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AN EVALUATION OF TWO ALCOHOL
EDUCATION COURSES IN A MILITARY
SETTING

A thesis presented in partial fulfilment
of the requirement for the degree
of Master of Arts in Psychology
at Massey University

John Michael Raven
1984

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ABSTRACT

An evaluation of two alcohol education courses conducted in a military setting for a supposedly "high risk" group in terms of alcohol related problems, formed the basis of the present study. The two courses differed in length (3 x 2 hour lessons, 2 x 2 hour lessons), and comprized a combination of lecture, film, question-answer and discussion group instructional methods. Pre and post questionnaire responses of the two groups of course participants (n = 28, 26) and of a control group (n = 28) were analysed. In addition a follow-up measure was taken of one group of participants four months after programme completion. Results indicated a significant gain in the course participants' knowledge as a result of the programme, but no change in attitudes, or skills-related responses. Despite a small positive post course reaction to the programme, the subjects self-reported alcohol consumption remained unaffected by the course, and on average placed the sample in the top 35% of the New Zealand population in terms of self-reported alcohol consumption. These results were considered to be reflective of the theoretical and practical distances between the concepts and processes of education, prevention and evaluation, by the present author.

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INTRODUCTION

"The need for more vigorous and carefully conceived evaluations of counselling programs in industry is clear. Just as the unexamined life, according to Aristotle, may not be worth living, so too may an unexamined intervention or program not be worth having. Clearly more is needed than blind faith and good intentions." (Cairo, 1983, pp 17).

Context of the Present Study

This study is concerned with an evaluation of two alcohol education courses in a military setting. It was intended to be part of a wider project which had the goals of developing an effective educational programme on alcohol and alcohol abuse for use in a variety of applied settings by staff of the Alcohol and Drug Centre, Palmerston North.

The two alcohol education courses under analysis were integrated into two pre-existing N.Z. Army courses which are run on a regular basis at Linton Military Camp, Palmerston North. The two Army courses, both formally titled the Regular Force Junior Non-Commissioned Officer Promotion course (Junior NCOs), lasted for approximately 10 weeks each during 1983, and spanned a variety of topics including drill, weapon training, navigation, leadership and military law. The two courses culminated in individual assessments being made of the performance of each participant. The lessons related to alcohol education differed significantly from the rest of the course primarily in that a civilian "expert" in the field gave the presentations.

Drinking in the Military

To locate this study in an appropriate theoretical context, it is pertinent to summarise some past research findings related to drinking in military settings.

2.01 Some findings

During 1972, Greden, Frenkel and Morgan (1975) assessed by questionnaire the drinking consumption of 1,873 United States (US) soldiers serving in Vietnam and the US. These researchers found that approximately 36% of the sample could be classified as actual, borderline, or potential alcoholics and also that a disproportionate percentage of this group were younger personnel and relatively poorly educated. It is notable that over half of the sample were serving in a combat zone at the time of the survey, which would undoubtedly effect the generality of the findings to the present setting.

In a more recent study, Cosper and Hughes (1982) compared the drinking consumption of US Naval Officers with a civilian comparison group. It was found that the Officers drank a larger overall quantity of alcohol, and that this could be primarily attributed to more frequent drinking and not just to the quantity consumed on specified occasions. The conclusion was made that the predominant drinking pattern of the servicemen studied, was one of the frequent, moderate and relatively controlled drinking.

Calahan (1976) in a large study of 4,390 US Naval Officers and 5,118 enlisted men found that 17% of the total sample had a very serious drinking problem and that about 10% had chronic problems associated with drinking.

On a smaller scale, in an interesting study Newby (1977), analysed the drug related behaviour of a small group (n=7) of serving soldiers, supposedly typical of small groups throughout the US military. He found that the ...

... average alcohol consumption of group members was, 39.6 cans of beer, 0.4 bottles of wine and 3.6 nips of spirits a week, which is equivalent to at least 700mls of pure, or absolute alcohol. By New Zealand (NZ) drinking standards, the consumption of alcohol described would place the group in the top 7% of the NZ population in terms of alcohol consumption (Casswell 1980).

These figures indicate that the assumption commonly held, that US personnel drink more than their civilian peers (Plant 1979, Cosper and Hughes 1982), has an element of truth to it.

A number of reasons have been put forward to account for the evidently higher alcohol consumption figures of servicemen. Steen (1975) found that socialisation and reference group factors stemming from the unique military lifestyle were the best predictors of drinking patterns in military environments.

Globetti, Alsikafi and Christy (1977) after a study of US military camps in Europe, concluded that, "patterns of abuse are seen as symptomatic of the military lifestyle" (pp 99). Similarly, Newby (1977) in his small group study viewed the unique group interaction processes, primarily conformity and adherence to norms, as being a central determinant of alcohol and drug abuse in military environments. Because of the legality of alcohol, he concludes that "alcohol receives positive sanctions for use and is abused with less discretion in modes that are often fused with irresponsibility and that lead to dysfunction" (pp 300). Heavy drinking is evidently seen by the authors as being a response to the unique pressures of the military, and has symbolic implications of masculinity, risk taking, and group affiliation.

Emphasis on the role of factors unique to the military in alcohol related problems has progressed to the classification of the military as a distinct sub-culture. Cosper and Hughes (1982) have said that, "heavy drinking on the part of military personnel could be understood as an occupational based sub-culture pattern" (pp 111). The military as a sub-culture has traditionally condoned drinking as a natural consequence of its, largely male membership, emphasis on combat, high geographical mobility, communal lifestyle and availability of alcohol (Plant 1979, Cosper and Hughes 1982).

Gwinner (1976) echoes this view, and has identified five factors unique to the military which contribute to the evidently high rates of excessive drinking amongst military personnel. Specifically these factors comprise the hierarchical, conformist military environment, the paternalistic nature of military life, a general tolerance towards alcohol abuse, unstable home life and the absence of women from military life. He suggests that a "let's all be boys together" attitude is encouraged in the military environment which promotes excessive drinking. (pp 25)

Similar findings are evident in a recent article by Mayer (1983), who suggests that "entry into military service has become a rite of passage frequently leading to binges and regular heavy drinking". (pp 1120)

All in all, overseas findings related to drinking and alcohol problems in the military, present a gloomy picture of military personnel as being a "high risk" group, particularly susceptible to alcohol related problems and heavy drinking as a consequence of their specific lifestyle and occupational environment.

2.02 Comparative Evidence

The only NZ study known to the present author, that investigates the drinking consumption of the NZ Armed Forces is not supportive of the overseas findings presented. A study by Casswell and Gordon (1983) surveying 10,000 New Zealanders, found that the alcohol consumption figures for Armed services personnel were similar to those of a wide range of other occupational groups such as Government Administrators, journalists, clerical supervisors, teachers, etc. The group of Armed services personnel identified in the sample, were not atypically high consumers of alcohol and tended to cluster with a large range of other occupational groups in the vicinity of 25-60 mls of pure alcohol consumed on 1-2 occasions per week (43 mls on the last reported drinking occasion).

Although the total number of respondents from the sample belonging to the Armed forces occupational group was relatively small (n=32) the findings tend to raise questions concerning the validity of the overseas findings to the NZ context. They give no support to the findings that Armed Forces personnel are a "high risk" group in terms of alcohol related problems and consequently for the existence of factors unique to the military that account for this. Perhaps the evident differences in demography, sociology, and conditions of service, between overseas military forces and the NZ Army could explain some of the differences in the findings.

The paucity of relevant past research on drinking in military environments outside the US is striking, and makes further investigation of the generality of overseas findings to the NZ setting virtually impossible. The poor comparability of drinking data has been mentioned elsewhere (eg: Greden et al, 1975; Khavari and Farber, 1978; Nathan and Lansky, 1978; Plant, 1979; Adams, Grant, Carlin and Reed, 1981), and could mean that the large pool of overseas data on drinking in the Armed Forces is of limited validity in the NZ setting.

2.03 Related Factors

An alternative conception of high risk populations, or groups has been in terms of situational factors, more specifically the availability and cost of alcohol in a particular setting. Makela (1972) studied the effect of a large scale change in laws related to the availability of alcohol in Finland in 1969. A strong positive relationship was discovered between alcohol availability, alcohol consumption and alcohol related problems. A 48 percent increase in alcohol consumption was found to be directly attributable to a relaxation in laws related to selling alcoholic beverages, for example.

The implications were that, per capita consumption would need to fall as a result of a reduction in available alcohol, prior to any decrease in the frequency of alcohol related problems in a society. This conclusion is supported by similar findings in associated studies in the literature (Smart, 1977; Plant, 1979; Rabow and Waths, 1982; Malford and Fitzgerald, 1983).

The pertinence of these findings in the context of the present study should be clear. In the NZ military environment, alcohol is more available than in the general civilian environment. The drinking facilities in a service establishment, such as at Linton, are such that the personnel generally have more opportunity to drink and abuse alcohol than their civilian peers. Most drinking facilities in NZ Army camps, for example, are open 7 days a week, and sell alcohol at generally cheaper rates than civilian establishments.

The findings presented, support a logically clear argument. Even though Casswell and Gordon (1983) found no difference between the drinking consumption of NZ Armed Forces personnel and a wide range of other occupational groups, Makela's (1972) findings indicate that NZ military personnel can still be regarded as a "high risk" group in terms of potential alcohol related problems, purely as a function of the availability and cost of alcohol in service environments.

Alcohol Education

Many studies in the alcohol education field, leave unmentioned fundamental aspects of the process, such as its role in prevention and its evaluation (Goodstadt, 1976; Einstein, 1977). Prior to a review of evaluative findings in the field, these important concepts will be discussed.

3.01 Education as Prevention

Inherent in many studies is the assumption that alcohol education per se is a viable technique for the prevention of problems associated with conditions or behaviours such as alcohol abuse. However, it is clear that a strong link between education and prevention cannot always be assumed in the alcohol field. It is often the case as Einstein (1977) suggests, that, "we have mixed up prevention, education, and training, as if they were equivalent". (pp 58).

Indeed, the logic of education is such, that it sometimes conflicts with the purposes of prevention. The conventional approach to education as prevention has been analysed by Engs (1977). He suggests that, "when a problem becomes popular and is seen as a crisis situation, educational programs are often developed hurriedly by a variety of agencies without being created for specific groups" (pp 39). This approach has tended to evade the basic purposes of prevention, and consequently any casual relationships between targeted groups and problems (Kessler and Albee, 1975; Einstein, 1977; Mahoney, 1978; Bacon, 1978).

Prevention attempts to improve the quality of life in some way by inhibiting some behaviours (eg: heavy drinking), while reinforcing others (Kessler and Albee, 1975; Einstein, 1977). In comparison, education has been described as "a process in which a heterogenous group becomes the focus of certain goals and techniques and terminates this process as a heterogenous group, particularly in terms of decision making" (Einstein, 1977, pp 58).

Clearly education is only one strategy for the prevention of specific behavioural problems, such as alcohol abuse, and may lack effectiveness purely as a function of being too general (Kessler and Albee, 1975).

So, despite the best intentions of education to prevent or reduce problems, such as alcohol abuse, it is apparent that this process sometimes does not work. This is especially the case in drug education. Evaluation has shown that experimental drug abuse may actually rise as a function of educational programmes (Goodstadt, 1976; Engs, 1977). Clearly education and prevention cannot be regarded as being synonymous.

It is apparent that we should never lose sight of the fact that the sole purpose of alcohol education is to prevent alcohol related problems, such as alcohol abuse. Because of the unreliable relationship between education and prevention, this knowledge should be brought out and made clear in any preventive effort utilizing alcohol education, as is the concern in the present study.

3.02 The Evaluation Process and Alcohol Education

A fundamental issue concerning all alcohol education programmes relates to their effectiveness as a preventative effort. The process of collecting pertinent feedback, or information concerning the value, or worth of a programme is usually termed programme evaluation.

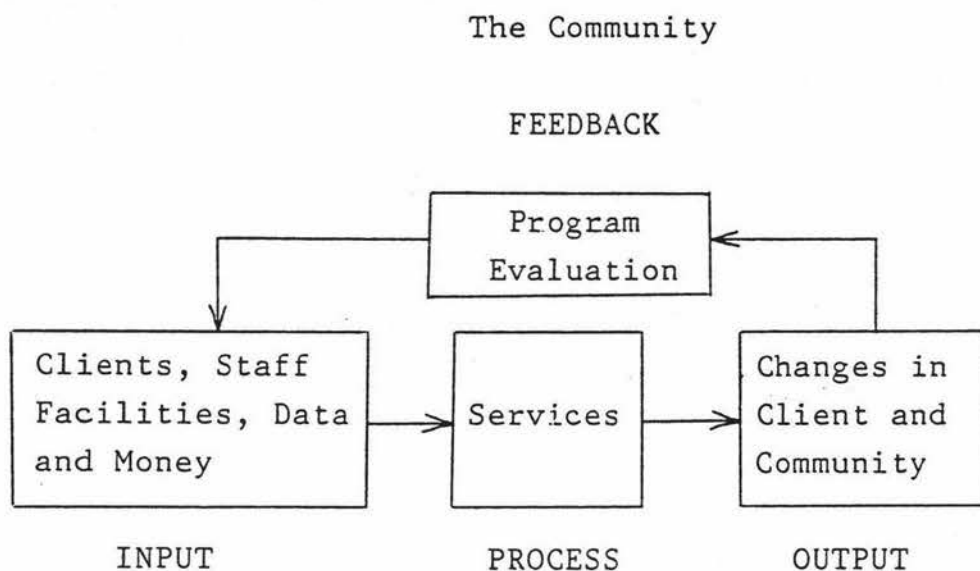
Despite its apparent conceptual simplicity, as illustrated in figure one, much controversy surrounds the definition and characteristics of the concept of evaluation as a research tool. It is a vague and flexible concept which encompasses a broad body of literature. Evaluation, for example, can be conceived as being, applied science, systems management, decision theory, goals assessment, jurisprudence, portrayal, or rational empiricism, amongst others. It can involve consideration of many factors including, scientific - technical, administrative - managerial, political - social, and ethical factors. As social experimentation, evaluation research must meet the standards of science and tackle the problems of reliability and validity (Cherns, 1969; Mahoney, 1978; Williamson, Prost and George, 1978; Glass and Ellet, 1980; Morell, 1982).

Indeed some reviews have indicated that because evaluation is such a broad and ambiguous concept, no clear and agreed upon definition of it exists. Morell (1982) suggests that "evaluation cannot be defined in a neat and unambiguous manner, it is by no means surprising that so many people do so many different things and call it evaluation" (pp 8-9).

Glass and Ellet (1980) express much the same opinion in their review of the literature when they defined evaluation as "a set of theoretical and practical activities without a widely accepted paradigm" (pp 211).

Similarly Wortman (1983) in a recent article, gives a relatively loose definition to the evaluation field as being a "multi disciplinary activity that is united by its concern for sound methods that can be used to obtain valid information" (pp 256).

Figure One: Program evaluation as a feedback for a service system.



Source: G.A. Williamson, J. Prost, G.E. George (1978)
The Professional Psychologist as Evaluator
 Professional Psychology 30 pp 309.

He also suggests that it is, "no longer possible, nor even desirable in a short review to provide a broad perspective or overview of the activities that comprise evaluation research" (pp 223).

However, despite the pessimism existing regarding definitions and consistent evaluative techniques, it is possible to make some valid generalizations about the process of evaluation. Evaluative information is typically gathered for the purposes of either, monitoring an outgoing programme so that improvements can be made, or for passing judgement on, and making decisions regarding the effectiveness of a programme. Scriven (1972) has labelled these two basic purposes of evaluation, formative and summative respectively.

In terms of alcohol and drug education, the role of evaluation is clear. It should have the specific purpose of devising an appropriate method(s) to measure and judge the effects of drug education, in terms of its assumed aim of reducing and preventing drug abuse (Braucht, Follingstad, Brakarsh and Berry, 1973; Goodstadt, 1976; Bacon, 1978).

(i) Problems in the Evaluation Field

The evaluation field is faced with major problems as a consequence of its conceptual vagueness and ambiguity. Many reports of "less than ideal" outcomes or "no effect" are common in the evaluative literature. As a quasi-scientific method, evaluation generally suffers from the use of non-factual "subjective" information and poor methodology (Mahoney, 1978; Chen and Rossi, 1980).

Evaluations tend to be performed in the "real world" and not in experimentally ideal climates, free from external influence. Cowen (1978) suggests that errors in designing and conducting evaluations "flow naturally from the special hazards of doing research in the community" (pp 793). He specifies four areas of difficulty particularly prevalent in applied evaluative studies, namely, data bias, problems of design, criterion related issues, and problems of experimental control.

Because evaluative studies are mostly carried out in applied settings, the field of research is additionally plagued with politically based problems. In a particular setting, researchers can often be biased and are often influenced by specific power struggles and/or other political influences (Boruch and Gomez, 1977; Freeman, 1977). Bonoma (1977) puts forward the argument that political and/or power issues can determine, not only the nature and kind of evaluation conducted, but also the resistance to change that is generated in a particular setting, and the method(s) for overcoming this resistance.

As a consequence of political issues/problems, many covert purposes for conducting an evaluation sometimes exist. Weiss (1972) lists some examples of these less legitimate reasons for evaluation such as, intentions for postponement, "ducking" responsibility, public relations, or for fulfilling grant requirements (pp 11-12).

A good example of an alcohol education programme plagued by politically based problems has been described by Sheppard (1982). Barriers to the implementation of the programme discussed, included organizational, administrative, and instructional blocks, such as the absence of any set objectives, delays over responsibility, lack of staff interest, inadequate lines of communication, and lack of experienced instructors. It was concluded that more thought needed to be given to such issues, prior to the implementation of future programmes. (Sheppard, 1982).

It is important for the evaluator to realize that political forces on evaluation research exists. Rossi and Williams (1972) reviewed some examples of evaluations affected by political pressure and concluded that, "only if our biases and fears, such as the possible contamination of science by its closeness to policy, are set forth and considered will we ever progress to reasoned debate" (pp 295). An awareness of biases, programme resistance, and covert purposes for conducting evaluations, is therefore of importance at the outset of planning.

(ii) Types of Evaluation

A brief review of relevant literature indicates that, although little agreement exists concerning the specific categories or typologies of evaluation, it has traditionally been classified in terms of the range of possible questions that can be addressed to a programme. These questions appear to be concerned with the predominant areas of effectiveness (outcome), efficiency, needs, and process, as subsets of an overall feedback process (see fig 1). (Rossi and Williams, 1972; Warr, Bird and Rackham, 1976; Reicken, 1977; Glass and Eliot, 1980; Posavac and Carey, 1980).

Each of these areas of questioning are concerned with different stages in the evaluation process and require different emphasis and investigation methodology by the evaluator. Outcome evaluation, for example, is concerned with the overall effectiveness of a programme or the cause-effect relationship between the programme and the target group, and as such, predominantly involves measurement of change (Mahoney, 1978). In contrast, analysis of programme efficiency is primarily concerned with the cost effectiveness, or price of a program (CEA) (Wortman, 1983). Evaluation of needs occurs prior to the existence of a programme or intervention, and forms the basis and justification for its existence (Posavac and Carey, 1978). The fourth category, process evaluation, describes the analysis of the actual intervention procedures used, that is the suitability of the techniques used, the effort displaced, the selection of the target group, and so on (Freeman, 1977).

Used together, or in combination, these categories of evaluative analysis can provide a comprehensive vehicle for evaluating the overall worth, or value of a programme, or intervention (Warr, Bird and Rackham, 1976; Freeman, 1977).

Further systematic sub-division of the categories presented is possible, and has been outlined by some theoreticians. Most notably, Hamblin (1974) and Warr, Bird and Rackham (1976), have divided outcome evaluation as a general evaluative process into levels of analysis, or of training effect. Warr, Bird and Rackham (1976) have labelled four levels of outcome: reactions, immediate, intermediate, and ultimate outcomes, whilst Hamblin (1974) has labelled his hypothesized levels of outcome: reactions, learning, job behaviour, organization and ultimate value. Whilst it is possible that these theoreticians are perhaps being too specific in their definitions of such a vague and broad concept as evaluation, the division into levels of programme effect potentially provides a useful vocabulary, or tool for the evaluation of a relevant training, or intervention programme.

The formative/summative dichotomy presented earlier can be seen to be interrelated to the typologies of evaluation, discussed. Formative evaluation typically precedes summative evaluation temporally, and both overlap with the various typologies mentioned. Formative evaluation for example, is inevitably linked with evaluation of needs and/or process, whilst summative evaluation typically utilizes the techniques of outcome and efficiency evaluation (Wortman, 1975).

(iii) Summary

It is apparent that, while evaluation is an essential and fundamental process, it evades adequate definition, and is viewed with a degree of scepticism in the literature with regards to its ability to assess the effectiveness of preventative programmes, such as alcohol education (Goodstadt, 1976; Engs, 1977; Morell, 1982; Cairo, 1983).

However, it is easy to be negative. As Mahoney (1978) suggests, "we need to guard against the paralysis of complacency regarding the adequacy of current research methods" (pp 660). The logical approach to the evaluation process must be, that, as an essential and integral part of any preventative programme, its design must be approached with caution, consideration being given to potential problem areas from the outset.

3.03 Past Evaluative Findings

A main conclusion made in a recent review by Cairo (1983) of counselling programmes in industry, was that very few published studies exist which indicate either the predominance of counselling programmes in industry or their effectiveness (pp 14). For example, he found that of the estimated 1,200 to 2,400 alcoholism treatment programmes existent in industry in the US, only 11 are known to receive specific ongoing evaluations, and that none report their specific educational, or treatment techniques.

The same is true of general alcohol education programmes (Braucht et al., 1975). Although a countless number of educational programmes have existed, the present author uncovered only a small number of articles (84) addressed to the evaluation of alcohol education programmes in a recent comprehensive computer aided literature search (Dialog search using Psych info and ERIC data bases). As Goodstadt (1976) suggests, "if it is difficult to determine what has been going on in drug education, it is even more difficult to assess the hundreds and thousands of programs that have been undertaken... almost no evidence exists" (pp 290).

The articles reviewed reported a wide range of programmes, techniques and evaluation methodologies. Some of the educational techniques reported included relatively common methods such as lectures, films, discussion groups, whilst others reported on more unusual methods such as bio-feedback methods, confrontation techniques and aversion therapy. In terms of programme effectiveness, there were few consistent findings in the literature.

An evaluation of an alcohol education programme, consisting of a film and discussion groups by Engs (1977), utilizing experimental and control groups, reported an increase in knowledge but no change in behavioural data. He concluded "that an increase in knowledge does not necessarily change behaviour...behaviour change is a difficult and complex process" (pp 43).

A similar finding was reported by Connor (1981), following a comparative evaluation of lecture versus small group discussion methods of education. Both techniques resulted in significant gains in knowledge in the subjects, more so in the discussion group subjects, but no change in attitudes was evident. The conclusion made by Connor was that "while it is a relatively easy task to change levels of information, attitude change through the alcohol education process is a more complex and intricately involved phenomena" (pp 39). No findings related to drinking behaviour were reported by the authors.

A relatively recent study by Pipher and Rivers (1982), evaluating the impact of an experimental alcohol course consisting of 14 lessons given to junior high school students (n=81), found little in terms of change in the subjects attitudes towards alcohol, alcohol related knowledge, or drinking behaviour, despite the students evidently favourable reactions to the course. Problems related to methodology and data were reported and the authors suggested that factors external to the course largely affected the findings.

Similar findings were repeated in a NZ study conducted by Casswell, Mortimer and Gilroy (1982), in an evaluation of a high school based drug education programme. Although a long lasting increase in knowledge was found, no change in attitudes or behaviour were reported by the authors. Problems in the use of a quasi-experimental design were made clear in the study.

Williams, Van Leven and Breen (1974) compared pre and post questionnaire responses of experimental and control group subjects, following an intensive 6 day alcohol education course (n=239). Some positive changes in attitudes and a significant improvement in knowledge and information were evident in the experimental group, which led the authors to conclude that the course "seemed to have considerable impact" (pp 697). It is notable that once again no data on drinking consumption were collected during the course of the study.

A differential evaluation of two ten week courses involving experiential and cognitive approaches to alcohol education respectively was conducted by Rozelle (1980). The results from the 44 subjects indicated that both methods of education were effective in producing immediate increases in "responsible" attitudes and knowledge about alcohol. No data concerning actual consumption were collected during the study, despite the author's statement that "for alcohol abuse prevention efforts to be considered effective their effects on actual drinking behaviour must be considered" (pp 50).

Similarly, a descriptive summary of the implementation and evaluation of an alcohol education course by Leavy (1979), reported no findings related to the supposed goal of alcohol education as prevention, that is, in terms of drinking behaviour. Similar criticisms can be levelled at other studies by Paskert (1974), Adams (1976), Beal (1977) and Denson (1978).

Studies related to the more unusual methods of alcohol education revealed some interesting findings. A NZ study by Brown (1979) with 40 subjects found that a controlled drinking course, based on biofeedback techniques was more effective than a traditional alcohol education course, in terms of "personal relevance".

A comparative approach to the employment of varying preventative techniques was under taken by Volger, Weissback, Compton and Martin (1977). Confrontation, aversion therapy, biofeedback, and counselling techniques were assessed separately in four programmes which each included "traditional" alcohol education for a target group of problem drinkers (n=80). No differences were found between the various techniques, in terms of drinking patterns and achieving moderation and all were relatively effective. If anything, these findings indicate the probable value of "traditional" alcohol education methods.

Other innovative techniques such as acupuncture, hypnosis and meditation were evident in the literature but have not received much analysis (Bourne, 1977; MacDonald, 1978). This is probably due to the "newness" of the techniques and problems related to the collection and nature of evaluative data. As Bourne (1977) suggests "too often the consensus appears to be that an approach appears to have tremendous potential but there is no way of scientifically documenting a subjective impression" (pp 199).

The implications are that the more unusual techniques are of limited validity in the context of the present study, because of the evident suspicion regarding their effectiveness and because of their inappropriateness in group settings (Goodstadt, 1976; Schlegel, 1977; Engs, 1977; Bacon, 1978; Cairo, 1983).

This viewpoint is supported by Bull (1983), who discussed the appropriateness of the various educational techniques in the NZ industrial setting. He argues that confrontation, coercion and other potentially threatening techniques are unhelpful and in fact damaging in the NZ setting and that so-called "broad brush" programmes are the most appropriate and effective for people with alcohol problems. By "broad brush" programmes Bull indicated programmes that address a number of diverse topics as well as alcohol. It was believed that alcohol education would be more effective purely because of the wider audience attracted to such programmes. However, as has been suggested earlier (Einstein, 1977; Gonzalez, 1978), these types of programmes often miss the point of prevention by not targeting specific problem groups.

Nevertheless, the argument by Bull (1983) that coercive techniques are of little value in the NZ industrial setting is of particular interest, as it is consistent with findings previously quoted. It suggests that traditional techniques, such as lectures and discussion groups, would be of more utility and value in the present setting than the more intensive and unusual techniques, such as aversion therapy and biofeedback.

Work by Zimering (1974) and Schlegel (1977) tends to add support to these findings. Zimering (1974) concluded, on the basis of a survey amongst school students, that films and discussion groups were a highly effective method of learning.

In summary, the indications are that, in terms of programme design, despite the paucity of the relevant research available, relatively conventional and non-threatening methods of instruction have proved to be effective in the past. Specific value was placed on discussion group methods of learning by some authors.

The importance of measuring information on actual drinking behaviour, such as alcohol consumption, was brought out in the literature. It is clearly not valid, as it happens in some articles and studies, to merely assume that desirable changes in drinking behaviour will naturally follow changes in knowledge and/or attitudes (Adams et al, 1981). The implications are that for any evaluation of an alcohol education programme to be considered valid, it must include information directly pertaining to the preventative purposes of alcohol education in terms of drinking behaviour.

Also noted in the literature reviewed, was the difficulty reported in attempting to change attitudes and/or behaviour using alcohol education, in comparison to the relative ease reported in changing levels of knowledge. This finding is consistent with Hamblin's (1974) and Warr et al's (1976) theories regarding the division of training outcome into levels and indicates the difficulty in generalizing change across levels.

The Present Evaluative Study

The basic purpose and motive behind the present study was to identify and educate a "high risk" group (ie: military personnel) about alcohol, in terms of its effects, characteristics, problems, treatment and prevention. To measure the programme's effect on the target group, a summative evaluation plan was integrated into the study from the outset. In terms of prevention, it was hoped that, through the use of education, the programme would have some positive influence on the propensity of the programme participants towards future alcohol abuse, and their influence on others drinking behaviour, especially subordinates.

4.01 Design

The present programme consisted of two separate courses of instruction on alcohol during July and October 1983, respectively. An appropriate method for evaluating the programme was assumed to be the collection of information at appropriate levels of training outcome both prior to, and following the two courses of instruction. The collection of information from a control group of similar characteristics to the participants of the programme, was judged to be experimentally appropriate, and was included in the evaluation methodology. A follow up study of one of the groups of programme participants was planned to measure any longer term effects.

A three group repeated measures quasi-experimental design was therefore utilized as the basis for testing evaluative hypothesis concerning the programme. The basic design of the study is illustrated in figure two. Although primarily summative in design, some formative evaluation was planned as a relatively minor part of the development of the second course of the programme.

It was hoped that the quasi-experimental design chosen would meet the basic requirements of applied science (see: Dunnette, 1976, Chap 7; Posavac and Carey, 1980, for example). The non-equivalent control group design supposedly permits a valid distinction to be made between the effects of the programme and several other plausible causes of change such as maturation, history, selection, or mortality (Rossi and Williams, 1972; Posavac and Carey, 1980).

Figure Two - An illustration of the quasi-experimental design of the present study.

<u>Group</u>	<u>Pre Measure</u>	<u>Services/ Programme</u>	<u>Post Measure</u>	<u>Follow-up Measure</u>
Experimental Group One	Questionnaire	1st Course (3 lessons)	Questionnaire	Questionnaire
Experimental Group Two	Questionnaire	2nd Course (2 lessons)	Questionnaire	NA
Control Group	Questionnaire	NA	Questionnaire	NA

4.02 Questions of Interest/Hypotheses

The hypotheses under analysis in the present study were derived from the basic purposes of the study, at the appropriate levels of analysis utilizing Hamblins (1974) terminology. More specifically, the questions of interest in the present evaluative study consisted of the following list.

1. Reactions - Did the participants of the programme (experimental groups 1 & 2) have a positive reaction to alcohol education as a result of the programme?
2. Attitudes - Was there any change in the attitudinal responses of the programme participants as a result of the programme?
3. Knowledge - Did the programme participants learn relevant knowledge about alcohol as a result of attending the programme?
4. Skills - Did the participants of the programme improve their general level of skills (i.e.: assessment ability, self awareness) as a result of attending the programme?
5. Behaviour -
 1. Was there any change in the drinking behaviour of the participants of the programme as a result of attending?
 2. Was there any other change in behavioural data?

6. Miscellaneous 1. Which of the two courses of instruction was more effective if applicable?

2. How did the general level of alcohol consumption self-reported by the sample compare with the civilian population?

These questions of concern can be translated into specific research hypotheses as follows:

1. Reactions H_0 - No positive reaction to alcohol education by participants.

H_1 - Participants positively reacted to alcohol education.

2. Attitudes H_0 - No difference in attitudinal responses as a result of the programme.

H_1 - there were significant changes in some or all of the attitudinal responses as a result of the programme.

3. Knowledge H_0 - No gain in knowledge of the topics presented in the programme by the programme participants.

H_1 - A significant improvement in the participants knowledge of relevant topics as a result of attending programme.

4. Skill H_0 - No difference in level of skill displayed by participants as the result of attending the programme.

H_1 - A significant level change in the level of skill displayed as the result of attending the programme.

5. Behaviour H_0 - No change in the behavioural data of the programme participants as the result of attendance.

H_1 - A significant change in behavioural data of participants as the result of programme attendance.

6. Miscellaneous 1. H_0 - No significant differences between the two courses of instruction in terms of the effect on participants.

H_1 - A significant difference exists between the two courses in terms of effect on participants.

2. H_0 - No difference between self reported drinking consumption of sample and general population.

H_1 - A significant difference between self reported consumption and general population.

METHOD

Subjects

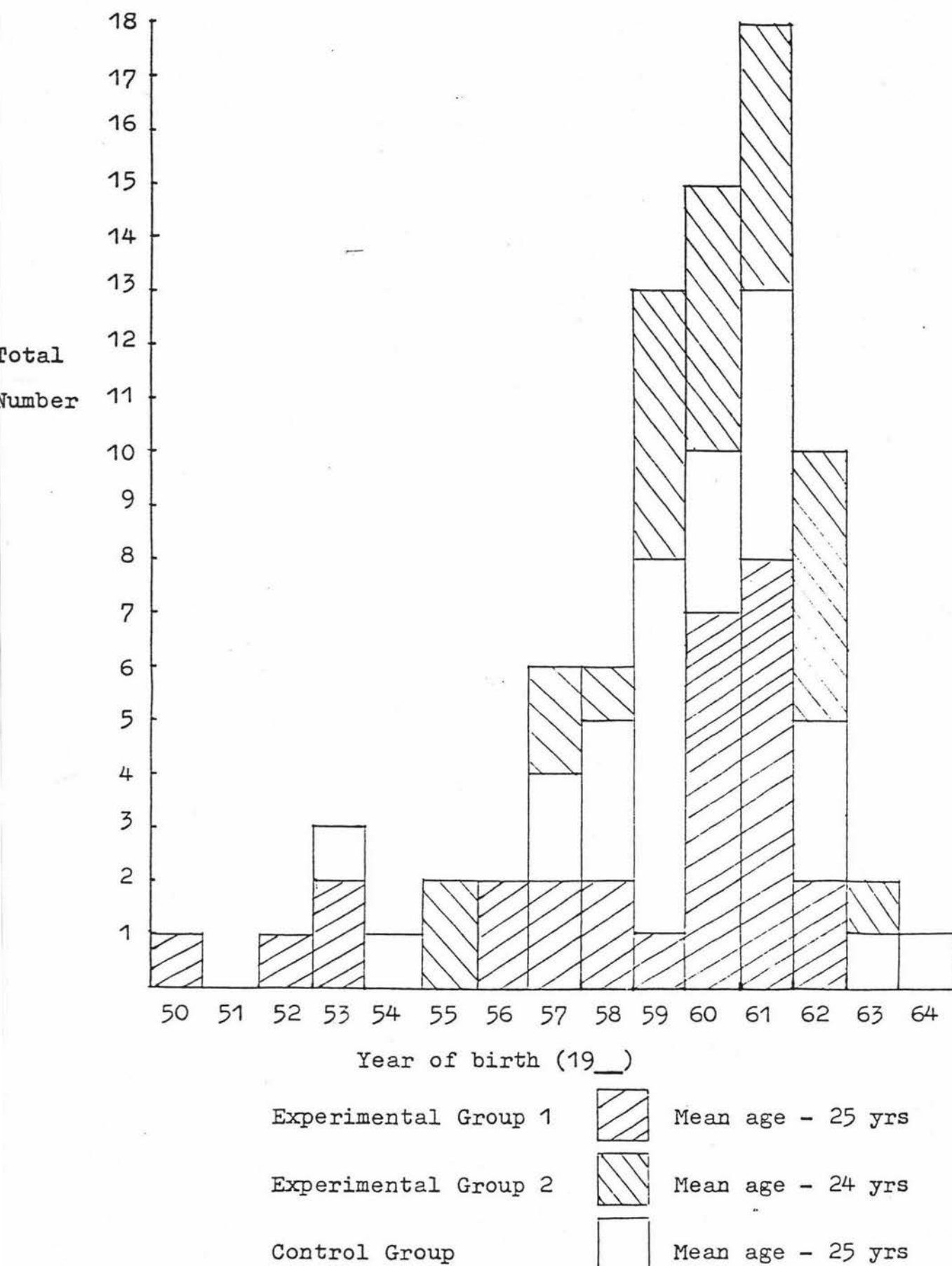
The subjects in the present study consisted of 82 NZ Army personnel divided into 3 groups of, 28 (experimental group 1), 26 (experimental group 2), and 28 (control group). The age span of the subjects ranged from 33 years to 19 years with the mean age for the total group being 24 years at the time of the study (mode = 22 years). The distribution of subject ages is displayed in figure three. The difference in mean ages between the three groups was not statistically significant ($p = 0.72$).

Of the subjects in the study, 5 were female and 77 male. All the female subjects were programme participants, with 3 being in experimental group 1, and 2 in experimental group 2. Because of the relatively small number of female subjects, it was not felt necessary to control for gender statistically in the study, and as a result no differentiation has been made between female and male responses in the results.

In terms of rank, the course participants were all at the level of Lance Corporal or Corporal at the time of the study. In contrast, the control group comprized a wider range of ranks and seniority, from the level of Private to Sergeant. On average however, the three groups were similar in terms of rank and years of service.

In summary, apart from the spread of rank in each group, it is apparent that the three groups of subjects were similar in terms of age, sex, rank and years of service on average. It is emphasized at this point, that the subjects were not intended to be representatives of a larger group, such as all NZ Army personnel. As an evaluative study, the area of interest is with respect to comparisons made between the three groups, and not to making broad statements concerning the drinking behaviour of all NZ Army personnel.

Figure Three: Profile of the subjects ages broken down
by group membership.



Measures

The measures used to assess the subjects reactions, knowledge, skills, attitudes and job behaviour, were combined into a single questionnaire administered to the subjects prior to, and following the programme. All groups were required to complete the questionnaire twice, with the exception of experimental group 1, which was additionally required to complete a follow-up questionnaire four months after the completion of the programme.

2.01 Questionnaire development

The questionnaire progressed through several stages of development prior to completion. Research uncovered a wide variety of questionnaires and items that had previously been used in related studies. (Mayfield, Mcleod and Hall, 1974; Hamblin, 1974; Selzer, Vinokar and Van Roorjen, 1975; Finn, 1975; Zimbardo, Ebbesen and Maslach, 1977; Friedrich and Loftsgad, 1978; Khavari and Farber, 1978; Mehrabian and Russell, 1978; Routledge, 1979; Casswell, 1980; Banks and Smith, 1980; Gregson and Stacey, 1980(2), 1981(2); Adams, Grant, Carlin and Reed, 1981; Hanifen, 1982; Kashmore, 1983).

From this large pool of information, and from consideration of the objectives of the programme, an initial questionnaire was constructed. This initial questionnaire (Appendix A) consisted of three broad sub-sections. The first section consisted of 17 true/false items designed specifically to measure the level of the subject's general knowledge of alcohol and its effects. The second section contained 9 attitudinal items with respect to alcohol. The final section of the initial questionnaire required the subjects to report the frequency and quantity of their alcohol consumption in the previous week.

This initial questionnaire was piloted on a small representative sample ($n = 10$), which consequently uncovered many flaws in the questionnaire. Specifically, the true/false format was found to be an inadequate measure of an individual's alcohol related knowledge due to an evident ceiling effect, the high specificity of the items, and the amount of guess work involved. It was also found as a result of the pilot study, that there were insufficient attitudinal items, no skills related items, and that overall the alcohol consumption item was too simplistic and did not give enough information.

One revision of the questionnaire was constructed before it was believed that an adequate instrument was produced. The revision attempted to measure the knowledge of the respondents by the use of 18 open ended questions related to the content of the programme. The section of the questionnaire related to attitudes was expanded to include a number of other items including four from the CAGE questionnaire (Mayfield et al. 1974). It was believed that these items would provide useful information concerning a profile of the subjects of the study, on the basis of past research.

Subsequent criticism of this instrument led to the construction of the final questionnaire. The items related to knowledge were believed to be vague and subjective, and to provide a generally inadequate measure of the information presented in the programme. The drinking consumption section of the revised questionnaire was still simplistic and did not allow meaningful statistical analysis to take place. No items related to skill existed in the questionnaire.

2.02 The Final Questionnaire

The final version of the questionnaire was designed to overcome previous criticism and included a number of new items. There were three basic forms of the questionnaire (pre, post, follow-up), a copy of which is illustrated at Appendix B. The three forms were identical, apart from the initial instructions given on the cover sheet and for the programme participants only, three items related to the subjects reactions were included in the post-course questionnaire.

The questionnaire items related to knowledge consisted of a number of mixed format (multi-choice, open ended, check list) questions. An index of knowledge was constructed on the basis of the number of items scored correctly, and served as a single variable for analysis of knowledge (min value = 0, max value = 25).

The second section of the questionnaire contained four attitudinal Likert scales concerned with drinking in NZ (based on items from Casswell 1980). The following seven items concerned the subjects self awareness with respect to drinking and included four items from the CAGE questionnaire (Mayfield et al., 1974). Three items addressing the skill or experience the subjects had had with peoples drinking problems, were included in the questionnaire.

The four final items (except the programme participants post-questionnaire) in the questionnaire were addressed to the subjects drinking behaviour. The first item consisted of a table the subjects were required to fill in stating their total alcohol consumption in the previous week broken down by frequency (day of the week), type of alcohol consumed, as well as quantity. For analysis, the alcohol consumption of each respondent was converted to mls of pure alcohol consumed. The next three items questioned the normality of the subjects self-reports and any history of drinking problems.

The three reaction items, which were included in the post measure of programme participants consisted of 7 point scales addressed to the subjects immediate reactions to the programme in terms of interest, job relevance, and amount of new information presented (obtained from Hamblin 1974).

There was no opportunity to pilot study or statistically validate the final questionnaire. Instead, on the basis of previous research on some of the questionnaire items (Mayfield et al. 1974, Hamblin 1974, Casswell 1980, Hanifen 1982), it was assumed that the instrument would provide a valid measure of the subjects reactions, learning and drinking behaviour.

Procedure

3.01 The Alcohol Education Programme

As mentioned previously, the alcohol education programme of concern in the present study, consisted of two separate courses of instruction.

The first course was developed around a set of objectives, taking into account the resources, facilities, and time available, and utilizing past educational techniques that have been reported as being effective and appropriate.

The second course of instruction was based around the same considerations, but additionally utilized some formative information from the first course, as it was implemented approximately three months later.

The specific objectives, facilities, resources, and time constraints, and the outline of each of the courses, will be discussed in detail in this section.

a. Programme Objectives

Utilizing Hamblin's (1974) terminology, the objectives of the alcohol education programme were concerned with positive change in the first three levels of training effect, that is, reactions, learning (knowledge, skills, attitudes), and job behaviour.

(i) Learning

The primary objective of the programme was to increase the programme participants knowledge, improve their attitudes and develop their skills, with respect to several alcohol related topics. These topics included NZ drinking statistics, psychological and physical effects of alcohol, reasons for drinking, guide-lines for controlled drinking, assessment and treatment of alcoholism, socialization and drinking, and Armed forces policy with respect to drinking. It was hoped that the programme participants would gain knowledge on the above topics, and be able to utilize this knowledge in attained skills, as a result of the programme.

(ii) Job Behaviour

A secondary objective of the programme was to change if necessary, the participants drinking behaviour. More specifically, it was hoped that, as a result of the programme, the alcohol consumption of some of the participants would be reduced and also that some would show some ability to recognize and assist problem drinkers as well as being more aware of their own drinking behaviour.

(iii) Reactions

A relatively minor objective of the programme was to develop a positive reaction in the participants towards the value and importance of alcohol education.

b Facilities, Resources, Time

The education facilities at Linton Camp, where the programme was conducted, were numerous and included suitable classroom facilities with appropriate audio-visual aids.

The source of the information presented in the programme was primarily obtained through the Alcohol and Drug Centre, Palmerston North. The speaker on the courses was experienced and familiar with the field of instruction and brought most of the information used, including the films with him. Other information used in the programme was obtained from the relevant literature, or was developed specifically for the course.

The main constraint on the programme as a whole was time. Three two hour periods were allocated to the first course of instruction and two two hour periods were allocated for the second. A requirement existed for some part of each course to address the topic of drugs which reduced the available time for alcohol education further. This meant that any course of instruction implemented had to be carefully planned in order to allow the effective communication of the material on alcohol. The lessons would need to be comprehensive yet concise.

c Outline of the First Course

It was decided that a combination of lecture/presentation and discussion group methods of instruction would be appropriate means of communication in the context of the study. A broad outline of the first programme was constructed around the objectives of the overall programme and the specific time periods available with more detail being written into the notes of the presentations and lectures given. A description of the content of each lesson making up the first course of instruction is given under the appropriate headings.

(i) Lesson One

Following an introduction designed to clarify the purposes and reasons for the existence of the programme, two short ten minute films entitled "With Us All The Way" and "The Double Standard" were screened (starring D. Mcphail, J. Gadsby, A. Whittle - Alcohol Liquor Advisory Council 1982). Both these films presented information on drinking in NZ relevant to the objectives of the programme. Information on the social use of alcohol, the behaviour pattern of problem drinkers, alcoholic stereotyping, and NZ drinking statistics were presented in the films, as well as information related to the various agencies available in NZ to assist the problem drinker.

After the presentation of the films, a lecture and question - answer session followed, which covered a variety of alcohol related topics, namely social facts on drinking in NZ, effect of alcohol on the body - psychological and physiological, the definition of drinking problems and their assessment, social definitions of drinking and guide-lines for moderate drinking.

(ii) Lesson Two

Following a short introduction, a discussion on the role of the course participants in assisting potential problem drinkers in the military context commenced the second lesson. The course participants then divided themselves into five discussion groups. Instructions were given to each group to discuss and make notes on a number of alcohol related topics for approximately 5 - 15 minutes each and report back to the class as a whole on completion.

The topics selected for group discussion consisted of the following list.

1. Why do people drink?
2. What are some of the alternatives to drinking?
3. How would you try to control your drinking if you felt you were drinking too much?
4. What physical signs might indicate an alcohol problem?
5. What behaviours at work might indicate an alcohol problem?
6. What factors at home or with the family might indicate an alcohol problem?
7. How does an alcoholic drink -
 - how much?
 - how often?

Following each group's discussion and presentation on the topics, a general discussion of each topic in detail completed the second lesson.

(iii) Lesson Three

A lecture and question and answer session on the types and classification of drugs, their effects, treatment and methods of administration, made up the bulk of the third lesson. A strong emphasis was placed on the classification as alcohol as a drug and its similarity with other drugs.

d Outline of the Second Course

Following reaction to the first course of instruction and consideration of other factors, primarily the shorter amount of time allocated, it was decided to alter the content and format of the second course. More specifically, it was decided to retain the film and discussion group sections of the course and condense the period of lecture/verbal presentation.

(i) Lesson One

The first two hour lesson initially consisted of the screening of the two short films discussed in the previous section. Following this, a short discussion on, the physiological and psychological effect of alcohol on the body, the social facts of drinking (i.e.: who, how much, how often) and remedial action for the problem drinker, occurred.

The class proceeded to be split up into six discussion groups and as outlined with the first course, was asked to discuss, make notes and report back on a variety of alcohol related topics. The topics chosen for group discussion were as listed below.

1. Why do people drink?
2. What are some of the alternatives to drinking?
3. How would you control your drinking if you felt you were drinking too much?
4. What physical signs might indicate an alcohol problem?

At the conclusion of the second lesson, a class exercise was handed out and explained. The class exercise (an example is at Appendix C) required each participant of the course to observe discreetly other peoples drinking behaviour, fill in the exercise sheet appropriately and hand it back during second lesson.

(ii) Lesson Two

The second lesson consisted of two parts. A one hour talk and question - answer related to the classification, effects, treatment of, and methods of administration of drugs comprised the first half of the lesson.

Following a five minute break the second section of the lesson returned to the subject of alcohol. The class exercises were handed in and discussed. The class then divided once again into 6 discussion groups as before, to discuss the following topics:

1. What behaviours at work might indicate an alcohol problem?
2. What factors at home might indicate an alcohol problem?
3. How does an alcoholic drink -
 - how much?
 - how often?
4. What remedial action is available to problem drinkers?

The second lesson was completed with a brief discussion and summary of the main points made on alcohol, with a specific emphasis being placed on the role of the course participants in the identification and assessment of problem drinkers.

3.02 The Evaluation

Table one illustrates the procedure of the present evaluative study. Specific dates, groups and numbers of subjects involved at each stage are presented in the table.

As indicated, in late June - early July 1983, the pre-course questionnaires were administered to the participants of the first course of instruction (experimental group 1), and to a matched control group prior to the commencement of the programme. Because the control group subjects were located in three separate sections of Linton Camp, the pre-course measure entailed four administrations of the initial questionnaire. All the questionnaires throughout the period of study were completed in classroom type environments.

Following the presentation of the three lessons comprising the first alcohol education course, the post-course questionnaires were administered in the same manner as the pre. Additionally experimental group 1 was advised at the post course stage that they would be receiving a follow-up questionnaire by mail in November to complete.

In October the participants of the second course of instruction received the pre-course questionnaire prior to the course of instruction. Similarly they received the post-course questionnaire approximately 3 weeks later following the completion of the second alcohol education course. Inadvertently 4 members of the course belonged to the control group which required the exclusion of their responses from analysis due to possible contamination.

In November, the follow up questionnaires were mailed out to the 28 subjects in experimental group one. Of these, seven did not return a completed questionnaire.

Several points need to be emphasised regarding the evaluation. The control group was assessed concurrently with experimental group one. There was no direct control group for experimental group two, but it was assumed that the courses were close enough together temporally to allow some valid comparisons to be made. The follow up measures of experimental group one occurred after completion of both courses and approximately 4 months after the first course of instruction.

Although an appreciation exists that the study does not reflect an experimental tidy design and that it would have been advantageous to have obtained a third measure for both the control group and experimental group two, and to have measured a separate control group for experimental group two, this was not possible in the circumstances of this study. There was not enough time to obtain a follow up measure of experimental group two, or to have provided a comparable control group.

Table One: Table of events of the study.

Date(s) 1983	Event	Groups Involved
July 1-5	Pre-measure	Experimental Group One (28), Control Group (28).
July 5	1st Lesson, 1st Course.	Experimental Group One (28).
July 14	2nd Lesson, 1st Course.	Experimental Group One (28).
July 30	3rd Lesson, 1st Course.	Experimental Group One (28).
July 30-Aug 5	Post-measure	Experimental Group One (26), Control Group (21).
Oct 13	Pre-measure	Experimental Group Two (26).
Oct 18	1st Lesson, 2nd Course.	Experimental Group Two (31).
Oct 31	Post-measure	Experimental Group Two (26).
Nov 1-5	Follow-up	Experimental Group One (21).

Analysis

The data were analysed using the Statistical Package for the Social Sciences (SPSS) on Univac 1100 and Prime 750 main frame computers (Nie, Hull, Jenkins, Steinbrenner and Bent, 1975).

Descriptive and non-parametric statistics (eg: Chi square) were primarily used for data analysis due to the quantity of nominally based information (eg: Attitudinal). A repeated measures 3 x 2 analysis of variance procedure (MANOVA) was used as a direct test of hypothesis concerning change in knowledge and alcohol consumption related data. This was an appropriate technique given the continuous nature of the relevant data and the evaluation design (Nie and Hull, 1981; Keppel, 1982).

Although it is apparent that a large quantity of information concerning the data could be communicated in this study as a consequence of using SPSS, only information pertinent to the hypothesis under study will be presented.

RESULTS

For ease of presentation, most of the results are presented with reference to the appropriate questionnaire item number (see Appendix B).

Reactions

The programme participants' (experimental groups 1 and 2) immediate post-course responses to item numbers 30, 31 and 32, in the questionnaire measuring subject reaction, indicate that their reactions tended to be slightly on the positive side of the midpoint of the 7 point scales (table two). Although not strong, the effect was consistent across items and between groups. That is, although the subjects' reactions were generally neutral, they judged the course to be slightly interesting, of slight relevance to their jobs, and slightly above average in terms of new information presented.

To evaluate the differences between the two participant groups' mean responses to the items statistically, T ratios were calculated (table two). This was an appropriate step given the distribution and variation of the data (Nie et al. 1975, pp 267). There were no statistical differences between the two groups of participants, but there was a wide variation in the individual responses to the three items as indicated by the size of the standard deviations (table two).

Table Two Summary of the programme participants
(experimental groups 1 and 2) responses to
the 7 point scales (post-measure only)
assessing immediate post-course reaction.

<u>Item No.</u>	<u>Overall Means</u>	<u>Experimental Group 1 Means</u>	<u>Experimental Group 2 Means</u>	<u>Standard Deviat- ion</u>	<u>Between Group T ratio</u>
30 1 interesting 7 boring	3.630	3.810	3.442	1.680	0.661
31 1 usefull 7 useless	3.545	3.724	3.346	1.580	0.785
32 1 taught alot 7 taught little	3.210	3.120	3.307	1.830	0.142

Knowledge

To assess the subjects' alcohol related knowledge, the number of correctly answered items from questionnaire numbers 1 to 11 were summated, providing an "index" of knowledge (scaled from 0 to 25), and arranged for each group (table four). Visual perusal of these results suggested a clear increase in the participants' (experimental groups 1 and 2) level of knowledge over the duration of the programme relative to the control group. In one group (experimental group 2), the mean number of items answered correctly by the subjects, approximately doubled over the duration of the programme. It is notable that the level of alcohol related knowledge also increased in the control group, but less so.

The results of the follow-up study indicated a good retention of the knowledge "learned" by one group of participants (experimental group 1), four months after course completion. The mean number of items answered correctly was maintained at the same level as at the post-course stage of questionnaire administration (figure four).

A repeated measures analysis of variance (MANOVA) was carried out on the data to evaluate the overall statistical significance of between group, within group, and interaction effects. This was considered to be a suitable test given the continuous nature of the data repeated over pre and post measures (Hull and Nie 1981, pp 47). Results indicated the existence of a significant difference between pre and post measures, as well as a significant interaction effect (table 3).

To further investigate the specific locus of the significant effects, separate post hoc paired comparisons between group means employing the Scheffe test were calculated (Keppel 1982, pp 151). The difference between the control groups' pre and post means was not significant ($F = 2.76066$ $p \not< 0.05$), but the differences between both experimental groups' pre and post means were significant ($F = 20.177$ - experimental group 1, $F = 37.89$ - experimental group 2, $p < 0.01$). These results indicate that there was a substantial increase in both experimental group's levels of knowledge over the duration of the study in comparison to the change evident in the control group. That is, the tests of significance carried out tend to support the comments made previously on the basis of visual perusal.

Figure Four

Mean number of knowledge items answered correctly by the subjects in each group at pre, post and follow-up questionnaire administrations.

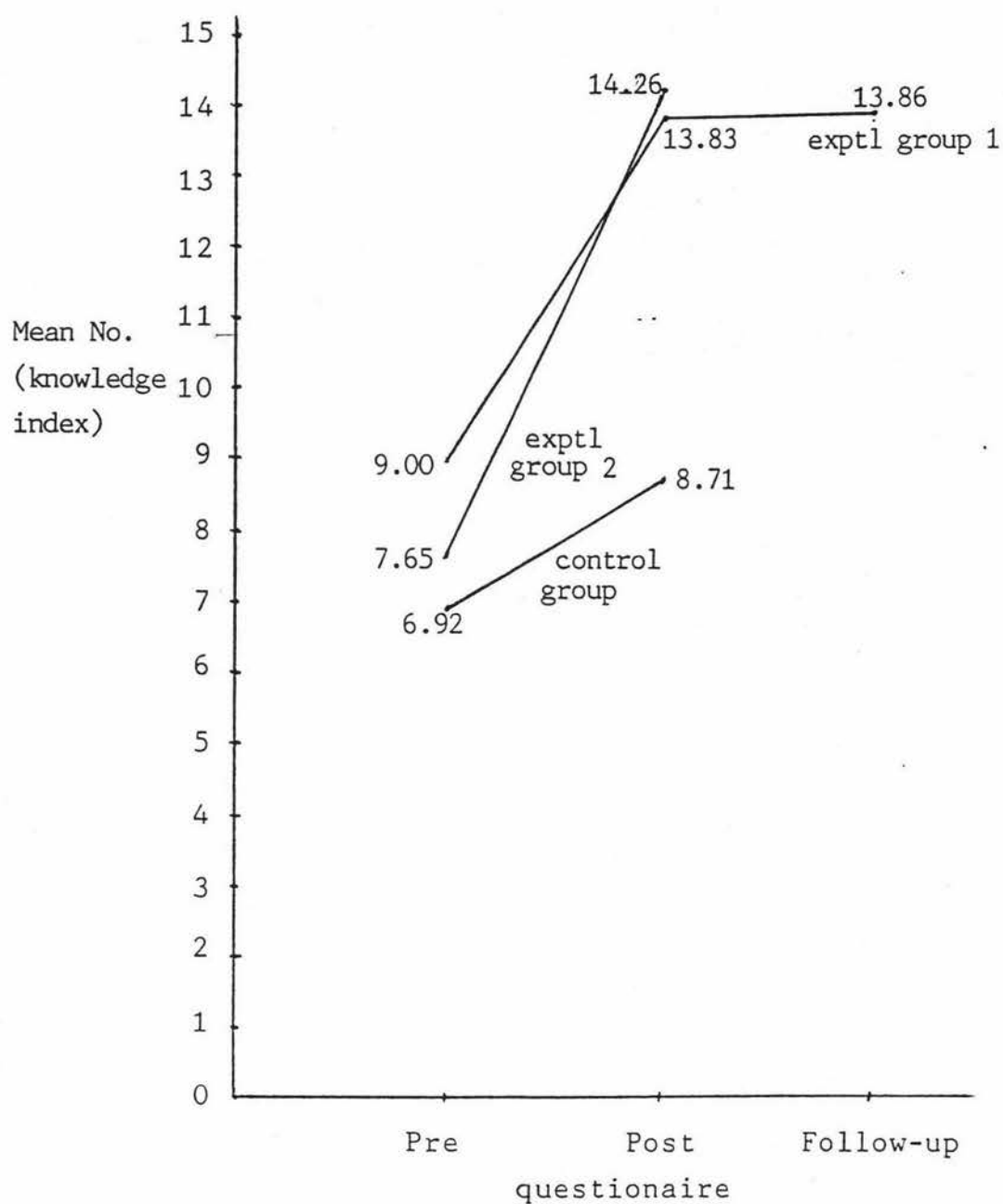


Table Three

MANOVA Summary table for knowledge data

<u>Source</u>	<u>Sum of Squares</u>	<u>Df</u>	<u>Mean Square</u>	<u>F</u>
group	426	2	213.50	28.9 **
error 1	590	80	7.38	
questionnaire	816	1	816.60	56.5 **
group by quest	113	2	56.90	3.94 *
error 2	1039	72	14.40	

* $p < 0.05$ ** $p < 0.01$

Attitudes

The findings of the study related to attitudinal items in the questionnaire (numbers 12 to 15), indicate that there were no significant changes in the subjects' measured attitudes during the course of the study (table four). Because of the nominal categorization of the data, the Chi-square statistic was the most appropriate measure with respect to assessing statistical significance (Nie et al. 1975, pp 223). No significant differences between pre, post and follow-up measures were found for any of the subject groups.

For the same reasons as discussed, Chi-square statistics were also employed for evaluating between group differences. With one exception, the results indicated that there were no significant differences between groups in terms of questionnaire responses to items 12 to 15. The exception was item number 13 (most people in NZ drink because there is nothing else to do with their time). A significant difference was found between the 3 groups in their responses to this item at both pre and post measures ($p < 0.05$ -pre, $p < 0.01$ - post). Only a small percentage of experimental group 2 responded positively to this item in comparison to the other two groups.

Table Four Percentage of subjects in each group responding "agree" or "strongly agree" to questionnaire item no's 12-15 at pre, post and follow-up questionnaire administrations.

Item No.	Group	Pre	Post	Follow-up
12	Exptl 1	14.3	20.7	19
	Exptl 2	11.5	11.5	NA
	Control	21.4	9.5	NA
13	Exptl 1	25.0	44.8	57.1
	Exptl 2	7.7	7.7	NA
	Control	35.7	23.8	NA
14	Exptl 1	10.7	10.3	9.5
	Exptl 2	7.7	7.7	NA
	Control	14.3	19.0	NA
15	Exptl 1	32.1	41.3	19.1
	Exptl 2	11.5	26.9	NA
	Control	19.0	14.3	NA

Skills

The subjects' responses to item numbers 16, 17, 23, 24 and 25 at pre, post and follow-up questionnaire administrations indicate a lack of change in any "skills" demonstrated by the subjects (tables six and seven). Chi-square statistics were used to test for statistical significance because of their suitability in testing for differences in nominally categorized data (Nie et al. 1975, pp 223). No significant differences were found between separate administrations of the questionnaire within any of the three groups. Similarly, no significant differences were found between the responses of the three groups.

The majority of the sample (55.3% - pre, 53.7% - post), indicated that they knew "1 or more" people with an alcohol problem. A smaller percentage (22.9% - pre, 14.3% - post) indicated that these individuals had, or were receiving treatment.

The number of subjects reporting that they could "accurately recognize an alcoholic or problem drinker", remained the same in the control group, but varied slightly in the participant groups over the duration of the study (table five, item 17). More specifically, the percentage rose slightly in experimental group 1 to a sample high of 38.1%, and dropped slightly in the other participant group.

Table Five Percentage of subjects in each group responding "yes" to questionnaire items No.s 16, 17, and 25 at pre, post, and follow-up questionnaire administrations.

<u>Item No.</u>	<u>Group</u>	<u>Pre</u>	<u>Post</u>	<u>Follow-up</u>
16	Exptl 1	32.1	51.7	38.1
	Exptl 2	28.6	28.6	NA
	Control	57.7	50.0	NA
17	Exptl 1	32.1	37.9	38.1
	Exptl 2	32.1	28.6	NA
	Control	23.1	23.1	NA
25	Exptl 1	3.6	3.4	4.8
	Exptl 2	0	0	NA
	Control	0	0	NA

Table Six Percentage of subjects in each group responding "1 or more" to questionnaire item No.s 23 and 24 at pre, post, and follow-up questionnaire administrations.

<u>Item No.</u>	<u>Group</u>	<u>Pre</u>	<u>Post</u>	<u>Follow-up</u>
23	Exptl 1	67.9	68.9	47.6
	Exptl 2	39.3	47.7	NA
	Control	57.6	42.2	NA
24	Exptl 1	35.7	27.6	23.8
	Exptl 2	21.4	9.6	NA
	Control	11.5	3.8	NA

Alcohol consumption

The self-reported alcohol consumption of the subjects in each group varied widely between, and within groups (figure five). The three groups differed, in that the self-reported consumption of experimental groups 1 and 2 (ie: the participants) was substantially lower than the levels self-reported by the control group. The self-reported alcohol consumption also varied between pre, post and follow-up measures with a general rise in reported consumption over the duration of the study being evident. In the control group for example, reported alcohol consumption nearly doubled between pre and post measures.

The self-reported alcohol consumption of the sample averaged over all measures was 201 mls of pure alcohol per week or 28.7 mls/day. The average alcohol consumption self-reported by the groups at just the post-course stage was 235.4 mls/week or 33.6 mls/day. Approximately 10% of the sample reported that they had had a drinking problem (table nine).

The subjects' responses to item number 27 reflected other group differences. A higher percentage of course participants responded that they "usually drank more", than did subjects in the control group (table eight). This difference increased slightly between pre and post measures by approximately 10%.

It is notable that the percentage of subjects in experimental group 1 responding "usually drank more", dropped markedly between post and follow-up measures. Similarly, the data related to the frequency of self-reported non-drinking (table ten), indicated that the number of non-drinkers dropped in experimental group 1 between post and follow-up measures. Correspondingly, the self-reported alcohol consumption of subjects in experimental group 1 rose over the same period (figure five).

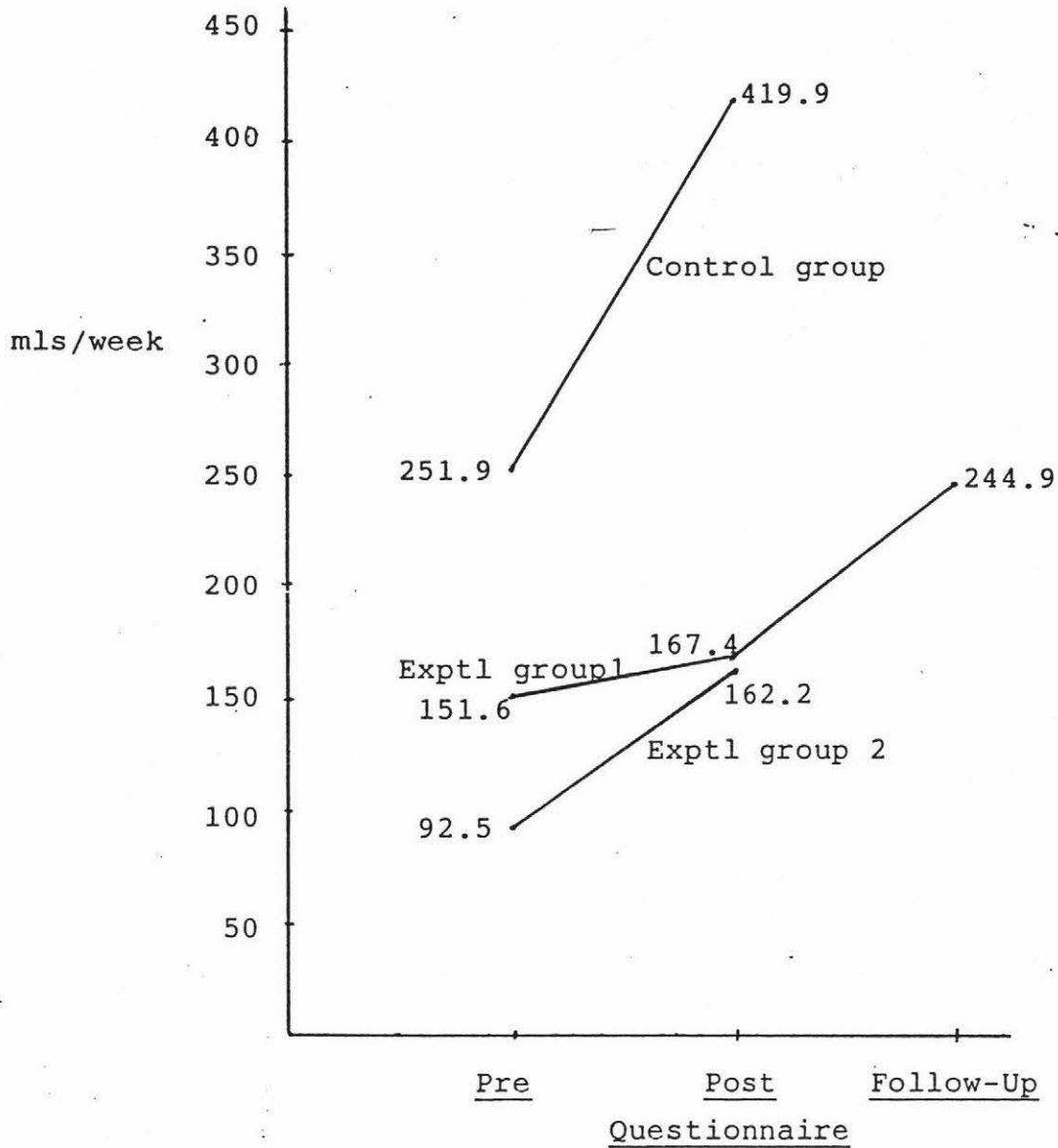
To evaluate the overall statistical significance of the data pertaining to self-reported alcohol consumption, a repeated measures analysis of variance (MANOVA) was carried out. This was believed to be an appropriate measure given the continuous nature of the data measured over pre and post levels for three subject groups (Hull and Nie 1981, pp 47).

The results of the MANOVA procedure indicated that the overall differences between the three groups of subjects were significant, but no other over-all effects were. That is, there was no significant within group difference and the interaction effect was not significant (table seven).

A post hoc paired comparison of the difference between the control groups pre and post levels of self-reported alcohol consumption employing the Scheffe test (Keppel 1982, pp 151), indicated that this difference was significant ($F = 7.47$, $p < 0.01$). Similar tests carried out for the two experimental groups found no significant differences between pre and post measures ($F = 0.067$ - experimental group 1, $F = 1.34$ - experimental group 2, $p \nless 0.05$).

Further post hoc analysis of the data indicated that the significant increase in the control groups self-reported alcohol consumption could be largely attributed to four subjects' self-reports. These changed from an average of 305 mls/week measured at pre-course questionnaire administration, to 981 mls/week at the post-course stage (43.6 mls/ day and 140.1 mls/day respectively).

Figure Five Mean weekly alcohol consumption self-reported by the subjects in each group at pre, post and Follow-up questionnaire administrations.



Sample mean - 201 mls/week or 28.7 mls/day

Table Seven MANOVA summary table for self-reported alcohol consumption data.

<u>Source</u>	<u>Sum of Squares</u>	<u>D.f.</u>	<u>Mean Square</u>	<u>F</u>
group	1119412	2	559706	12.0 **
error 1	3704831	80	46310	
questionnaire	158177	1	158177	3.35
group by quest.	68341	2	34170	0.72
error 2	3399555	72	47216	

** $p < 0.01$

Table Eight Percentage of subject group responding "usually drank more" to questionnaire item No. 27 at pre, post and follow-up questionnaire administrations. (Would this be a normal weeks consumption?)

<u>Group</u>	<u>Pre</u>	<u>Post</u>	<u>Follow-up</u>
Exptl 1	21.4	31.0	14.3
Exptl 2	23.1	34.6	NA
Control	3.6	4.8	NA

Table Nine Percentage of subject group responding "yes" to questionnaire item No. 29 averaged across pre and post questionnaire administrations. (Have you ever had a drinking problem?)

<u>Group</u>	<u>% "Yes"</u>
Exptl 1	10.7
Exptl 2	11.5
Control	6.1

Table Ten Number of non-drinkers at each group questionnaire administration.

<u>Group</u>	<u>Pre</u>	<u>Post</u>	<u>Follow-up</u>
Experimental Group 1	6	6	2
Experimental Group 2	4	3	NA
Control Group	4	3	NA

CAGE responses

The subjects' response to the four items from the CAGE questionnaire (item numbers 19 to 22), warrant separate analysis as they cannot be classified into the categories presented. Because the data were nominally categorized, Chi-square statistics were utilized for testing the statistical significance of differences (Nie et al. 1975, pp 223). No significant differences were found within or between the subject groups (table eleven).

Because the CAGE questionnaire has previously been used as a screening instrument (Mayfield et al. 1974), the data was summarized in terms of the number of subjects in each group registering 0, 1, 2, 3 or 4 positive responses at pre-course questionnaire administration (table twelve). The results reflected further the lack of differences between the three groups. It is notable that nine subjects in each group responded "yes" to two or more CAGE items.

Table Eleven Percentage of subjects in each group responding "Yes" to questionnaire item No.s 19-22 at pre, post and follow-up questionnaire administrations (items from Cage quest.).

<u>Item No.</u>	<u>Group</u>	<u>Pre</u>	<u>Post</u>	<u>Follow-up</u>
19	Exptl 1	32.1	34.5	23.8
	Exptl 2	30.8	23.1	NA
	Control	39.3	33.3	NA
20	Exptl 1	35.7	27.6	33.3
	Exptl 2	26.9	23.1	NA
	Control	28.6	33.3	NA
21	Exptl 1	17.9	20.7	19.0
	Exptl 2	19.2	23.1	NA
	Control	17.9	19.0	NA
22	Exptl 1	28.6	41.4	42.9
	Exptl 2	30.8	19.2	NA
	Control	28.6	47.6	NA

Table Twelve Number of subjects responding "Yes" to the four items from the CAGE questionnaire (items 19-22) in each group at pre-course questionnaire administration.

<u>Group</u>	<u>No. of Positive Responses</u>				
	0	1	2	3	4
Experimental Group 1	11	7	4	3	2
Experimental Group 2	10	8	6	2	1
Control Group	6	11	6	3	0

DISCUSSION

Summary of findings

The change in both experimental group's level of alcohol-related knowledge was the strongest apparent effect of the programme. This was indicated by the significant improvement in the participant groups (experimental groups 1 and 2) measured knowledge between pre and post measures, and the retention of knowledge "learned" by experimental group one subjects in the follow-up study.

In contrast, there were no significant changes in the subjects measured attitudes or "skills" over the duration of the study. This finding is similar to those of previous studies which suggest that attitudes and behaviour are harder to change than levels of knowledge by educational techniques (Schlegel, 1977; Connor, 1981). Indeed, the lack of change at some levels of analysis seems to be reflective of the distance between the concepts of prevention and education (Engs, 1977; Einstein, 1977).

The lack of positive changes, and the relatively large increases in self-reported alcohol consumption in some groups in the present study is disconcerting. In the control group for example, self-reported alcohol consumption almost doubled over the duration of the study. As indicated in the results, this increase could be largely attributed to the self-reported consumption of four members of the control group prior to the administration of the second questionnaire. The self-reported levels of alcohol consumed by these four individuals, increased from an average of 305 mls/week to 981 mls/week. The latter figure is an extremely high level of self-reported alcohol consumption, in the top 6% of the population by New Zealand standards (Casswell, 1980).

Other differences and changes in self-reported alcohol consumption can also be readily interpreted. The three groups of subjects differed significantly in terms of self-reported consumption. Both participant groups (ie: experimental groups 1 and 2) reported less quantities of alcohol consumed than did control group subjects. This difference can be understood in terms of an "experimenter" or "course" effect. That is, the subjects were self-reporting less quantities because they were on a promotion course and were either less willing to acknowledge the consumption of alcohol in a questionnaire administered by an "Officer", and/or they actually drank less because of extra time pressure and fewer opportunities to drink. The evident rise in experimental group one's mean self-reported alcohol consumption and the drop in the number of non-drinkers at follow-up, supports the existence of this effect.

The self-reported alcohol consumption of the sample averaged over all measures was 201 mls/week. This would place the whole group in the top 35% of the New Zealand population on the basis of statistics published by Casswell (1980). This finding should be considered to be a conservative estimate. Gordon (undated) reported in a New Zealand study that "all surveys under-report 'real' consumption" (pp 1). Additionally, the "experimenter" effect discussed above, seems to have had the effect of artificially lowering self-reported levels of alcohol consumption in two of the three subject groups. It is likely, therefore, that the sample as a whole would potentially be placed in a higher percentage of the New Zealand population in terms of self-reported alcohol consumption, than indicated.

Research conducted by Mayfield et al (1974) suggests that items from the CAGE questionnaire can be used for the identification of individuals with an alcohol-related problem. Using Mayfield et al's (1974) criterion of a two item positive response as an indication, 33% of the subjects in the study could be detected as having an alcohol-related problem.

Utilizing a three item positive response criterion, this percentage drops to 13% of the sample. Related to these findings is the result that 10% of the sample admitted that they had experienced a drinking problem. Analysis of these findings and Mayfield et al's (1974) work, suggests that a true figure of the predominance of drinking problems in the sample would be between 13 and 33 percent.

The self-reported alcohol consumption and the CAGE responses, indicate, as theorized previously, that the sample could be considered to be "high risk" in terms of potential alcohol-related problems. The findings give little support to Casswell and Gordon's (1983) findings that New Zealand Armed Forces personnel are "normal" drinkers, and support the generality of the large body of overseas findings regarding problem drinking in the military, to the New Zealand context (Cosper and Hughes, 1982; Mayer, 1983).

A concern of the present study was to improve the participants (experimental groups 1 and 2) ability to recognize the characteristics of problem drinking. Change in this area was assessed in the subjects responses to item number 17 in the questionnaire, which indicated that only a minority of the subjects believed that they could accurately recognize an alcoholic or problem drinker. Furthermore, the results indicated that this figure did not change significantly over the duration of the study. These findings indicate that, in spite of the evident improvement in the participants alcohol-related knowledge, they were no more confident about the characteristics of problem drinking after the course completion than they were before the course started.

Also of interest in the findings of the present study was the lack of any differences between the two courses of instruction in terms of participant responses. A comparison of course content suggests that the discussion group and question-answer instructional methods were instrumental in changing levels of knowledge. If this is the case, then it is reflective of previous findings in the field of alcohol education (Zimering, 1974; Schlegel, 1977; Rozelle, 1980).

In summary, the predictions made by the hypotheses in the introduction received only partial support by the results. Experimental hypotheses regarding alcohol-related knowledge were supported by the evidence of a significant improvement in the levels of knowledge measured in the participant groups (experimental group 1 and 2). Experimental hypotheses regarding participant reaction were also supported by the results. The lack of positive change in any measures taken of attitudes, "skills" or behaviour, supports null hypotheses concerning change in these factors. There was a significant rise in the control group's self-reported alcohol consumption between pre and post measures, which could be attributed to high levels of consumption reported by four members of the group.

On the basis of self-reported alcohol consumption and CAGE responses, the sample as a whole was confirmed to be "high risk" in terms of potential alcohol-related problems as predicted by one experimental hypothesis. Overall the sample was placed in the top 35% of the New Zealand population with regards self-reported alcohol consumption, and it was estimated that between 13 and 33 percent of the sample could be identified as having an alcohol-related problem. An additional finding indicating the absence of any differences between the two experimental groups in terms of questionnaire responses, supports the predictions of one other null hypothesis presented in the introduction.

Implications and problems

In many respects, the results of the study can be seen to be reflective of the problems faced by the evaluative and preventative fields (Engs, 1977; Glatt, 1977; Cowen, 1978; Morell, 1982; Cairo, 1983). The partially supportive findings indicates both the difficulty of generalizing change across different behavioural levels of analysis (Hamblin, 1974; Warr et al, 1976), and the disparity between the concepts and processes of education and prevention. Despite the result that the participants alcohol-related knowledge increased as a function of the programme and that the course could be considered educationally "successful", the goals of prevention in behavioural and attitudinal terms remained unaffected.

The lack of change in attitudes and behaviour measured, together with an evident improvement in knowledge is similar to previous findings in the field (Engs, 1977; Pipher and Rivers, 1982; Casswell, Mortimer and Gilroy, 1982). It also may suggest a reason for the exclusion of behavioural data in other studies (eg: Williams et al, 1974; Brown, 1979; Rozelle, 1980; Connor, 1981). Especially pertinent to the present findings is Casswell, Mortimer and Gilroy's (1982) findings of no behavioural change in a New Zealand educational setting, and the reported problems of utilizing a quasi-experimental design.

As discussed previously, problems are rife in the general field of evaluation (Cowen, 1978; Mahoney, 1978; Morell, 1982). In the present study methodological and political problems were encountered, as were criterion-related problems. Many of the problems stemmed from a restricted range of options and choices, with respect to subjects, time, and facilities available. These included the inability to have measured, or obtained other groups of subjects, or to have obtained further measures of the groups involved. There was little flexibility in the amount of time allocated to the programme, and problems related to questionnaire validation were encountered.

Although some confidence that the questionnaire actually measured what it claimed to on the basis of previous work existed, objective validation information was limited and generally inadequate.

The potential effects that these problems had on the study as a whole, are fairly clear. The present study employed a three-group repeated measures pre, post design with one follow-up measure being taken. Ideally, the study would have comprized four subject groups, two experimental and two control, with repeated measures being taken for all groups at pre, post, and follow-up stages. A greater range and depth of information would have been available as a consequence of these changes, from a statistically stronger research design.

The lack of information related to the validity of the questionnaire has broader implications for the results presented. More specifically, it means that a degree of suspicion and doubt must be addressed to the accuracy and meaning of questionnaire responses presented in the results. A more adequate validation or pilot study would have overcome these shortcomings which unfortunately was not possible in the methodological and political context of the present study. Perhaps future resarch could consider the results presented as part of a pilot study.

Conclusion

Overall, the results of the present study indicate that the two alcohol education courses were only partially effective in terms of change measured in subject response. Although a significant improvement in alcohol-related knowledge as a result of the programme was evident, no positive changes in attitudes, "skills", or behaviour were found. These findings have been seen to be similar to those of previous studies and in many respects reflect the problems of evaluation, education and prevention. Whether the findings were due to the lack of any strong relationship between alcohol education and the prevention of alcohol-related problems, or in part to problems in measurement, is not clear.

A clear finding from the study relates to the "nature" of the sample. It was found that the subjects (New Zealand Army personnel) self-reported substantially higher levels of alcohol consumption than evident in the New Zealand population. It was also found that between 13 and 33 percent of the sample could be identified as having drinking-related problems. These findings point to the "high risk" nature of the sample in terms of potential alcohol-related problems and are supportive of past research on problem drinking in the military.

Perhaps it is true of alcohol education programmes such as the two presented, that because of the over-riding influence of social and other "external" factors, they have little effect on actual drinking behaviours in "high risk" settings. If this is the case then surely we should consider Engs (1977) recommendation "that if a program just indicated an increase in knowledge but no change in behaviour that the presenting group discuss its continuation" (pp 43). Other available preventative actions which address the critical issue of "attribution of cause" (Kessler and Albee, 1975, pp 569) could then become the focus of attention.

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SURVEY (DRAFT)

The purpose of this survey is to assess the effectiveness of alcohol education on the Junior NCO's course at 2 RTW. No identifying information is required and the information given is strictly confidential to the purposes of the study.

Instructions:

Please complete the survey by circling or filling in the appropriate answers.

1. More than 10% of NZrs can be classified as alcoholics or problem drinkers.

TRUE / FALSE

2. Alcohol related accidents are estimated to cost NZ industry more than \$100 million per year.

TRUE / FALSE

3. The medical model of alcoholism views drinking as learned behaviour.

TRUE / FALSE

4. The services accept no responsibility for the treatment of alcoholic servicemen.

TRUE / FALSE.

5. Alcohol tends to pep a person up.

TRUE / FALSE

6. Everyones body reacts the same way to the same amount of alcohol.

TRUE / FALSE

7. You can sober up quickly by dousing your head with water and drinking black coffee.

TRUE / FALSE

8. In the body, alcohol is burned up as food is.

TRUE / FALSE

9. Problem drinkers often drink to escape problems.

TRUE / FALSE

10. Drunkenness and alcoholism are the same thing.

TRUE / FALSE

11. Guidelines exist for sensible drinking.

TRUE / FALSE

12. Alcoholics are typically down and out "skid row" types.

TRUE / FALSE

13. The ability to drink a large quantity of alcohol without showing any affect is a sign of physical fitness and health.

TRUE / FALSE

14. The single best way to assess problem drinking is by measuring how much someone drinks.

TRUE / FALSE

15. Abstinence (non-drinking) is the only cure for an alcoholic.

TRUE / FALSE

16. Alcoholism can often be seen to be a cry for help.

TRUE / FALSE

17. There are certain symptoms to warn people that their drinking may lead to alcoholism.

TRUE / FALSE

18. At present, we worry too much about alcohol abuse in the Armed Services.

AGREE / DISAGREE / NOT SURE

19. Most people in NZ drink because there is nothing else to do with their time.

AGREE / DISAGREE / NOT SURE

20. Alcoholics cannot help being alcoholics, its not their fault.

AGREE / DISAGREE / NOT SURE

21. We would have fewer problems with heavy drinkers if we had more sensible laws about drinking.

AGREE / DISAGREE / NOT SURE

22. Being drunk is good fun.

AGREE / DISAGREE / NOT SURE

23. Do you think that alcohol could damage your health?

YES / NO / NOT SURE

24. Does social pressure ever influence your drinking?

YES / NO / NOT SURE

25. Do you feel that you are an normal average drinker?

YES / NO / NOT SURE

1. Approximately what percentage of New Zealanders are estimated to have an alcohol problem?
(Tick one)
- a. 0 - 4%
 - b. 5 - 9%
 - c. 10 - 14%
 - d. 15 - 20%
2. Tick those of the following illnesses that can be caused by alcohol abuse?
- Appendicitis
 - Hepatitis
 - Cirrhosis of the liver
 - Muscular dystrophy
 - Gastritis
 - Boils
 - Emphysema
 - Measles
 - Peptic Ulcers
 - Pancreatitis
3. How is most alcohol disposed by the body?
(Tick one)
- a. Through urine.
 - b. Breath and perspiration.
 - c. By the liver.
 - d. By the kidneys.
 - e. Other.
4. How can you sober up quickly? (Fill in)

5. Tick those of the following that are indications of an alcohol problem.
- Over-active social life.
 - Sleep disturbances.
 - Boastful behaviour.
 - Depression.
 - Nervousness.
 - Drunk - Driving convictions.
 - Drinking during the day.
 - Disturbed family life.
 - Drinking solidly for 3 days a month.
 - Poor hearing.
 - Tiredness.
6. Where does the majority of drinking in New Zealand take place? (Tick one)
- a. In the pub.
 - b. At social functions.
 - c. In the home.
 - d. Elsewhere.
7. Is alcohol: (Tick one)
- a. A stimulant.
 - b. A depressant.
 - c. An opiate.
 - d. A placebo.
 - e. None of the above.
8. State some of the alternatives to drinking alcohol. (Fill in)

9. People drink alcohol because of: (Tick one)
- a. Physical needs.
 - b. Sensory needs.
 - c. Emotional needs.
 - d. All of the above.
 - e. None of the above.
10. What part of society does the typical alcoholic come from? (Fill in)
11. Tick those of the following that are guidelines for controlled or moderate drinking.
- Do not drink then sleep.
 - Do not drink alone.
 - Limit drinking to 2 drinks an hour.
 - Avoid pubs.
 - Do not mix drinks.
 - Put glass down between drinks and take small sips.
 - Take at least 20 minutes to finish a drink.
 - Drink at home.
 - Eat something when you drink.
 - Do not smoke and drink.
12. At present, we worry too much about alcohol abuse in the Armed Services. (Circle one)
- STRONGLY AGREE/AGREE/NOT SURE/DISAGREE/STRONGLY
DISAGREE
13. Most people in New Zealand drink because there is nothing else to do with their time (Circle one)
- STRONGLY AGREE/AGREE/NOT SURE/DISAGREE/STRONGLY
DISAGREE

14. Alcoholics cannot help being alcoholics, its not their fault. (Circle one)

STRONGLY AGREE/AGREE/NOT SURE/DISAGREE/STRONGLY
DISAGREE

15. We would have fewer problems with heavy drinkers if we had more sensible laws about drinking. (Circle one)

STRONGLY AGREE/AGREE/NOT SURE/DISAGREE/STRONGLY
DISAGREE

16. Does social pressure ever influence your drinking these days? (Circle one)

YES/NO

17. Do you think that you could accurately recognize an alcoholic or problem drinker? (Circle one)

YES/NO/NOT SURE

18. Do you ever try to limit your drinking to certain places or to certain times of the day? (Circle one)

YES/NO/NOT SURE/NA

19. Have you ever felt that you should cut down on your drinking? (Circle one)

YES/NO

20. Have people ever annoyed you by criticising your drinking? (Circle one)

YES/NO

21. Have you ever felt bad or guilty about your drinking?

YES/NO

22. Have you ever had a drink first thing in the morning to steady your nerves, or getrid of a hangover (eye opener)? (Circle one)

YES/NO

23. How many friends, relatives or members of your unit would you consider to have an alcohol problem? (fill in)

24. How many of those have been treated? (fill in)

25. Were you involved? (Circle one)

YES/NO

26. How much alcohol did you consume in the last week? Please fill in indicating number and size of drinks consumed, ie.

3 jugs

2 large cans

4 nips Whiskey for bar poured spirits

or 4 home nips for home or party poured spirits.

	<u>Day</u> (<u>Mon, Tue</u> <u>Etc.</u>)	<u>Beer</u>	<u>Wine</u>	<u>Spirits</u>	<u>Fortified</u> <u>Wines</u>
Yesterday					
2 days ago					
3 days ago					
4 days ago					
5 days ago					
6 days ago					
7 days ago					

27. Would this be a normal week's consumption? (Circle one)

YES/USUALLY MORE/USUALLY LESS

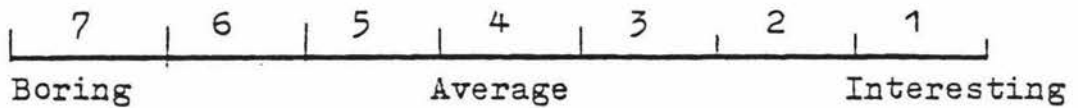
28. Has the way you drink changed over the last few weeks? (Circle one)

YES/NO/NOT SURE

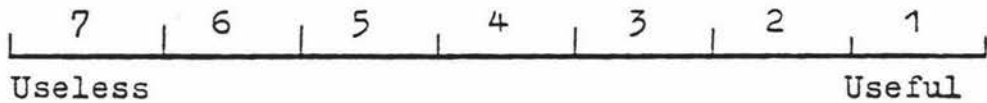
29. Have you ever had a drinking problem? (Circle one)

YES/NO/NOT SURE

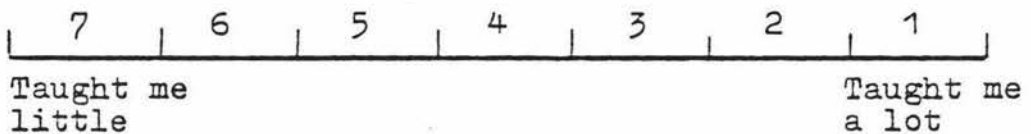
30. How interesting did you think the section of the course related to alcohol was? (Circle one).



31. How relevant to your job do you think the section of the course related to alcohol is? (Circle one).



32. How much new information did you think was given on the alcohol programme? (Circle one).



Thank you for your co-operation.

NAME: _____

JUNIOR NCOS COURSEAlcohol Education Class Exercise

Over the following week you are required to observe and make notes on some topic areas related to alcohol use. These notes will be handed in and discussed during the next lesson (26 Oct).

1. Observe people's behaviour when they are drinking in a group. What social processes and pressures towards drinking are evident (if any)?

2. What main reasons for drinking do you notice during the period of observation?

3. Observe someone who you consider to have an alcohol problem (if possible). What do you notice about the following:

- a. their drinking behaviour? ie, how much, how often, who with;
- b. any physical problem? and
- c. any other factors or problems associated?

4. What remedial action could be taken to help a problem drinker in the situation observed?