evidence that sex is not related to AIDS or illness and the idea that it may be an intervention to 'stop you having fun' appears more credible. When people's attitudes are based on their own experience they are held with greater conviction (Regan and Fazio, 1977) and are more resistant to change (Kiesler, 1971). People's past experience provides them with compelling information about themselves.

It is therefore necessary to identify and address the anti-health promotion ideas that may be at large in the community. Arguments which present both sides of a case are experienced as more persuasive than one-sided arguments (Hovland *et al*, 1949). Furthermore, anticipating and refuting opposing arguments has been found to 'inoculate' audiences against the effects of those arguments (McGuire, 1964). Health promoters must be given an opportunity, at the local level, to counter anti-health promotion ideas. This requires anti-health promotion ideas to be initially identified.

Health promotion ideas are most effective when they are based on actual health beliefs and practices (Irwin *et al*, 1991). People are more willing to change their behaviour if they feel that their personal and cultural ideas have been taken into account. One method of identifying these ideas at the local level is the use of focus groups (Folch-Lyon and Trost, 1981). These groups have been used to study the attitudes, knowledge and beliefs of small groups of people towards HIV and AIDS in Zaire (Irwin *et al*, 1991). The method of focus groups produces a rich crop of qualitative data much of which may be unanticipated by the researcher or group leader. In focus groups the experts are the people most involved in the discussion rather than the people monitoring the discussion.

However the focus group method also has a number of drawbacks. It can be very time consuming and require the use of recording equipment or comprehensive note taking. The group discussion can be influenced by the selection of group members and a few people may dominate the discussion. In addition a lack of anonymity may discourage openness (Irwin *et al*, 1991) and individuals may be hesitant to express ideas fearing other group members may laugh at them.

This paper provides an illustration of another technique for gathering qualitative data which minimises the difficulties of the focus group. It is suggested that the Nominal Group Technique is particularly well suited to exploring anti-health promotion ideas in small groups. Like focus groups, the Nominal Group Technique (NGT) has been used in the context of management training (Taffinder and Viedge, 1987; Scott and Deadrick, 1982). The technique was developed to achieve more effective communication and problem solving in organisations (Delbeca and Van de Ven, 1971) and has been found to facilitate creative thinking in comparison to more 'open' and participate group techniques (Taylor *et al*, 1985). This paper seeks to introduce and describe the NGT in some detail, in order to allow others to apply the technique to small groups for the purpose of psychological and health related research.

The use of the NGT will be illustrated on a group of subjects who are at high risk of contracting HIV by virtue of their domicile. The technique was used with a group of Malawian university students. In 1990 Malawi had the unenviable distinction of having the highest rate of reported AIDS cases in the world (World Vision, 1991). In urban areas, where Malawian university students are residents, on average 20% of adults and between 90 -100% of prostitutes were HIV positive in 1991 (AIDS Secretariat, Ministry of Health, 1991). It has been estimated that by 1998 between 600,000 to 1,000,000 Malawians will be dead or dying of AIDS. In the 20-49 years age group 77% of deaths can be attributed to AIDS (AIDS Secretariat, Ministry of Health, 1991).

Method

The subjects reported here to illustrate the Nominal Group Technique, were final (fourth) year psychology students taking a course on 'The Psychology of Health and Management' . All 10 students who were taking the course agreed to participate in the exercise. There were 4 females (aged 20, 22, 22 and 30) and 6 males (aged 22, 23, 24, 25 and 27). These subjects were presented with the question: 'What ideas have you heard about HIV/AIDS which may encourage people to ignore health promotion efforts to prevent the spread of HIV/AIDS?'

The phrasing of the question is of great importance since this is what directs the thinking of the group and therefore the theme of the responses given by participants. It may be useful therefore to construct the question by working back from what the information is to be used for. This should allow for greater specificity in question formation.

1. Idea Generation
The first stage of the NGT therefore requires participants to write down as many ideas as possible in answer to the question posed. This is done independently and without discussion between participants. It is important that what participants write down is the expression of their own ideas. For the above question it was emphasised that they were not being asked to give ideas which they personally believed to be true or did not believe to be true. Nor were they being asked to give statements which they agreed or disagreed with. Participants were being asked for ideas which they felt were influential. Ten minutes is allowed for this stage.

2. Selection
In the second stage participants are asked to rewrite their ideas in telegraphic form. This encourages participants to refine their thinking and makes the next stage easier for the group facilitator and the participant. Once they have rewritten the ideas they are then asked to select the two ideas which they think are the 'best' ideas. 'Best' is of course judged with reference to the question that was asked and should not be confused with notions of correctness or propriety. In addition participants are asked to select two more of their ideas to hold 'in reserve'. Another ten minutes should be allowed for stage two.

3. Listing
The third stage involves the group facilitator asking each member of the group to give what they consider to be their best idea and to describe it in more detail if necessary. It is best to do this in an orderly sequence rather than in a random fashion or by asking for volunteers as this may be unnecessarily anxiety provoking for some participants. The group facilitator records the ideas on a flip chart or blackboard in the sequence in which they are presented. During this stage of idea presentation there should be no discussion, only description. If a participant indicates that their favoured idea has already been given then they may offer their next best ideas or, failing that, a 'reserve' idea. Ten minutes should be sufficient for a group of ten participants.

4. Clarification
The fourth stage allows participants to discuss and clarify the ideas which have been presented. However participants should be made aware that nobody is required to clarify or justify their idea if they do not wish to do so.

The intention of this is to avoid conflict. Skilled facilitation of the discussion should allow for sufficient clarification of ideas. It may happen that two or more ideas are substantially similar, in which case the facilitator identifies a form of words which encompasses the similarities and removes duplication from the list. At this stage participants may also be asked if they want to put forward any of their alternative ideas. The ideas discussed are then sequentially numbered on a blackboard or flip chart. The facilitator should allow fifteen minutes for stage four. Initially the ten students described above gave ten ideas. Two of these ideas were identical and so the subject who was second to offer the idea was asked to give the idea which he judged to be his second best. In discussing the resulting ten ideas it was found that, in two separate cases, two ideas were sufficiently similar to collapse them into one. This left eight ideas. When the participants were invited to offer other ideas which they had had, and which were not covered by the existing list of eight ideas, a further six ideas were added to the list. This gave a total of 14 ideas.

5. Ranking
The fifth stage requires participants to rank the listed ideas in order of their perceived importance. The list may be ranked according to a variety of criteria. For the purposes of the present study participants were asked to rank the listed ideas in terms of their fellow students. Ten minutes should be sufficient time even if a great number of items are being ranked. Experience shows that participants can identify the top rankings much quicker than the bottom rankings. Participants self-reports indicates that once the top rankings have been established the remaining ones are ranked in a less thoughtful and more haphazard manner. It would seem that once the important rankings have been established the other items are ranked less meaningfully. One way to prevent such 'meaningless' ranking is to specify a certain number of rankings available and then to disregard the remaining items. However in the present study, for the sake of illustration, all fourteen items were ranked.

6. Consensus
In the sixth stage participants' rankings are collected together and the facilitator sums the rankings for each individual item to obtain an overall ranking for that item. When this is done for all items it represents a consensus ranking for all the ideas presented. It is recommended that the facilitator ask each individual to give their rankings for all the items before moving on to ask the next individual. This process is intuitively interesting to participants and enhances their sense of 'ownership' over the resultant list of rankings. This may in turn act as a spur to further discussion. If the recommended procedure is adopted a further thirty minutes should be allowed for stage six.

The NGT may therefore be summarised as going through the following six stages: (1) Idea Generation, (2) Selection, (3) Listing, (4) Clarification, (5) Ranking, (6) Consensus.

For the group described above this whole process took one and a half hours.

Results

The items with their resultant consensus rankings are shown in Table 1.

Table 1 Ideas listed in order of decreasing influence in encouraging people to ignore health promotion efforts to prevent the spread of HIV/AIDS (with mean ranking)

1. There is nothing you can do about AIDS.(5.2)
2. Some witch doctors can cure AIDS. (5.4)
3. AIDS is just another epidemic. (5.9)
4. Enjoy life, you will die anyway. (6.2)
5. AIDS is just an *American Idea to Discourage Sex* (A.I.D.S.). (6.7)
6. AIDS is a disease for Whites not Africans. (6.9)
7. AIDS has always been there. (7.4)
8. Car accidents cause more deaths than AIDS. (7.5)
9. AIDS does not exist. (7.8)
10. AIDS is a fashionable name for all diseases. (8.9)
11. AIDS is a mandate for moral behaviour. (9.0)
12. Blood group 'O' cannot get AIDS. (9.0)
13. People are able to cope with HIV. (9.3)
14. AIDS is a way of controlling the population. (9.8)

The mean ranking across the fourteen items ranged from 5.2 to 9.8. Clearly no item was seen as 'first rank' (mean of 1.0) by all participants or last rank (mean of 15.0). Indeed inspection of the rankings for some individual items reveals great variation across subjects. For example the item ranked fifth, 'AIDS is just an American idea to discourage sex' received rankings of 1, 1, 1, 5, 6, 8, 10, 11 and 13. On the other hand the item ranked seventh, 'AIDS has always been there', received less varied rankings: 3, 5, 5, 6 , 7, 7, 7,10,12 and 12. Consequently the NGT allows us to consider on any ranked item.

A graph of the rankings presented in Table 1 indicates a relatively large jump between the ninth (7.8) and tenth (8.9) ranked items and this may represent a convenient empirical cut-off for the items which should be focused on. The strength of the data produced by the NGT is that, while largely qualitative, it also allows for quantitative comparisons between different ideas.

Discussion

This paper has sought to illustrate the application of a qualitative technique to a small sample of subjects who may be considered an 'at risk' group. The participants of the Nominal Group Technique for intervening in small groups, for purposes of health promotion generally and for identifying anti-health promotion ideas more specifically, is the focus of this paper and will be discussed below. Although the Nominal Group Technique produces rankings and therefore 'numbers', it should be remembered that these numbers are only a shorthand for describing qualitative data.

The rankings produced in this illustration of the NGT reflect the perceived popularity of ideas which were judged as influential with regard to encouraging people to ignore health promotion efforts to prevent the spread of AIDS. In the sample of ten final year students at the University of Malawi there was no one idea which predominated. This suggests that for the purpose of making health promotion efforts more effective, several of the top ranked items should be considered. These ideas provide the information necessary to counter the anti-health promotion messages given to students. By addressing highly ranked items, health promotion literature can anticipate and discount anti-health promotion arguments, thus enhancing the persuasive effects of health promotion messages (Hovland *et al*, 1949: McGuire 1964). To complement health promotion efforts with students, sessions could be run which address 'False beliefs about AIDS'. However it is necessary to look at the qualitative aspects of the data to sense the most effective mode of presentation for these sessions. Several themes emerge from the top nine ranked items. One such theme is that of helplessness and hopelessness (Items 1, 3 and 4). Another theme is that AIDS is not such a great problem for Africa (Items 2, 6, 8) and a third emerging is to deny the severity of the threat (Items 5, 7 and 9). However addressing these 'head on' may not be the most effective procedure. Bombarding people with statistics and 'research findings' may simply alienate the health promoters, especially if they are American! Personal accounts from credible African sources are likely to be more influential. For the small sample described above therefore, at least three factors may need to be emphasised:

1. That the pessimism and lack of control which people feel about AIDS is much more appropriate to the consequences of contracting HIV, than it is to the possibility of contracting AIDS itself (see Item 1).

2. That whatever the origins of AIDS, it is widespread in Malawi and that students are an 'at risk' group for contracting HIV. Having other students who are HIV positive admit to this and describe their life prior to contracting HIV, would help the participants of the group identify with the disease.

3. That AIDS is a serious disease which at present has no known cure. This is perhaps one of the most difficult messages to get across effectively. The previous two points address the tendency of the participants to deny the severity of AIDS and to feel helpless about it. Too much emphasis on the prevalence and deadlines of AIDS may be too much to handle, and

simply strengthen the use of these defences. Thus messages which emphasise the severity of AIDS could also stress the personal control which people have over the disease. People may be encouraged by hearing of how others prevented themselves from engaging in high risk behaviours. Rather than simply describing ways of 'avoiding' AIDS, students could be encouraged to think in terms of 'escaping' from AIDS in high risk situations. Thus AIDS is dangerous, but controllable. The above suggestions represent a response to anti-health promotion ideas about AIDS, based on the fourteen statements produced by the NGT. However another approach to tackling such anti-health promotion ideas is to again use the NGT. To counter a particular idea or theme a group could be asked the question: 'What evidence would you need to decide that idea X is not true?' And then: 'What would help people most in their attempts to cope with...?' Thus the NGT has a role to play in problem solving as well as in problem identification.

Advantages of the Nominal Group Technique in primary prevention

The NGT allows facilitators to run structured meetings with small groups of targeted people. The group produced a qualitative analysis of the problem presented to them, yet one which allows the investigator to identify the relative importance or influence of the ideas generated by the group meeting.

One of the greatest advantages of the NGT is that it explicitly requires each member of the group to have an equal input into the initial idea generation stage. People feel more commitment to a group if they have had a chance to influence its thinking (Walton, 1985). In context of identifying anti-health promotion ideas and subsequently seeking to convincingly disprove their validity, it is important that each member of the group feels that 'their ideas' have been disproved rather than only the ideas put forward by other people. While focus groups allow for individual expression some individuals will be more reluctant than others to participate.

A second advantage of the NGT in primary prevention is that the technique can be applied by only one person and that it need only take up to one and a half hours. Thus it is a relatively quick and efficient way for researchers to gather 'hidden' data.

Thirdly, group participants are able to be successful in the groups in the sense that there is no possibility of failing. 'Failing' in a more open discussion group may mean not speaking up, saying the 'wrong' thing, not being supported by other group members and possibly even dominating the group. People's experience of data gathering exercises may exert a strong influence on their willingness to accept or go along with initiatives arising out of the exercise.

A fourth advantage that the NGT has is that it provides a group process which is necessarily one of producing consensus. In the case of anti-health promotion ideas regarding AIDS it can also produce an impetus for action. Having identified anti-health promotion ideas which are influential, group members may see the presentation of such a list as a challenge to the health promoter running the group. This therefore gives the health promoter 'permission' to present the health promotion side of the argument. This may be a better way of presenting health promotion information than simply ' setting up shop'.

As already discussed one of the most frequent uses of the NGT is for problem solving. Thus another strength of the technique is that it may also be used to challenge some of the anti-health promotion ideas put forward. It is therefore especially noteworthy that the NGT has been found to be superior to other problem solving techniques such as brainstorming and buzz sessions (Delbeca and Van de Ven, 1971). In particular the NGT reduces the emotional element of group participation and results in a greater number of different ideas, and these are of higher quality.

The NGT has the advantage of allowing group members to think through ideas before verbalising them to the group. It also allows them to consider these ideas in relation to similar ideas. The fact that the outcome of the whole procedure is clearly documented and fully understood by all members emphasises the practicality of the procedure.

Disadvantages of the Nominal Group Technique in primary prevention

One difficulty which people may find in using the NGT is in properly framing the question to be asked. The particular words used to ask the question should be unambiguous, with the overall direction of the question being quite specific. As suggested earlier, a useful guide to constructing the question is to consider what you want the information for. By working backwards from your target, you may be able to construct a question which allows you very specific information on a point of interest. At the same time, a poorly worded question may generate information which is too general, vague or off the point. Thus a well worded question should allow the investigator to narrow the focus of the participant's attention to the issue of interest.

The NGT should not be seen as a 'stand alone' research tool. It may however add qualitative richness to quantitative methods. In the present paper my intention has been to emphasise the practicality of the NGT as an investigatory tool for field work. This has been shown in a small sample and it would be inappropriate, in statistical terms, to try and generalise from this sample. However, it might also be inappropriate in terms of the technique itself, as the NGT is intended only to give in-depth information on a small number of people. This narrowed focus is what allows the technique its depth.

Conclusion

This exploratory and illustrative paper has outlined the application of the NGT to the investigation of anti-health promotion ideas about HIV/AIDS. As well as illustrating the technique, some interesting data have been gathered which support the notion that anti-health promotion ideas do exist. The present paper throws up two important questions which are worthy of further investigation. Firstly, how valid is the NGT? That is, if an idea identified by the NGT as having been influential in encouraging people to ignore health promotion efforts to prevent the spread of HIV/AIDS, then what other evidence exists that this idea is indeed strongly held? Secondly, what are the effects of these anti-health promotion ideas? That is, by how much do they undermine health promotion efforts?

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