A longitudinal study of behaviour-disordered adolescents and the effects on them of a wilderness-enhanced program

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NOTE

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Chapter 1

The Study, Its Importance and Evaluation

Adolescence is a time of change. For some, the changes are not made successfully and this can lead to behaviour problems, extremes of which can lead to juvenile delinquency. Juvenile delinquency is a real problem for schools and for society. Attempts to explain it have been made throughout this century. Many of the earlier theories were univariate and failed to address the whole phenomenon of delinquency. Univariate approaches to solving delinquency problems also met with limited success. Accepted theories nowadays are multivariate and multivariate programs have also developed to deal with juvenile delinquency. A particular multivariate program that appears to be having success is a wilderness-enhanced program. Short-term evaluation and anecdotal reports appear optimistic but hard evidence, especially long-term evidence, is not plentiful.

This chapter gives a short summary of the present study on four wilderness-enhanced programs in New South Wales. The rarity of such long-term research into wilderness and wilderness-enhanced programs and the problems of evaluation are addressed. The questions to be answered by the study are also outlined.

1.1 Introduction

Adolescence has long been viewed as a time of change, when a child undergoes physical and psychological changes to become an adult. Some adolescents experience difficulties during this change period and this can find expression as behaviour problems. If the behaviour problems are severe, the adolescent can be labelled a juvenile delinquent. There is a great need for intervention with these juvenile delinquents: to assist them get back on track, that is, to move them back into the normative range of adolescent behaviour. Juvenile delinquents cost society a great amount of money each year, but the social costs inherent in it are even greater. Both in schools and in communities, carers are looking for effective ways of intervening with young delinquents and turning their lives around so that they can lead positive and fulfilling lives as adults, instead of being a burden on their communities.
Juvenile delinquency is a complex phenomenon. There are many characteristics of adolescence that may predispose this problem behaviour. In fact, the problem behaviour may already have been present from early childhood, but parents and teachers are usually able to contain this behaviour until the time of adolescence (Wragg 1995). Adolescence seems to act as a catalyst for some young people, when they find the changes they are experiencing and the demands placed on them too stressful. These adolescents respond by acting out and can become quite unmanageable, thus attracting the labels of 'behaviour disordered' and 'juvenile delinquent'.

Many of the earlier theories put forward to explain juvenile delinquency were univariate, that is, they identified only one variable as a causitive factor (Shaw & McKay, 1931; Cohen, 1956; Merton, 1966; Sutherland, 1966). One such factor, widely reported on, was the peer group. Adolescents undertake many tasks in their growth towards adulthood and one such task is the establishment of their identity. The search for identity usually involves the loosening of family ties and the strengthening of the peer group. The peer group does appear to be a major influence on the adolescent and on the development of juvenile delinquency, however it is not the only one. Some of the early theories of juvenile delinquency, viz Delinquent Subculture theory, Cultural Transmission theory and Differential Association theory, all indicated that the association with deviant peers was a major factor in an adolescent developing deviant behaviour.

However, it is now realised that juvenile delinquency is a complex issue and many other factors are involved in its development. The influence of the family is very important, through conflict and aggression in the home, parenting style, family break-up and many other factors. The adolescent's personality is another important factor. Such traits as a negative attitude to school and authority, a low commitment to goals, no acceptance of responsibility and the rights of others can all be indicators of a predisposition to delinquency. The overt behaviour of the adolescent will also have a bearing on the success they can experience both at school and in their community.

Because juvenile delinquency is such a complex problem, with many different variables being important in its development, it is unlikely that simplistic, univariate theories, like those mentioned
above, could adequately explain it. The earlier theories thus fell short. Most of them tried to explain delinquency in terms of only one or two variables and, consequently, did not give the full picture. The more recent, multivariate approach of the psychosocial models appears to be a much better way of examining the phenomenon. Jessor and Jessor’s Problem Behaviour Theory Model (1977) is one such model and it contains three sets of variables which together influence a state called problem behaviour proneness. Because this model is widely accepted as one giving a clearer picture of juvenile delinquency, it has been adopted to examine the programs in this study.

Society has long been in a quandary over the best approach towards juvenile delinquency. Incarceration does not appear to be the answer. Diversion programs appear to be a better alternative. Because delinquency is complex, it is reasonable to expect that many different programs would be needed to meet the differing needs of individual offenders. However, many of the programs in existence are univariate and so fall short of addressing many of the issues inherent in a delinquency problem. Many programs have also been found to be atheoretical and simplistic (Wragg, 1996). A complex problem like juvenile delinquency would appear to need a complex, multivariate intervention program to engender lasting success.

For both at-risk and juvenile delinquents, one method of intervention that shows promise of success is a wilderness-enhanced, multivariate intervention program. These generally have a wilderness experience as a catalyst followed by a lengthy intervention program involving cognitive restructuring and behaviour modification. These types of programs are already reporting anecdotal and short-term success in terms of changing attitudes and behaviours. Whereas a wilderness experience alone (as a univariate approach) appears insufficient to engender lasting change, as part of an on-going wilderness-enhanced, multivariate program it may be a very valuable tool in reducing the incidence of juvenile delinquency.

Wilderness-based programs for Australian youth-at-risk and juvenile delinquents, such as those that were included in this study, have received a great deal of anecdotal support (Mason & Wilson, 1988, Cianchi, 1991). However, attempts to evaluate the impact of such programs have been very limited.
Rudzats (1991) carried out a short-term evaluation on the South Coast Wilderness Enhanced Program and the results were very encouraging. Feedback from parents and teachers, largely anecdotal, reported positive attitude change in 73% of participants and a significant drop in the number of school suspensions following participation in the program. However there was no control group and standardised measures were not used.

Unfortunately most studies of wilderness and wilderness-enhanced programs have similar shortcomings in design and longitudinal studies are rare. One such longitudinal study, however, was documented by Kelly (1974) who reported on a ten-year program, including a five-year follow-up on one group of delinquents. He found that the wilderness program sustained the boys in their community for a longer time than traditional treatment programs. However, the effect was eroded over time, probably due to negative environmental pressures causing a regression towards delinquent behaviour.

Many studies found support in the short-term for Kelly's earlier work. Winterdyk and Roesch (1982), Bauer (1982) and Kimball (1988), as well as others, all reported reduced recidivism rates in subjects who participated in some outdoor program. However all these evaluations were carried out within twelve months of the program. No long-term evaluation was done.

Many studies centred on the effect of a wilderness program on an adolescent's self-concept. It is generally accepted that wilderness therapy enhances the self-esteem (Clifford & Clifford, 1967, Marsh & Richards, 1985) and internal locus of control (Gaston, 1978, Wright, 1982, Callahan, 1995) of participants. Other studies reported increased levels of self-reliance and self-control and decreased levels of anxiety and aggression (Berman & Davis-Berman, 1989, Kaplin & Kaplin, 1989, Sakof, 1992). Unfortunately, as shown above, there have been so many foci in the evaluations that have been carried out that it is extremely difficult to draw any general conclusions about their effects on juvenile delinquency as a whole.
Some of the research on juvenile delinquents after the completion of a wilderness program reported a fading effect, such as Kelly found. That is, the impact of the program tended to diminish over time (Kelly & Baer, 1968, Birkenmayer & Polonoski, 1973, Winterdyk & Roesch, 1982). However the retention and internalisation of important values learned, and attitude and behaviour changes made, were thought to be enhanced by a lengthy after-care period of regular contact and counselling. This has yet to be studied conclusively. Reid and Matthews (1980) saw this when they reported the wilderness experience was simply the catalyst that can begin the change process.

More recently, Davis-Berman and Berman (1994) in a two-year study, found interesting results. They tested an experimental group pre and post wilderness and found positive changes in self-esteem and internal locus of control after the wilderness experience. They then reported that measurements taken four months after wilderness were similar to pre-test levels, whereas tests at twelve months and two years afterwards were closer to the significantly higher post-wilderness levels. In other words, there appeared to be an initial improvement in self-esteem and locus of control after the wilderness experience, then a regression, then a second improvement over the next eighteen months. However no control group was used so it is difficult to know whether the changes were significant.

1.2 The Purpose of the Study

The purpose of this study was to examine four programs with a wilderness component and a multivariate lengthy follow-up intervention period to ascertain the effectiveness of them in arresting problem behaviour and juvenile delinquency. These four wilderness-enhanced programs are currently running in New South Wales (NSW). They are all based on the theoretical model of the South Coast Wilderness Enhanced Program that operates out of Wollongong, NSW. It is believed that these programs are succeeding in helping adolescents with behaviour problems by challenging their attitudes and behaviours. In order to verify the existing anecdotal and short-term evidence, it was necessary to consider how best to evaluate these programs. This study used a longitudinal
research design with pre and post tests. Both control and reference groups were used, the latter to assess any age-related changes. The control group consisted of adolescents exhibiting problem behaviour, but not involved in any intervention outside of their normal high schools. The reference group consisted of normal stream adolescents, none of whom exhibited problem behaviour. This was to ascertain normal adolescent behaviour and the effects of maturation on this behaviour. The participants were followed for two years and were tested a total of five times. The testing was done before and after the initial wilderness experience, then six, twelve and twenty-one months later.

Three standardised tests were used. These were a Self-Concept Scale (Piers, 1984), A Locus of Control Scale (Nowicki & Strickland, 1973) and an Attitude Scale (Shaw & Wright, 1967). Also administered was a questionnaire on attitude and behaviour developed specifically for the study. In this purpose-constructed questionnaire, the adolescents were assessed on their attitudes and behaviours using a self-report that was designed to give information on thirty-one variables deemed to be indicators of problem behaviour leading to juvenile delinquency. These variables were taken from Jessor and Jessor’s Problem Behaviour Theory model (1977).

Therefore the purpose of the study was twofold. It was firstly to contribute to the knowledge base of adolescence in Australia, both in normal stream subjects and in those exhibiting problem behaviour. Longitudinal studies are rare and, in Australia, almost non-existent. Secondly, it was to examine the impact of a wilderness-enhanced program on the attitudes and behaviours of adolescents deemed by their schools and others to be exhibiting problem behaviour.

The need for such a study is obvious. Most schools in Australia have difficulty in handling students with problem behaviour and there is evidence to suggest that the number of these students is increasing. If the wilderness-enhanced program examined in this study can be shown to be effective in bringing about long-term change in these students, then there will be a strong argument to support future funding of this type of program. It has already been shown to be a very cost-effective way of addressing the problem (Handley 1990a). If this type of program were to be implemented widely, educators prophesise that the savings on society would be considerable.
1.3 The Significance of the Study

The significance of this study was fivefold. Firstly, it evaluated programs which were multivariate and long-term, that is, they had a lengthy follow-up period after the initial wilderness experience. It has been mooted that these programs are more likely to engender success but this had not yet been rigorously tested. Secondly, the study was longitudinal. Longitudinal studies are difficult and, therefore, rare, but essential in finding out more about juvenile delinquency. Thirdly, it examined many variables (thirty-one) related to juvenile delinquency. Fourthly, it attempted to avoid design flaws of previous studies. And lastly, it provided data hitherto unavailable in an Australian setting.

Overall, in the studies to date, there appears to be a lack of empirical rigour in the research. Most studies have reported either no follow-up testing or no comparison groups used. Also the selection of dependent variables is so diverse as to make cross-study comparisons difficult if not impossible. As Polk (1990) said "Without a commitment to systematic evaluation, we are unable to provide that base of knowledge which will permit us to build a growing repertory of program components which work, and to discard those which are ineffective" (p109).

The study used a longitudinal tracking method, which provided a data base to fulfil two objectives. Firstly, it provided valuable information on the developmental nature of delinquency in adolescence, both in normal-stream subjects and those exhibiting problem behaviour, which can assist in future research and may also provide the basis from which future programs can be developed. Secondly, it helped explain programs' impact on at-risk adolescents and juvenile delinquents and ascertained the degree of success they were having. These programs were multivariate and therefore would appear more likely to be successful, but this supposition needed rigorous testing. This study examined thirty-one variables deemed important in the development of juvenile delinquency (Jessor & Jessor, 1977). Because it examined such a wide range of factors in juvenile delinquency, it hoped to provide sound overall evidence as to whether the programs did engender lasting changes in behaviour.
A longitudinal study of participants appears to be an essential part of assessing the credibility of any program. This allows not only an assessment of attitude and behaviour changes between the beginning and end of a program, but also whether these differences persist over time. Winterdyk and Griffiths (1984) saw the need for such study. Likewise, Marsh, Richards and Barnes (1986) agreed, when they stated that short-term effects, even if they were not maintained, were valid, but if they were maintained then they would be much more important. Roberts (1988) also stated that it was critical that longitudinal research be conducted. Terenzini (1980), Sveen (1990) and Craig (1990) concurred with this sentiment. Hogan (1990) was also critical of the fact that most research lacked long-term follow-up study.

There are a number of reasons for this, probably the greatest of which is the considerable difficulty in tracking behaviour-disordered adolescents and juvenile delinquents over a substantial time period. They tend, as a whole, to drop out of school and frequently move their place of residence, often with no forwarding address. Other reasons longitudinal research is not forthcoming include the cost of the research and the lengthy commitment in time by the researcher.

However, the need for meaningful, long-term evaluation in Australia is not an option, it is a necessity. A wilderness component within a larger therapeutic program may show greater promise as a method of working with juvenile delinquents to promote positive attitude and behaviour change, but at present there is a lack of strong evidence to support this. There are many programs in operation but very little evaluation. Evaluation needs to be adequately developed and as rigorous as possible to gain meaningful results. It is therefore the focus of this study to try to provide a stronger, rigorous and more methodologically sound evaluation of a substantive intervention program containing a wilderness component. There is a lack of substantial evidence as to what actual long-lasting changes are most likely to occur with these youths following completion of these programs and which particular elements are considered most crucial in promoting observable attitude and behaviour changes (Sveen & Denholm, 1991).
In support of this research project's direction, Sveen (1993) stated that the focus of research in Australia must include the maturation processes and the growing out of crime rather than just before and after surveys, as well as actual attitude and behaviour change measures used as success indicators rather than simply the over-used indicator of recidivism, which can inflict a bias in the results through an incomplete or distorted representation. This study focussed on the measures Sveen suggested as well as other measures generally deemed relevant to deviant adolescent behaviour.

1.4 Research Questions

The study used a longitudinal tracking method, which provided a data base to provide information on the developmental nature of delinquency in adolescence, which can assist in future research and may also provide the basis from which future programs can be developed. It also helped explain current programs' impact on at-risk adolescents and juvenile delinquents and ascertain the degree of success they are having.

The questions addressed in this study were as follows:

1. Did the wilderness-enhanced program of two years duration cause any changes in maladaptive behaviour?

2. Did the wilderness experience of ten days duration cause any changes in maladaptive behaviour?

3. If there were positive changes in the treatment group attributable to the wilderness-enhanced program, were these changes of sufficient magnitude to bring this group within the normative adolescent range of attitudes and behaviours?
The evaluation of the programs in this study used Jessor and Jessor's Problem Behaviour Proneness Model to generate the kinds of variables that are considered relevant as risk factors or predictors and which could be expected to show change. On the basis that the predictor variables of problem behaviour proneness found in USA (United States of America) studies were similar in Australian youth, it should be possible to distinguish between maladaptive and adaptive behaviour, that is, between behaviour disordered/delinquent adolescents and the normal adolescent population of Australia. Also, this study was designed to ascertain whether the already existing anecdotal and short-term results that have been reported are valid.

No such study has been carried out before in Australia. Despite the limitations of attrition inherent in a longitudinal design, the relatively small sample size and the inability to match perfectly the control group with the treatment group, the study will hopefully prove to be a significant one and one that will help give direction to future juvenile justice and education policies.