Evaluating the Effectiveness of SADD (Students Against Driving Drunk)

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ABSTRACT

This research arose from a request from the New Zealand Students Against Driving Drunk (SADD) Trust. The Trust needed to have the activities of SADD evaluated for effectiveness in order to satisfy the requirements of their sponsors. SADD claims that its mission is to reduce harm amongst students by promoting alternatives to drinking and driving through positive peer influences. Drinking and driving is a risky behaviour. Substantial work has been done in the area of risk taking and driving and various methods have been used to modify adolescent risk taking behaviours. The researcher had a particular interest in the work that had been done in this regard on personality development through education. For these reasons the scope of the evaluation was expanded to include risk taking, peer influences and personality development.

Three methods of data gathering were used. These included administering the Washington University Sentence Completion Test (WUSCT) of ego development on two occasions a year apart to the same students. Secondly, face to face interviews were conducted with a sample of students throughout the year 2000 and finally a written questionnaire was sent to those schools with the most active SADD groups. These three methods enabled the effectiveness of SADD to be assessed from a number of different perspectives.

The results obtained identified the strengths of SADD and enabled suggestions to be made for improvement in some areas. The research also identified areas in which additional research into personality development and its link with behaviour would be of value.

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CHAPTER 1

BACKGROUND TO THE STUDY

Introduction

This research project aims to conduct an extensive evaluation of the organisation Students Against Driving Drunk (SADD). Robert Anastas formed SADD in the United States in 1981 (Laurenson, 1992) as a personal response to carnage on the roads. The SADD message and organisation spread to New Zealand in 1985. In 1990 the first national SADD Coordinator was appointed but it was not until 1992 that the SADD Trust was formed. The Trust was set up and administered by the New Zealand Automobile Association and consisted of representatives from a number of Government Departments and two elected youth representatives (SADD Strategic Plan, 1998-2001). According to the strategic plan of the organisation the function of the Trust was to find and manage funding, to develop policy, to provide training opportunities for students and to empower young people to establish and maintain SADD teams by providing support and advice. This latter function was managed by employing, training and supervising the national and regional coordinators. By 1999 the organisation had grown to the extent that, in addition to the national coordinator, three regional coordinators were employed. The coordinators were to provide peer training of students in order to promote positive alternatives to drink driving.

In 1999 there was some pressure from sponsors for the SADD organisation to demonstrate effectiveness in terms of reduced alcohol related road trauma if it were to receive further financial support. Funding bodies had noted that the organisation had not been evaluated since 1994 and several recommendations for improving the efficacy of SADD had been made in that evaluation. The question being asked was "Had those recommendations been acted upon?" A new evaluation was requested by the SADD Trust that would answer the question and explore the organisation's effectiveness in achieving its mission.

SADD's mission is to "reduce harm amongst students by promoting alternatives to drinking and driving through positive peer influences" (SADD, Strategic Plan 1998-2001, p.1). One of the methods used to bring this about is to debate between members healthy alternatives to driving after drinking. Although youth road crashes had declined since the advent of SADD (and the introduction of the graduated driver licensing with its restrictions on night driving, alcohol consumption and the carrying of passengers),

there was still a considerable number of alcohol related youth road crashes as Table 1 illustrates. Although deaths and injuries reduced in real terms during this period, for this age group, they also reduced for all drivers, so the percentage of young drivers who incurred injuries in alcohol related crashes did not substantially alter. In the same period overall youth involvement in road crashes declined. The car crash fatality and hospital admission rate per 10,000 licensed drivers for 15-19 year old drivers decreased from approximately 37 in 1985 to 25 in 1990 and 20 in 1996 (Begg, Stephenson, Alsop & Langley, 2001, p.293). This still left New Zealand's performance as one of the worst in the OECD behind Portugal and Luxembourg (Hewitt, N., Elliott, B. & Shanahan, P., 1995).

Table 1

Alcohol affected drivers aged 15-19 in fatal and serious crashes 1990-99

Year	**15-19 Deaths**	**All Deaths**	**15-19 % Involvement**	**15-19 Injuries**	**All Injuries**	**15-19 % Involvement**
1990	50	281	17.79%	533	2785	19.14%
1991	39	240	16.25%	458	2493	18.37%
1992	42	236	17.79%	430	2331	18.44%
1993	35	196	17.86%	357	1938	18.42%
1994	22	195	11.28%	378	2086	18.12%
1995	28	166	16.87%	398	2149	18.52%
1996	26	132	19.70%	288	1678	17.16%
1997	15	135	11.11%	254	1411	18.00%
1998	16	122	13.11%	240	1367	17.55%
1999	14	103	13.59%	214	1080	19.81%

Note. Data supplied by Land Transport Safety Authority (Personal communication 2001)

Focus of this Study

This research arises from the researcher's professional interest and involvement in road safety interventions. Previous involvement on the SADD Trust had stimulated a desire to explore the effectiveness of SADD membership across a broad base. The

behaviour SADD aims to change, driving after drinking alcohol, is considered a risky behaviour. It will be relevant and of interest, therefore to explore possible links between risky behaviours and SADD membership. One of the questions yet to be answered in road safety research is how risky behaviour, particularly in adolescent males can be modified. In 1995, Elliott and Shanahan Research were contracted by the Land Transport Safety Authority of New Zealand to review literature regarding risk taking in young people aged 15-24 (Hewitt, et al, 1995). They were tasked with looking at the size and nature of the problem as it pertains to road safety in Australasia and to note any interventions that appeared to offer a way to modify risky behaviours. Among its findings the study commented that "interpersonal factors including family and peer influences were noted as having a substantial impression on youth, especially their driving behaviours" (p.ii).

The idea of peer preference, rather than peer pressure, was found to be a new development in understanding the determinants of risk behaviours" (Hewitt et al, 1995, p.ii). In order to evaluate whether the SADD organisation had achieved its mission it would be necessary to look at how it used its role as a peer organisation to positively influence peer preference and to modify risky drink-driving behaviour. It could, of course, be argued that SADD's mission doesn't claim to modify behaviour, merely to provide information on alternatives to drink-driving, that if acted upon, would reduce harm. However, the organisation's claim of responsibility for some of the reduction in alcohol related crashes involving youth would make this line of argument difficult to sustain.

Earlier and contemporary research suggested that a link may exist between risk taking and personality development, particularly in the areas of decision making, impulse control, conscious preoccupations and metacognition. The researcher had an interest in the work of Kohlberg, particularly work that had been done in the area of moral education (Power, Higgins, & Kohlberg, 1989). This work (that will be discussed in greater detail in Chapter 2) claimed that it was possible to develop personality and raise the level of moral functioning of adolescents through education. This leads us to wonder whether there could be a link between high levels of moral functioning and low levels of risk taking.

SADD is a peer-led organisation that aims to modify drink-driving behaviour in high school students. It would be interesting therefore to explore what links exist, if any between SADD membership, personality development and risk taking. Exploring these

links would broaden the evaluation beyond what the SADD organisation needed for funding purposes but, on the other hand the study would be timely and useful in terms of the wider needs of road safety in New Zealand.

Given the desire to explore in greater depth the effectiveness of SADD across a broad spectrum we must determine how to proceed. The task here is to explore research literature relating to risk taking, personality development and peer education in order to come up with a set of research questions and a method for answering them that will throw some light on the nature of effectiveness and on how effective SADD is in both meeting its stated mission and on achieving a behaviour change that would reduce risky driving among a wide cross-section of young people. Is there any evidence that youth led organisations like SADD positively affect the behaviour of their peers? If so, how do they do that? Do youth led organisations influence the behaviour of a wide circle of at-risk adolescent males or is their effect limited to the inner circle, those who choose to belong. If the latter, in what way are they influenced? Do they choose not to exhibit risky behaviour because of the organisation's influence or do they choose to join because they already embrace the philosophy and behaviours espoused by SADD.

Another strand for the research to consider is the link between personality or level of moral functioning and behaviour. Is there any evidence that less risky behaviour is exhibited at higher levels of moral functioning and if so can education universally raise the levels of moral functioning and thereby reduce both risky behaviour and road trauma.

Pursuit of these issues would take a study far outside the boundaries of what the SADD Trust envisaged and requested in the form of an evaluation. It would, however, cover ground of such significance to the New Zealand road safety community that the diversion is worthwhile, for in addition to what else is learned it would certainly provide evidence of the effectiveness, or otherwise of SADD in attaining its mission.

CHAPTER 2

LITERATURE REVIEW

Introduction.

The task for this research was to evaluate the effectiveness of the organisation "Students Against Driving Drunk" (SADD). This is an organisation created by and for adolescents with the intention of changing what was perceived as risk taking behaviour with regard to drinking and driving. It was decided, therefore, to explore the relationship between membership of the organisation, risk taking and moral development. Consequently the focus in the literature review was to explore in greater depth literature on adolescent risk taking (particularly with regard to alcohol use), and the work in adolescent moral development of researchers such as Kohlberg, Gilligan and Loevinger.

In addition, research into the effectiveness of similar intervention programmes elsewhere was looked for. As a result of this examination of the literature, the key questions and most effective methodology for this New Zealand evaluation would be constructed. The traditional research question would be "Does the organisation lower road trauma?" It would, however, be almost impossible to determine any causative link between group membership and reduction in road crashes. It was hoped that within the literature justification would be found for an approach that would look at determining whether membership of SADD is likely to contribute to enhanced moral development and lower risk taking than is the norm in this age group.

Safety Culture

There is no standard definition of safety culture, although the UK Health and Safety Commission (1993) defined it in the following way:

> The safety culture of an organisation is the product of individual and group values, attitudes, competencies, and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation's health and safety programmes. Organisations with a positive safety culture are characterised by communications founded on mutual trust, by shared perceptions of the importance of safety, and by confidence in the efficacy of preventive measures (p.23)

The New Zealand National Road Safety Plan 1995 (Officials Committee on Road Safety, 1994) has three goals. One of those is to "foster and support the development of an improved safety culture which creates safer attitudes, skills and behaviour amongst road users" (p. 12). Although Safety Culture is not defined, as such, in the document it is stated that a "safety culture will be evident where high-risk behaviour, including drink driving and speeding, is socially unacceptable as a result of greater community awareness and education, peer group pressure and widespread implementation of measures aimed at deterring offenders" (p.9).

The term "safety culture" does not feature in the new Road Safety Strategy to 2010 (National Road Safety Committee, 2002) that will replace the National Road Safety Plan from its launch in March 2003, but it does form an integral part of the NZ Injury Prevention Strategy where one of the two goals is "to achieve a safety culture in New Zealand" (ACC, 2002 p.v). The injury prevention strategy will be the Government's umbrella document for all injury prevention activity into the 21st century so development of a safety culture remains an important focus in road safety.

If SADD members could be shown to be more safety conscious than is the norm for this age group, if they exhibit attitudes likely to be consistent with low levels of risk taking behaviour and if it could be shown that they were able to deter drink driving through the use of education and peer group pressure then the organisation could, in these terms be said to have a high level of safety culture. In order to determine whether this was the case it would be necessary to show that SADD students were more safety conscious than their peers and that membership had contributed to the development of this safety consciousness rather than the organisation merely attracting members who already held these views. In addition it would be possible to explore whether SADD students had lower levels of risk taking and higher levels of cognitive development, particularly with regard to decision making, impulse control, conscious preoccupations and metacognition than their peers.

Adolescent Risk Taking and Peer Influences

Adolescence is described in the Concise Oxford Dictionary as "between child and adult". This in-between period gives rise to many rites of passage to adulthood that are synonymous with adventure and risk. All life involves the taking of risks but risk

behaviours are more common in adolescence. In a review of risk taking behaviours among 15-24 year olds it was concluded (among other things) that:

- Risk taking is endemic, ubiquitous, inescapable, not always conscious and sometimes desirable;
- Risk taking, which is potentially physically harmful, is accentuated or more widespread in the 15-24 age group than in most other age groups;
- Risk taking by this age group focuses on the gains rather than the losses of engaging in the behaviour;
- The aim has to be to minimise the harm associated with inevitable risk taking;
- Harm minimisation can involve influencing young people directly and/or indirectly (via the supportive environments: social, physical, economical etc);
- Countermeasures/interventions aimed at reducing road user behaviours which are risky (potentially harmful) will be even more successful if they are accompanied by voluntary risk reduction;
- Road safety should take heed of the idea that peer preference (not peer pressure), which operates through a subtle group norming process, is a powerful influence on youthful behaviours. Thus, attacking social norms on what constitutes safe road behaviours will prove more beneficial in demonstrating to youth and their peers what behaviours are "safe" road behaviours. Eventually the normative road behaviours for young people will become "safe" behaviours, and "unsafe" or risky road behaviours will be in the minority; and
- Strategies aimed at high risk youthful road users need to be considered but not at the expense of population based approaches. Moreover, these approaches will possibly reflect a "flow over" effect from health promotion interventions targeting different issues (ie: family interventions, school-based programmes, etc). (Hewitt, Elliott & Shanahan, 1995, p.161)

It has been pointed out (Lightfoot, 1997) that risk involvement may have positive consequences for psychosocial development. Encouraging the taking of moderate academic risks, for example, can enhance learning (Pressley & McCormick, 1995). "Those sympathetic to this emerging point of view are making claims that pot

smoking, wild driving, early sexual intimacy, and so forth, have strategic roles in achieving social status, demonstrating autonomy, and hedging boredom and anxiety" (Lightfoot, 1997, p.20).

Unfortunately risk taking behaviours can produce undesirable consequences including injury and death. Young people, particularly males aged between 15-24 years comprise the second largest single group in death and injury hospitalisation figures across all injury domains after adults aged seventy-five and over. Young men had the highest rates for suicide and motor vehicle crashes while adults aged 75 and over mainly receive their injuries in falls (Accident Compensation Corporation, 2002, p.23). In New Zealand, young drivers, particularly young males, between sixteen and twenty years of age have the highest rates of, injury and death for crashes involving speeding, driving under the influence of alcohol and failing to give way (Land Transport Safety Authority, 2002, p.4). Young New Zealand men kill or injure themselves on the roads at twice the rate of their Australian counterparts and, until recent changes in the graduated driver licensing system, had the highest rate of road deaths among the 15-24 year age group (per capita) than all OECD counties other than Luxembourg and Portugal (Hewitt, Elliott & Shanahan, 1995, p.6).

The statistics in the NZ Injury Prevention Strategy (ACC, 2002) raise some questions. Is the crash rate of young people a direct result of risk taking behaviours? If so, why do young people take more risks (however that is defined) than older people? If not, what factors contribute to the higher crash statistics? The answer to the first question is a resounding yes. Irwin and Millstein (1986) found that:

> behaviours associated with the major mortalities and morbidities of adolescents share a common theme: risk taking. Young people with limited or no experience engage in potentially destructive behaviours with or without understanding the immediate or long-term consequences of their actions. Although some risk taking is necessary in the normal developmental process, too often the results of risk taking are disastrous (in Muuss, 1990, p.339).

A strong relationship has been assumed to exist between risk taking behaviours and peer influence. In 1978, Kandel (in Muuss, 1990) reported that the strongest indicator of illicit drug use and estrangement from parents was involvement in a drug-using peer group. She did recommend exercising caution, however, in assuming a causative link in any direction between drug taking, peer involvement and parental

estrangement. She further noted that with regard to alcohol, parent modelling might be more common than that of peers. Kandel stated that:

> both parents and peers can have strong influences on adolescents, the degree of influence depending on the arena of interest. Peer influences predominate on current lifestyles, while parental influences are especially strong with respect to basic values and future life goals and aspirations (in Muuss, 1990, p.168).

In a later work Coggans and McKellar (1994) challenged the idea of peer group pressure. They argue that peer pressure implies that adolescents engage in dangerous or risky behaviours because others coerce them to do so. Intervention programmes designed on this theory have aimed to help adolescents resist the urge to succumb to peer group pressure (eg: DARE, "Just Say No" to drugs). Newell, Wrighton and Barwick (1993) in their review of drug and alcohol education programmes found no evidence that this approach is effective. They reported that "almost all reviewers failed to be convinced that drug and alcohol programmes in schools could be proved to bring about positive behaviour or attitudinal change in relation to drug and alcohol use" (p.3). Those programmes specifically designed to reduce drug taking by helping students resist peer pressure:

> had no effect on early adolescent's use of alcohol, cigarettes or inhalants or on their intention to use these substances in the future. It did however have positive impacts on student's awareness of the costs of using both alcohol and cigarettes, their perceptions of the media portrayal of these substances, general attitudes towards drugs, perceived peer attitudes towards drug use and assertiveness. (Newell, Wrighton & Barwick, 1993, p.24)

Coggans and McKellar (1994) in their attempt to explain the link between drug use and adolescents found no evidence of "peer pressure" but found that individuals who share similar attitudes would gravitate together, as opposed to someone's attitudes being shaped by their friends. They redefine peer pressure as peer preference and suggest that drug education programmes should move to assess the influences on children before they form groups of like-minded peers. Thus individual and motivational factors are important in pre-peer years with socialisation considered to lay the foundations of delinquency, deviance and non-conformist behaviour. While they

suggest that life skills approaches to drug education have some potential, the impact is limited because the underlying assumption of the "peer pressure" concept is incorrect.

Arnett (1992) also considers peer influences on adolescent risk behaviours. He suggests that sensation seeking may play a role in that adolescents who share high levels of sensation seeking may seek each other out. Further, the adolescent with the highest sensation seeking needs will emerge as the peer group leader with each member adopting risk taking and reckless behaviours as a means of both conforming to the group's norms and fulfilling his or her own sensation seeking needs. Arnett (1992) therefore suggests that the adolescent's predisposition may act as a precursor to group membership and peer influence.

Using a narrative perspective on risk taking, Lightfoot (1997) interviewed thirty adolescents aged from 16 to 18 years and found that shared risks (such as accepting or rejecting marijuana or "wagging" school) created group culture and interpersonal histories. Lightfoot had commented that if risk-taking began as play and drama, it ends as narrative and story. "Like the war stories analysed by anthropologists, adolescents' risks can be seen to promote a sense of shared history, and a means by which to mediate ingroup-outgroup relations" (p.3). She also suggested a need to reconceptualise peer pressure. "It is less an externally located push to conform, than a socially constructed desire to participate in culture-created experiences" (p.240).

Similarly, Keefe (1994) found that it is group norms which operate as pressure on the individual, not direct pressure of one peer to another. In contrast to conventional wisdom, a majority of adolescents reported that their friends pressured them not to use alcohol. Keefe (1994) reported that normative pressure varies with age. For example, 7th graders he interviewed felt more pressure against their alcohol use than did 9th and 11th graders. In comparison, parental influence decreased with increasing age of the adolescent. While older adolescents were more likely to cite the perceived benefits of alcohol use, perceived costs of alcohol use decreased with age. In addition, males reported a greater intention to drink than females. On the basis of these results early adolescence, not late adolescence as is the case with SADD, appears to be the ideal time to initiate interventions for preventing alcohol misuse.

Not only is there evidence that like-minded peers flock together, but that greater involvement with peers has been shown to be related to greater reported alcohol and other drug use (Williams & Smith, 1993). Furthermore, Williams and Smith found that

males who are actively involved with their peers but who do not have close family ties are the adolescents most likely to use substances.

Peer Education

There is some evidence in the literature that peer tutoring and peer interventions can be effective in both raising achievement levels (Pressley & McCormick, 1995) and reducing risk taking (Laurenson, 1992; Evans, 1993; Topping & Ehly, 1998). Peer education programmes have in the main not been well evaluated but the power of peer influence has been recognised for some time by health educators and has been documented as being influential in the area of sexual behaviour as well as in smoking, alcohol and drug prevention. Anne Mitchell in her review of prevention and education programmes in the area of HIV/AIDS and sexually transmitted diseases (STDs) isolated some distinguishing characteristics of effective programmes (cited in Coleman & Roker, 1998). Among the seven criteria was "the use of peer education" (p.112).

There appears to be little consensus in the literature on what constitutes a peer programme despite the large number of health-promoting areas that now claim to use peer support. One definition of peer education, with specific reference to young people is "an approach which empowers young people to work with other young people, and which draws on the positive strength of the peer group. By means of appropriate training and support, the young people become active players in the educational process rather than passive recipients of a set message" (Coleman & Roker, 1998, p.139). This highlights some of the components mentioned regularly by authors as being important for success. The following are factors regularly mentioned in the literature:

1. Peer support should include teaching part of the programme;
2. The peer tutor should be seen as a role model by tutees;
3. The peer tutor should teach only part of the programme, in partnership with adult content experts;
4. The peer tutors must receive training and ongoing support that is both comprehensive and appropriate;
5. The programme must receive appropriate and ongoing support, including policy and financial resources; and
6. The peer group must have a voice in planning, resource development and evaluation of the programme.

Topping and Ehly (1998) offer a simpler definition of peer education, which is "peers offering credible and reliable information about sensitive life issues and the opportunity to discuss this in an informal peer group setting" (p.7). Although peer education has not been common to all those health promotion programmes seen as successful there seems to be a growing conviction in the area of health education that "peer educators are probably an essential component in health programmes that demonstrate significant behavioural change" (Topping and Ehly, 1998, p. 139).

Evans (1993) reports on an alcohol intervention programme in Oklahoma entitled "Students Encouraging Peers Positively" or "StEPP Up". The report acknowledges the part played by SADD in this programme. As SADD also involves parents in positive role modelling through the use of the "Will to Live" it may have the potential to improve attitudes and safety culture. The "Will to Live" is a SADD contract between the student and their parent or caregiver in which the student undertakes never to get into a car with a driver who has been drinking. In return the parent promises to respond to a call for a ride or help at any time without question.

StEPP Up is part of an Oklahoma state challenge for young people to go into their schools and communities and take an active role in promoting seat belt use and combating drink driving. "Twice each month, 300 teens from Oklahoma's 500 high schools get together with college students to learn how to be leaders in the fight against drinking and driving....That's a total of 7,200 teens each year who learn how to change perceptions, attitudes and behaviour in their peers" (Evans, 1993, p.22). One of the success factors identified for the programme was the fact that the tutors were at college, three years older than the tutees and looked up to as role models. Each college student works with 15 high school students to help them gain skills with which to promote the drive sober message and to help them organise activities in which they can get a natural "high" without the use of alcohol, such as hang-gliding or sleep-overs. The organisers like to work with groups such as SADD because the students "can take their learned skills home and begin implementing them immediately" (p.24). There was some evidence that the programme was successful in saving lives. The number of teens who died in Oklahoma in alcohol-related car crashes halved in the first ten years of the programme.

Topping and Ehly (1998) discuss what constitutes effectiveness in peer assisted learning. They acknowledge that one of the difficulties in determining effectiveness is the fact that most peer education programmes have not been rigorously evaluated. They

give several examples of exceptions to this where peer-based strategies have been found to be effective. One of these was a World Health Organisation project that involved four countries (Australia, Chile, Norway and Swaziland) in a controlled experiment to evaluate the effectiveness of different strategies for school-based alcohol education. The study involved twenty-five schools in which students were randomly assigned to a peer-led, teacher-led or control group. Pre-test measures included knowledge, attitudes and skills towards alcohol in general and their own and friends' drinking patterns. "Students in the peer-led program subsequently reported significantly less use of alcohol than did students in the teacher-led program and control group, irrespective of whether they were drinkers or non-drinkers at the start. The students in the peer-led group gained more knowledge, acquired better attitudes and reported fewer friends drinking at post-test" (Topping & Ehly, 1998, p. 215). The result was achieved across all settings and cultures.

Another project discussed, that was of particular interest as a comparison with SADD, was a cross-age peer project in England in which older students (17-19) worked with younger ones (13-14) in sex education. Among the objectives of the programme was the provision of strategies for those not sexually active to "resist unwelcome pressures in relationships" (Topping and Ehly, 1998, p.215). The project was evaluated using pre and post-test questionnaires and it showed that the students were aware of more strategies for resisting unwelcome pressure to have sex at the end of the project than at the beginning. If SADD operates in accordance with the definitions of good practice in peer education then similar results may be expected from them with regard to SADD's mission of "promoting alternatives to drinking and driving through positive peer influences" (p.1)

Moral development

It has been assumed for the purpose of this research that young people who have attitudes and values consistent with an enhanced safety culture and who are exposed to moral education are likely to develop morally more quickly than their peers. It was therefore important to review the work of theorists looking at moral development and similar concepts.

One of the earliest theories of moral development was proposed by Jean Piaget who, with his stage theory of child development, has probably had more impact on the

field of developmental psychology than anyone else to date. "Piaget formulated hypotheses about children's moral understandings based on children playing by the rules, cheating and changing rules. He then tested these hypotheses by asking children to reason for him about social dilemmas that he presented to them as short stories ending in a question" (Pressley & McCormick, 1995, p.264). Piaget proposed a two-stage model of moral development. The first or heteronomous morality stage is usually held by children under the age of seven. Children at this stage believe that rules are sacred, respect those in authority and believe that consequences are more important than intent. The child at the second or autonomous morality stage, however, sees that rules are made and can be changed by people. At this stage the child believes consequences to be less important than intent.

Although Piaget's work laid the foundation of moral developmental theories, its theoretical stages are of limited use with people who have outgrown childhood. Of all the researchers who have contributed to the field of adolescent development, Lawrence Kohlberg is undoubtably the most influential in the field of moral development. Kohlberg (1981) proposed a six-stage theory of development. He maintained that people pass through each stage progressively in an invariant order. People can continue to progress throughout life although few will ever reach the highest stage. People can plateau at any stage but there is no regression. A stage once attained is always maintained or advanced upon.

Kohlberg gives a good summary of his theory in an article reprinted in Muuss, 1990. His six stages are divided into three levels; the pre-conventional, conventional and post-conventional (also referred to as the autonomous or principled) levels. At the pre-conventional level people (always young children, outside of institutional settings) are concerned with punishment and rewards. Kohlberg says that at this level "Avoidance of punishment and unquestioning deference to power are valued in their own right" (Muuss, 1990, p.92). At the higher stage in this level, elements of fairness and of equal sharing are present but always in a simplistic reciprocity (You scratch my back and I'll scratch yours), not one based on loyalty, justice or gratitude.

At the conventional level "good behaviour is that which pleases or helps others and is approved of by them" (Ibid, p.92). Those who achieve stage four believe that they should respect authority and do their duty to maintain the social order. At the highest (post-conventional) level, which is attained by a minority of people, individuals move towards the acceptance of "universal principles of justice, of the reciprocity and

equality of human rights, and of respect for the dignity of human beings as individual persons" (Muuss, 1990, p.92).

Kohlberg measured the level of moral development by confronting people with a series of moral dilemmas and asking them to make and justify moral choices. The most widely known of these dilemmas is the Heinz dilemma. Heinz's wife is dying of cancer. There is a cure but the druggist who developed it would only release it for ten times what it cost to make. Heinz attempts to raise the money but is unable to raise enough. Should he steal the drug to save his wife? Kohlberg is not concerned with the participant's response (Kohlberg, 1981) which he calls the moral content but rather the reasons for the choice or moral judgement. He maintains that reasoning centres on 12 universal moral values, later revised to 10 (Muuss, 1990, p.93). These are:

1. Life - Preservation, Quality & Quantity
2. Property
3. Truth
4. Affiliation
5. Erotic love and sex
6. Authority
7. Contract
8. Law
9. Civil rights
10. Religion
11. Conscience
12. Punishment

One of the greatest contributions Kohlberg gave to the field of moral development is the work done on moral education. This began with the work of one of Kohlberg's students, Moshe Blatt (Power, Higgins, & Kohlberg, 1989). Blatt reasoned, in what has become known as the plus-one approach that if students were "systematically exposed to moral reasoning one stage above their own, they would be positively attracted to that reasoning, and would, in attempting to appropriate the reasoning as their own, be stimulated to develop toward the next higher stage of moral judgement" (Power et. al, 1989, p.11). It is interesting to note that Blatt's experiments found teacher-led moral education more effective than peer-led programmes.

There is considerable evidence (Pressley & McCormick, 1995) that this type of cognitive conflict does work. Blatt's supervisor (Power et. al., 1989) was astounded that stage growth could be measured and that it persisted over time. SADD also claims to use the cognitive conflict approach in that members are constantly exposed to dilemma discussions and the views of others. Because of this feature of SADD, an evaluation of the effectiveness of the organisation could include the measurement of moral development and comparison with a non-SADD control group.

Kohlberg's work has been subject to a number of criticisms (Modgil & Modgil, 1985). The scoring manual for the dilemmas is difficult to master, taking up to a year of training. Much more important though are the claims that there is not, as he claimed, evidence that the dilemmas can be used across all cultures and demonstrate that there are "universal kinds of judging or valuing" (Modgil & Modgil, 1985, p.436).

Although Kohlberg's work has been shown to be capable of developing moral thought in adolescents it has been ineffective in elementary or primary schools (Pressley & McCormick, 1995) where the sophistication of the dilemma he uses is beyond most children. According to Jane Loevinger (Loevinger, 1987), Robert Selman believes that a child's understanding of social relations limits the development of moral reasoning and this necessitates the studying of social relations prior to studying moral development. Selman devised dilemmas involving children participating in things children normally do. As a result Selman has classified four domains and five levels of role taking or what he refers to as interpersonal understanding.

Carol Gilligan made the strongest criticism of Kohlberg's work. She had been a student of his and had noticed that women invariably scored lower than men in his scoring system, rarely rising above stage three on the six stage scale. She noticed that women were more likely than males to consider issues of interpersonal caring when they considered their responses to the dilemma but that "herein lies a paradox, for the very traits that traditionally have defined the 'goodness' of women, their care for and sensitivity to the needs of others, are those that mark them as deficient in moral development" (Gilligan, 1982, p.18). She maintained that since Kohlberg's scoring system had been developed in research that dealt almost exclusively with males it could not be generalised to apply to women. "Kohlberg was sensitive to a masculine strategy based on rationality and justice but insensitive to feminine thinking strategies in which dilemmas are analysed in terms of the human, interpersonal consequences of the various possible actions by the actors in the dilemma" (Pressley & McCormick, 1995, p.273). This has serious consequences if we are to assume that high levels of moral development equate to greater caring and therefore a lower level of unnecessary risk taking. The ability to reason about consequences is an essential component in Kohlberg's definition of moral development and is one of the major facets of moral development examined through the use of the Heinz and other moral dilemma exercises. If Kohlberg's definition includes only logically successive perspectives on justice (Loevinger, 1998, p.51) and excludes wider aspects of personality, such as the need to

analyse the human consequences of actions, then it may be too narrow as a useful explanation of why adolescents take or refrain from taking unnecessary risks. A wider view of adolescent development may be necessary.

William Perry (1970) conducted research in the United States in the 1950s to study changes in student attitudes towards their studies during the course of their university studies. He tried to do this through the use of true-false tests but discovered that when the students were interviewed the reasons they gave for some of their answers were the opposite of what the answers seemed to imply. As a result Perry decided that only the interview technique would provide sufficient material to allow for correct interpretation.

Perry (1970) developed a nine stage or (as he prefers to call them) position theory. As with many cognitive stage theories a person is assumed to move from a simple or dualistic perspective in which they see statements as right or wrong towards a greater appreciation of and ability to cope with ambiguity in situations and in life. Students exhibiting the highest levels of thinking are not only able to accept relativism as the way of the world but have also made commitments to some perspectives.

Perry's work differed from the conventional wisdom of the day in some important and groundbreaking ways. Firstly he was one of the first to contend that intellectual and ethical development continued throughout life. He claimed striking shifts in thinking between 18 and 22 years of age. Secondly he argued, unlike most stage theorists, that development could proceed in reverse. Perry describes:

> three alternatives to growth - temporizing, retreat and escape. *Temporizing* means pausing for more than a year in one position, typically with awareness of the next step ahead. *Retreat* occurs after some glimpse of multiplicity and involves an active denial of the legitimacy of the opinions of others. Typically it takes one back to extreme dualism. It may be seen in a dedicated reactionary, a dogmatic rebel, or in passive resistance to authority without espousing a cause. *Escape* typically entrenches the student in a middle position, using multiplicity or relativism in the service of alienation or cynicism or even of Authority (Loevinger, 1987, p.237).

Perry was alone among the developmental theorists and particularly stage theorists of the time in claiming that development can occur in more than one direction.

If he is correct this could have implications for the proposed research into adolescent moral development.

As Loevinger records (1987) one of the difficulties with current stage theories is their proliferation. There are a range of different measures which show only a moderate relationship to each other. This is partly because they all measure different things. There is some overlap between such concepts as Kohlberg's moral development, Perry's intellectual and ethical development and Loevinger's ego development but there is also some variance.

Jane Loevinger has devised a series of stages of ego development that currently number eight. More importantly the stages look at three key characteristics of ego development that could directly relate to risk taking. These are impulse control, interpersonal mode, and conscious preoccupation. Each of the three develops through stages. Impulse control moves through a continuum from impulsive to tolerance and the ability to cope with conflict. Interpersonal mode develops from egocentricity and dependence through self awareness to interdependence and cherishing individuality in self and others. Conscious preoccupation develops from preoccupation with bodily feelings through preoccupation on feelings to self-fulfilment and an integrated sense of identity. These characteristics are all entirely relevant to the type of ethical reasoning and decision making that would be explored in connection with SADD.

Loevinger's stages are dynamic. For that reason she objects to them being referred to by number since any change could cause confusion in those trying to interpret the literature. The original Washington University Sentence Completion test (WUSCT) of ego development adopted four stages (Impulsive, Conformist, Conscientious and Autonomous) from a sentence completion test derived by Elizabeth Nettles (Loevinger, 1998, p.4) for a study on the problems of adolescent girls and young women. Through time, as responses were rated the need for additional intermediate stages was determined. The names given to the most recent stages are impulsive, self-protective, conformist, self-aware, conscientious, individualistic, autonomous, and integrated.

As with Kohlberg's theory it is unlikely that any adults will still be operating at the lowest level and very few at the highest levels. Loevinger (1987) points out that all stage theories and measurements are more accurate at lower levels and problematic at higher levels. The reason she puts forward for this is that there is a much smaller database to work with so behaviours exhibited at the higher levels tend to be a

projection of the way the researcher feels people should develop. The interaction of the levels and the characteristics is shown in Table 2 reprinted from Loevinger (1998) p.5. The codes in parentheses are from the earlier version and relate to what were thought to be intermediate stages.

Table 2

Characteristics of Stages of Ego Development

		Characteristics		
Level	*Code*	*Impulse Control*	*Interpersonal Mode*	*Conscious Preoccupation*
Impulsive	E2 (I-2)	Impulsive	Egocentric, Dependent	Bodily feelings
Self-Protective	E3 (Delta)	Opportunistic	Manipulative, Wary	"trouble", control
Conformist	E4 (I-3)	Respect for rules	Cooperative, loyal	Appearances, behaviour
Self-Aware	E5 (I-3/4)	Exceptions allowable	Helpful, self-aware	Feelings, problems, adjustment
Conscientious	E6 (I-4)	Self-evaluated standards, self-critical	Intense, responsible	Motives, traits, achievements
Individualistic	E7 (I-4/5)	Tolerant	Mutual	Individuality, development, roles
Autonomous	E8 (I-5)	Coping with conflict	Interdependent	Self-fulfilment psychological causation
Integrated	E9 (I-6)		Cherishing individuality	Identity

Table from Loevinger (1998) p.5

At the lowest level people are egocentric and preoccupied with bodily feelings. Conformists accept rules because the group does. Loevinger found that cliché responses are more characteristic of conformists than of others. The self-aware stage was originally conceived as a transitional level (then known as conscientious-conformist) but since the majority of North American adults appear to be at this level it deserves to be considered a stable level. At higher levels people display "a sense of paradox, a conception of persons as being different in their different roles (wife, mother, housekeeper, lover, working woman, daughter), the idea of psychological causation and an interest in psychological development" (Loevinger, 1987, p.229). The WUSCT used to assess the levels consists of a number (usually 36) of sentence stems which people are asked to complete in writing. The responses are then coded to determine the level.

Loevinger maintains that ego development stabilizes for most people by early adulthood and that there is little progression from that point (Westenberg, Blasi and Cohn, 1998). There is marked growth in ego levels through adolescence but little from that point on. Cohn looked at a number of studies in order to ascertain what stimulates or inhibits growth. Some of these studies sought to facilitate development by exposing participants to peer mentoring and counselling experiences. "At least eight studies (mainly comprised of high school students) have reported significant advances in WUSCT scores following such interventions" (Westenberg, et al., 1998, p.141). Cohn noted that "environments that encourage perspective taking and reflectiveness are likely to facilitate movement away from the Conformist stage to the Self-Aware and, possibly, Conscientious stages" (Westenberg, et al., 1998, p.142). SADD claims to provide such an environment.

Loevinger's theory seemed to provide the best vehicle for this research for several reasons. Firstly "Loevinger (1976) viewed 'moral development' as a facet of the single coherent process of ego development. Moral development, that is, is understood as a 'more restricted realm than ego development'" (Westenberg, et al., 1998, p.164). It seemed that her statement that ego or personality development "is a continuum that is both a developmental sequence and a dimension of individual differences at each stage" (Muuss, 1990, p.112) was closest to what was being proposed for this research. Secondly her WUSCT appeared to be a tool that, while still requiring training to master, would be easier to administer and code than either Perry's or Kohlberg's. It also seemed that "being a free response, or projective, test, it gives a

more rounded and complete portrait of the subject's personality than an objective test could" (Loevinger, 1987, p.225).

If it is accepted that raising the level of safety culture is dependent on lifting levels of moral reasoning or ego development, then the WUSCT could greatly assist in the evaluation of SADD. By giving the test to a random sample of students at the beginning of year 12 (one of the two year groups with the largest SADD membership) and then again a year later it should be possible to detect growth. If growth appears greatest in those students who belong to SADD this could be an indicator of success. It would be necessary, however, to supplement the WUSCT with other measures to discover whether the growth is likely to have been caused by membership or whether students at the higher levels of ego development are more predisposed toward membership.

Narrative Research

Earlier we discussed Lightfoot's (1997) work on risk taking in which she used a narrative research model. The use of narrative is a recurring theme in the study of human development. It is becoming increasingly justified as a method of obtaining data to investigate concepts such as the life-course and personal identity. While it may seem strange to pursue a narrative perspective or life-story approach when working with adolescents who have little life experience, this is not so. We are told that it "is in late adolescence and young adulthood that the individual makes his or her first concerted effort to reconstruct the remembered past in order to conceive a self-defining life story that provides ones life with unity and purpose" (McAdams, 1991, p.144).

The purpose of autobiographical narrative is, according to Dan McAdams to establish a mature identity in adulthood. He talks of "me" and "I" where "me" is the "empirical self that can be known" and "I" is the "pure ego that knows"(McAdams, 1991, p.134). We spend a lifetime trying to construct a coherent identity or "me". The narrative does much more than just tell about me. It constructs me. As Jerome Bruner puts it "eventually the culturally shaped cognitive and linguistic processes that guide the self-telling of life narratives achieve the power to structure perceptual experience, to organise memory, to segment and purpose-build the very 'events' of a life. In the end we become (his emphasis) the autobiographical narratives by which we 'tell about' our lives" (1987, p.15).

McAdams claims that from adolescence onward each person is attempting to craft a portrait of themselves that both establishes their identity and with that a purpose for their being. He has constructed a life story model of identity which helps to recognise the elements that are important in this life-long construction of personal identity which "is a necessary effort to ground the individual life in a meaningful context of personal and social history" (Singer & Salovey, 1993, p.70). There are four major components in the model and two dimensions or "second order variables" that carry through each of the components. The components are ideological setting, imagoes, nuclear episodes and the generativity script. The dimensions McAdams refers to are thematic lines and narrative complexity.

McAdams wrote that "thematic lines are recurrent content clusters in stories, analogous to recurrent melodies in a complex piece of music" (Singer & Salovey, 1993, p. 72). These lines can be high in agency or communion. "Agency refers to the impulse in human beings to achieve independence, autonomy, and self-definition through separation...Communion embraces the human desire for involvement with others, for interdependence, nurturance, affection, comfort and sharing." (Ibid p. 72).

The second dimension is narrative complexity. According to Singer & Salovey "complex stories involve many characters, plots and subplots, major and minor themes. They are more likely to contain ambiguity, contradictions and unresolved tensions. Stories with simpler narratives proceed in a more straightforward fashion; they may be powerful and eloquent in their singularity of theme or purpose" (p.73).

The first of the four components, which are bound into the life story by these two dimensions, is the ideological setting. This is established, according to McAdams (1991) early in the story making process, usually in adolescence. It is the network of beliefs and values we have that form the backdrop to our personal story. Once established, these are rarely questioned.

Nuclear episodes are those vivid or repetitive memories we all have of specific instances in our lives. They are the stories that we continually enthral or bore the members of our families with. An autobiography could be said to be a collection composed of only such episodes since it is our collection of remembered stories about ourselves. Dan McAdams "feels there are two general types: episodes of continuity and change. Nuclear episodes of continuity are moments of truth, moments that define who individuals are and for what they stand.(1989, p.169). "Nuclear episodes of change are

turning points, critical junctures in which one's life takes a new direction" (Singer & Salovey, 1993, p.75).

Imagoes are the characters that appear repeatedly in the life story. McAdams' use of this term seems to parallel the concept of the "hero" spoken of by David Cohen (1990) and Carol Pearson (1987).

The fourth and final component in the McAdams' model is the generativity script. "The generativity script is the adult's plan or outline specifying what he or she plans to do in order to leave a legacy of the Me to the next generation" (McAdams, 1991, p. 154).

Dan McAdams wrote that "as accounts of human intentions, stories tell what characters are striving to do, what they want and how they go about trying to get what they want over time. There is no story without intention. Further, there may be no intention without story" (1991, p.156). His model has provided the heuristic means by which we may better isolate the ingredients that make up the intention, the identity, the "me". For this reason the narrative method and McAdams' model may be worth considering as a method to be employed in this research. This is particularly so because of the connection between narrative and ego. The model clearly links narrative complexity with ego stage. The more complex the narrative across all of the four components of ideological setting, imagoes, nuclear episodes and generativity script the higher the ego stage. McAdams (1991) states that:

> Individual differences in the *narrative complexity* of life stories should be predictable from independent scores on measures of cognitive complexity. One such measure that taps into cognitive complexity is Loevinger's (1976) sentence-completion method for assessing *ego development.* The life-story model of identity has generated some research relating ego development to individual differences in the narrative structure of people's life stories. In general the research has supported the hypothesis that higher stages of ego development in Loevinger's scheme are associated with the construction of more differentiated and integrated life stories (p.149).

With this in mind it may be useful both to compare the complexity of narrative generated from the WUSCT against McAdams' model and to develop an interview format that will encourage the young people interviewed to engage in wider narrative than is possible in sentence completion. Assessing the extent to which a student had

constructed an integrative life narrative would be a useful cross check against the results obtained from the WUSCT. There is, however, a down side to this. Rosenwald and Ochberg (1992) outlined four critical issues that must be reconciled if narrative is to be equated with realism. One of these is the relation between individual and society. They make the point that narrative can be constrained or distorted by the prevailing culture. They contend that:

> The self-consciousness of a culture continually reforms its public discourse and the informing notions of good and evil. Before such values become securely established so that they exert their formative effect on lives "from within" - through primary socialization - their influence is that of a looming admonition, a threat to moral comfort (p.13).

This is most likely to occur in adolescents at lower stages of ego development. It does mean that cultural stereotypes are likely to colour narrative in any interviews in this research, therefore, given the age and culture difference between the researcher and the researched. These differences may make the students being interviewed who are at lower stages of ego development constrain their narrative. In these cases, narrative may be based not on what they believe but on what they believe the researcher wants to hear.

SADD Effectiveness

SADD New Zealand has been evaluated twice before. The first was a general review by Laurenson in 1992 and the second in 1994 by the Business Research Centre. Laurenson's review consisted of action research interviews with high school students in Christchurch. "The sample consisted of nineteen students, fourteen females and five males. Ethnically the majority (sixteen) identified as Pakeha New Zealanders, with one Tongan-New Zealander, one Samoan-New Zealander and one Australian. Their ages ranged from sixteen to nineteen" (Laurenson, 1992, p.291). The review was not an evaluation of effectiveness but an attempt to learn more about the students who join SADD. What was the attraction of and relevance of SADD for them? Laurenson concluded that SADD students are "young people with the confidence and courage to be different...just normal kids who want to party"(p.299). Blaylock (1992) had mentioned that the perception some people had of SADD students as "goody-goods" was incorrect. SADD lists among its strengths that it is "alcohol friendly - recognising that some young people will drink, and therefore encouraging drinking within safe limits" (SADD

Strategic Plan 1998-2001). Laurenson urged authorities not to dismiss them for these qualities and to use SADD when planning drink-drive campaigns because "if we are serious about combating the huge toll extracted out of society by alcohol related motor vehicle crashes then realistic alternatives to alcohol need to be offered to our young people from a very early age" (p.299).

Budget limitations are reported to have restricted the BRC evaluation (Sullivan & Buchanan, 1994) to a self-completion questionnaire sent to SADD representatives in 401 New Zealand schools. There was a 41% response rate. The evaluation report made a number of recommendations to assist SADD to work more effectively. These included:

- More careful targeting of schools. SADD should consider focusing its attention on 90% of secondary schools, the largest schools; and
- Addressing the imbalance of students. Females outnumbered males by three to one and sixth and seventh form students outnumbered other forms in the same ratio.

Because of the time lag since the BRC recommendations were made some pressure has been applied by the sponsors of the programme to re-assess the organisation and to get a measure of effectiveness. Consequently, in this research, it was decided to review the connection between SADD membership and risk taking, as one measure of effectiveness although SADD does not claim to reduce adolescent risk taking. SADD's mission, as outlined in its 1999-2001 Strategic Plan is "to reduce harm amongst students by promoting alternatives to drinking and driving through positive peer influences" (p.1). So an evaluation would need to ask how effective SADD is in reducing risky drink driving behaviour by promoting the use of alternatives to driving after drinking for young people?

Laurenson (1992) in an her review of SADD in New Zealand stated that "one should not underestimate the strength and potential of adolescent peer culture. What really appears to work, both for the SADD members and as an educational concept, is peer support and peer teaching" (p.289). Blaylock (1992) stated in support that, as a result of organisations like SADD, drink driving in New Zealand is becoming socially unacceptable. "For young people, those normally featured in motor vehicle crash statistics, to say to their peers 'it's not cool to drink and drive' shows the development of their skills. These skills should be exercised – the overwhelming growth of the SADD organisation since 1988 shows that this is happening" (Blaylock, 1992, p.310).

She pointed out that crashes involving alcohol and young people had declined since the introduction of SADD. While true (see Table 1 on page 2) it would be difficult to determine any causative relationship between the two as in the same period the Graduated Driving Licence (GDLS) was introduced. GDLS restricts youth driving between 10pm and 5am. These are the times when alcohol related crashes have traditionally been at their highest, particularly on Thursday, Friday and Saturday night. Compulsory breath testing was also introduced at roughly the same time. An evaluation of the New Zealand Graduated Driver Licensing System (Langley, Wagenaar & Begg, 1996) showed the introduction of the graduated driver licence system was associated in its first five years (1987-1992) with a reduction in driver crashes among the 15-19 age group of at least 7% and perhaps as much as 23%.

SADD maintains that one of its strengths, indeed one of its main claims to effectiveness is that it is run by students for students. While SADD advocates are convinced of the value of peer-led interventions, others are not. Gorman's (1995) review of school-based resistance skills training programmes was not enthusiastic about such approaches and concluded that "individuals who are at increased risk due to factors other than peer or media pressure are unlikely to benefit greatly from such programs" (p.93).

Another criticism of alcohol related education programmes and of organisations such as SADD is that they do not reach those students who most need them. Howard (1996) reported that "many young people who most need an effective intervention are not at school when it is delivered; they are truanting, have been suspended, or are needed by their parents to generate income or provide child/house minding tasks" (p.5). In some cases they have already left school.

The 1994 evaluation of SADD also questioned whether it was reaching the right people. They noted that, while drivers involved in youth road crashes were predominantly male with Maori being over-represented on a population basis, SADD was heavily female oriented and Maori made up 12% of active membership. The authors of the report (Sullivan & Buchanan, 1994) regarded this percentage as "comparable to the 12% of 6th and 7th formers overall in New Zealand who are Maori" (p.5). They reported that 75% of SADD students came from these two forms (years 12 and 13). While it is proportionate of those two class levels in New Zealand high schools it is not proportionate of the populations that traditionally appear in drink driving statistics (Clayton, 1997). In a 1998 analysis of drink driving as a social issue,

Sheehan, Baum, Ferguson & Schonfeld reported that 80% of offenders are male and they "were generally of lower socioeconomic status compared to the community sample, and were over-represented in lower education and income levels and in the occupational category 'not in paid employment'" (p.42). Ministry of Education (1996) information shows that on average those students at school in years 12 and 13 fall in the upper range in socioeconomic standing.

Maori are also over-represented in drink drive crashes. Bailey reports that "the Maori population is under-represented in injury-producing sober accidents, but severely over-represented in injury drink-driving accidents" (1993, p.20). The limited available data shows that in 1991, the age specific death rates for Maori males aged 15-24 involved in alcohol related motor vehicle crashes was 11.6 per 100,000 compared with a non-Maori rate of 7.3 per 100,000 (1.6 times the non-Maori rate). An estimation by Bailey (1993), involving examination of death certificate data, indicated that 43% of drunk drivers involved in fatal motor vehicle crashes were Maori. Yet Maori made up only 12% of SADD membership in 1994.

It is surely unconvincing for an organisation to claim success in changing youth culture when its membership is not representative of youth, unless the organisation is being successful at promoting its message to non-members. To determine effectiveness the research will also, therefore, need to examine the changing demographics in SADD membership between 1994 and 1999 and it will need to examine whether the SADD message is being successfully transmitted to and taken up by youth sub-cultures not represented in the organisation.

Summary

This chapter presents a review of the literature relevant to this study. The focus of the literature review was an exploration of adolescent risk taking particularly with regard to alcohol use. Literature in adolescent moral development, particularly the work of Kohlberg, Gilligan, Perry and Loevinger was reviewed in depth. Comparisons between adolescent risk taking with regard to alcohol use and adolescent moral development were examined to ascertain evidence of a connection between the two concepts.

The literature reviewed suggests that it may be possible to find evidence that SADD is an effective organisation in its aim to reduce adolescent risk taking.

First, the activities of SADD groups promoted by its central organising body can be compared to principles of effective peer education such as those presented by Coleman and Roker (1998) or Topping and Ehly (1998). This will enable an examination of best practice and whether the organisation is engaged in the right activities.

Secondly, following the findings of research into moral development in the Kohlbergian tradition, members of SADD may be involved in activities which promote development of reasoning about moral dilemmas which may stimulate accelerated personality growth. Assessing the level of moral or ego functioning of students at two different stages will enable an examination of growth. There is some suggestion in research into personality development that inferences can be drawn about effects on likely risk-taking behaviours from changes in the complexity of cognitive functioning.

CHAPTER 3

METHODOLOGY

Research question, problem or issue

This research project is an evaluation of the organisation Students Against Driving Drunk (SADD). SADD's mission is stated as being "to reduce harm amongst students by promoting alternatives to drinking and driving through positive peer influences" (SADD, Strategic Plan 1998-2001, p.1). The organisation employs young people as programme coordinators whose function is to provide peer training of students in order to promote positive alternatives to drink driving. There was some pressure from within Government for the organisation to demonstrate effectiveness in terms of reduced alcohol related road trauma if it was to receive further public financial support. It was unlikely that effectiveness could be demonstrated by any direct relationship between SADD's activities and mortality or morbidity data since no causal link could be established between the two. It was decided, therefore to look at the organisation on a number of different fronts so that some picture of the efficacy of their approach could emerge.

The main question for this research is "Is the SADD organisation effective?". How can effectiveness be determined? If SADD is successful in deterring student drivers from driving after drinking then it is likely to be effectively reducing harm and achieving its mission. Establishing a direct link between SADD activities and the behaviour of refraining from driving after drinking would be as difficult, however, as the direct link with mortality and morbidity data. The decision making and introspection required to determine to refrain from driving after drinking are nevertheless components of the moral development measured by Kohlberg or the ego measured by the Washington University Sentence Completion Test (WUSCT). Kohlberg and Blatt had shown (Power, et al., 1989) that it is possible to increase the level of moral reasoning through education. Cohn had presented some evidence that exposure to peer mentoring and educational experiences that encourage reflection can "increase a person's capacity for perspective taking and, hence, their ego level" (Westenberg, et al., 1998, p.141). SADD claims to encourage reflection and debate about alternatives. It is possible, therefore, that SADD membership could stimulate accelerated moral or ego development. The first sub-question therefore could be "Do

students who belong to SADD attain high levels of moral or ego development at a faster rate than other students of the same age do?"

SADD's strategic plan outlines the organisation's core values and beliefs. Among these SADD values are:

- Motivating, enthusing and supporting students to think and act independently;
- Young people leading their peers;
- Students directing SADD's work;
- The safety and well-being of young people (SADD Strategic Plan 1998-2001).

These beliefs and the actions that underpin them fall within the definition of peer assisted learning or peer education used for this research, that it is "an approach which empowers young people to work with other young people, and which draws on the positive strength of the peer group. By means of appropriate training and support, the young people become active players in the educational process rather than passive recipients of a set message" (Coleman & Roker, 1998, p.139). Another sub-question to ask could be, therefore, "Does SADD operate in a way that is consistent with what is considered good practice in peer education models?"

SADD lists a number of objectives that, if achieved, will lead towards achievement of its mission and, some of which, will contribute to an enhanced safety culture. The objectives are that SADD will:

- Maintain a stable funding base, with increased funding for regional activities;
- Support active SADD teams in every secondary school;
- Be supported by all New Zealand secondary schools;
- Expand resources with materials and promotions that are stylish and appropriate to culture and gender differences;
- Actively lobby drink-drive issues at a political level;
- Maintain its focus on drink-driving;
- Be instantly recognised by members of the public;
- Be recognised as "the youth organisation" to be consulted with on issues relating to young people and alcohol; and

- Be well represented by people from other cultures and of both genders who actively promote SADD's message (SADD Strategic Plan 1998-2001).

If SADD achieves its objectives it will have had a positive effect on the safety culture within the school and peer group. The third sub-question therefore might explore the extent to which these have been achieved by asking, "What indications are there that the SADD message is having a positive effect on safety culture within the school and peer group?" This question combined with the first two sub-questions will enable us to answer the final sub-question "Has SADD been successful in attaining the mission set in its strategic plan?" If this question can be answered affirmatively then the organisation can be said to have been effective.

As outlined in the next section, some preliminary work was carried out in 1999. This helped to determine the questions to be answered in the research project. The main question to be answered is "Is the SADD organisation effective?" Sub questions that will assist in answering this question will be:

(i) Do students who belong to SADD attain high levels of moral or ego development at a faster rate than other students of the same age do?

(ii) Does SADD operate in a way that is consistent with what is considered good practice in peer education models?

(iii) What indications are there in the stories of those interviewed that the SADD message is having a positive effect on safety culture within the school and peer group?

(iv) Has SADD been successful in attaining the mission set in its strategic plan?

Preliminary work carried out:

Initially, in 1999 a small-scale trial was undertaken for the purpose of finalising research questions and developing measuring instruments for the final research project. The following procedures were followed:

1. A questionnaire was developed. This was designed to enable students to talk about their own lives. It was trialed with a small number of senior students from two high schools to determine whether the questions stimulated and guided narrative without leading or channelling it. Some students belonged to SADD and some not. The purpose of the trial was to assess the ease with which the narratives could be

transcribed and analysed to make judgements about attitudes, values and the level of moral development. It was reasoned that by encouraging students to talk about their schooling and their lives, information could be gathered which could point to the effectiveness of SADD in influencing school and youth culture. In this approach a number of people were to be interviewed to gauge their beliefs about the organisation, to try and ascertain their level of moral development on Kohlberg's hierarchy and to see any way in which moral development was assisted or impeded by SADD membership. Members of SADD were to be interviewed to discover what motives they had in joining and what they had gained from membership.

After the first set of interviews radical changes were made to the questions in the student questionnaire. It was apparent that the original questions did little to discover more about the respondents. Who were they? Where did they see themselves fitting in the social strata of their school? What were their opinions about drinking and driving? Earlier reports on SADD (Laurenson, 1992; Blaylock, 1992) had mentioned that the SADD students were seen as "goody-goods" and suggested that the organisation attracted only one type of person. It was decided that there would be value, therefore, in finding out what sub-cultures were perceived in the school by the students and in seeing if SADD students were always classified as belonging to the same group. Some new questions were developed along the lines of those asked by Lightfoot (1997). She had commented that if risk-taking began as play and drama, it ends as narrative and story. "Like the war stories analysed by anthropologists, adolescents' risks can be seen to promote a sense of shared history, and a means by which to mediate ingroup-outgroup relations" (p.3).

It had been hoped that the questions on risk would uncover whether those people who belonged to SADD told markedly different risk stories do those who don't. The new questionnaire was more successful at encouraging narrative and this made coding easier.

2. As an additional component of the interview procedure a dilemma similar to Kohlberg's "Heinz dilemma" but around the topic of drinking and driving was constructed. The questionnaire and dilemma are attached as Appendix 1a and 1b. The dilemma required the students to choose from a number of options, one of which involved driving after drinking. This was designed to be similar to the Heinz dilemma used by Kohlberg (1981) in that it called for the participants to make moral choices and justify those choices but it revolved around a situation involving alcohol

and driving. The dilemma was constructed so that it could be put to people of various ages, some of whom have and some who have not been members of SADD. A trial was conducted with two students. The two subjects were questioned in an attempt to probe their moral reasoning. It was assumed that their initial comments would reflect their normal operating level. Probing for a second and third comment was necessary to get into the reflective levels and secure their most mature moral thought.

The dilemma had interchangeable gender names in an effort to reduce the gender bias Gilligan (1982) claims for Kohlberg's stages. No such bias was apparent however. After the first trial, the dilemma was modified. A further trial was then held with two students from each of two local high schools but even with modifications it produced inconsistent results so the dilemma was discarded from the final project. Another method of assessing thinking about moral dilemmas or cognitive maturity was sought.

3. Concurrently the literature review was being conducted that explored the areas of moral development in adolescence and looked at literature regarding adolescent risk-taking. It had originally been intended to directly explore the possibility of a link between SADD membership and risk taking. The literature provided evidence of the difficulty in finding such a direct link. There is evidence in the literature, however, that risky behaviours are more evident among adolescents from lower socioeconomic backgrounds (Sheehan, Baum, Ferguson & Schonfeld, 1998). There is some indication that "students at the lowest ego levels were the most likely to become school dropouts" (Westenberg, Blasi & Cohn, 1998, p.142) and we know that school dropouts are most likely to come from lower socioeconomic backgrounds (Sheehan et. al., 1998). It was hypothesised, therefore, that indications of high ego levels among SADD students could be also indicative of lower levels of risk taking among members. This provided an incentive to adopt Loevinger's Washington University Sentence Completion Test (WUSCT) of ego development as a measurement device for this research.

In summary then, the purpose of the early pre-project research was to develop measuring instruments that could be used to see if members of the organisation SADD were operating at higher levels of moral development than was the case with other students, whether they were attaining these levels faster than other students and whether the organisation was having a positive effect on the safety culture within the school

community. A measuring instrument had been developed and trialed with students. The results were assessed and the instrument was modified. A further trial was conducted and the results used for further modification.

Methods finally employed

Several different methods of data gathering were used in the final research project to assist with the validation. It was decided to review the SADD organisation on three levels. By encouraging students to talk about their schooling and their lives, information could be gathered which could point to the effectiveness of SADD in influencing school and youth culture. For this purpose a number of adolescents were interviewed to gauge their beliefs about the organisation and its message. A modified version of the questionnaire developed in 1999 was used for this purpose (Appendix 2).

The earlier work showed the importance of reaching young people who have left school as well as those who continue into Year 12 and 13. This could be accomplished by approaching students at work training schemes operating for young people who are no longer at school. High school students attending the annual SADD conference were interviewed in July 2000. In addition 141 high schools were approached for permission to involve their SADD groups in the research and students attending two separate pre-employment schemes were interviewed.

It was planned to include direct observation of student activities and interactions at SADD meetings in this project. It is claimed that "one of the most notable gaps in current research is the lack of detailed analysis of the sorts of interactions that actually take place between young people under the guise of peer education. There is therefore no clear data on how these initiatives are, or if they are, being accommodated into forms of interaction that already take place between peers" (Frankham, 1998, p.186). It was intended in this research to analyse interactions through direct observation. Because the presence of any researcher was likely to be inhibiting and counter productive it was proposed that a small number of schools videotape SADD meetings, training days and any special projects. These tapes were to be analysed for evidence that the interactions fell within the definition of peer education (Coleman & Roker, 1998) and they were to be compared against a model of good practice to see that they conformed. As it transpired the difficulties involved in getting permission to use the video technique in schools could not be surmounted in the time frame available.

As a substitute it was decided to send a questionnaire to those schools identified by the SADD National Coordinator as having active groups (Appendix 3). The questionnaire that was developed contained 30 multiple choice questions with room for additional comments. The schools were asked to complete the questionnaire as a group exercise and submit the group consensus. Several questions from an earlier SADD evaluation (Sullivan & Buchanan, 1994) were used with the permission of the publisher, BRC Social Research, and additional questions were posed to assess the activities that were actually conducted by the SADD groups. It was important to determine whether SADD, as had been claimed, regularly provides students with discussion opportunities in which they confront moral dilemma in the manner of Kohlberg's moral tuition.

Kohlberg (Power et al, 1989) has shown that it is possible to raise the moral level of people through education. Constant exposure to a level of moral development one level above the current operating level has been shown by Kohlberg and Blatt to stimulate the student's development. This has become known (Pressley & McCormick, 1995) as the plus-one effect. As SADD claims to regularly expose its members to moral dilemma discussions during meetings it was reasoned that it might be possible to demonstrate that high levels of moral reasoning develop at a faster rate among members than among a random sample of other students. It was initially hoped to do this with the aid of a moral dilemma similar to that used by Kohlberg (1981). The early trials presented considerable objectivity and coding problems, which would have been difficult to overcome in the time available.

Attention then turned to the possibility of using the WUSCT (Loevinger, 1998). Theoretically, measuring ego development was perhaps even more justified for this research than measuring moral development because it also contains elements of changes in impulsivity and concern for others, which are relevant to reasoning about ways to avoid the consequences of risky behaviour.

The WUSCT requires that subjects complete a sentence stem in written form. It contains 36 sentence stems. There are different forms for males and females (Appendix 4) although differences between them merely reflect varying gender terminology with no real difference in question content. Coding the WUSCT can become reliable by training with the use of the Hy and Loevinger (1996) manual. A recent critical review (Manners & Durkin, 2001) of the validity of the ego development theory and its measurement concluded that "there is substantial empirical support for the conceptual soundness of ego development theory and the WUSCT" (p.541). For these reasons the

WUSCT would provide a useful check against the results of the interviews and questionnaires as well as providing an indication of growth in ego over a 12-month period. It was decided that the SCT-Y version of the WUSCT developed at Leiden University[1] for Dutch children and youths (Westenberg et al, 1998) would be most appropriate as it has been validated for adolescents.

The same group of students was to be tested twice with a twelve-month gap between tests. A comparison could therefore be made between those students who chose to join SADD and a randomly selected group of students of similar age who had chosen not to join SADD.

Research procedure and time-scale

The research commenced in July 2000, a little later than was anticipated. The delay was necessary to satisfy the requirements of the Massey University Human Ethics Committee. Approval was received on 28 June (Appendix 5) and the research commenced with the first round of the WUSCT.

The NZ SADD Trust had been approached and had given permission for local SADD groups to be approached in its name. Lists were provided of the names of all schools with active SADD groups. The Principal of each school was approached in a letter outlining the purpose of the research (Appendix 6). This was followed by contact on the phone or in person to gain permission for both the SADD group and other students to be approached. The Principal was informed that approval was sought for a number of activities to be undertaken at school with as many year 12 students as possible. The activities included undertaking the WUSCT (Appendix 4), taking part in an interview and having SADD meetings videotaped. A number of school principals throughout New Zealand agreed to allow year 12 students to be approached for the purpose of the test or an interview but only one agreed to the videotaping of SADD meetings. For this reason the latter method was discarded.

[1] Data from this research was submitted to Leiden University as part of an international benchmarking study.

When permission had been received from the principal, teachers and students were approached. Both were informed that the activities were voluntary and that they could refuse to take part. All students were given an information sheet with the purpose of the research and their rights as participants (Appendix 7). The students who agreed to undertake the WUSCT, or an interview, were asked to sign the appropriate consent form (Appendix 8). Interviews were to be conducted with students at school but not in class time. They were held immediately prior to school, at lunchtime or immediately after school. The WUSCT was more easily completed with students in groups and it was considered that this could be done most easily in school time and with permission of both school and students.

Staff and students of various employment training programmes (i.e. school leavers) were approached and asked to volunteer to take part in interviews and the WUSCT. The same procedures and forms were used with this group.

Some consideration was given to gaining parental permission. Initially it was considered that the age of the participants would make it unnecessary to seek permission of parents. It was decided, however to inform school principals about the research and take guidance from them regarding the need for parental consent. An information sheet (Appendix 9) and consent form (Appendix 10) were developed and would have been sent to parents had the school considered that to be advisable. It was felt that this step was likely to deter some students from participating and thus skew the sample towards those at higher ego levels, so for this reason it would not be taken unless the school requested it. As it happens none of the schools approached deemed this to be necessary.

At some schools the researcher administered the test. In other cases teachers asked to administer the test to their own students. In these cases the test papers and consent forms were mailed to the school with instructions on how the test was to be administered and the necessity of returning the completed test papers with a consent form attached. The test papers did not contain any identifying characteristics other than the assigned code number. For this reason it was essential that the test papers were returned attached to a signed consent form so that it was possible to link the unique identifier with the correct name and address. Without this information it would be impossible to match test papers the following year.

Several high schools were chosen to take part that had no SADD group in operation. These and four work schemes for unemployed youth conducted by the

YMCA acted as the control group. In addition the test was administered to all students attending the 2000 SADD conference in Christchurch, New Zealand. In all, over 200 test papers were received. Unfortunately a large number had to be discarded as two schools returned test papers and consent forms separately. Some of these were able to be matched because students had written their names on the test paper and some where the writing on both forms was clearly from the same hand but most were not able to be used. In all 148 codable test papers were completed in the first year. Of these participants 100 were female and 48 male. The number of students who completed the WUSCT in 2000 who did or did not belong to SADD was not recorded. That analysis was only done for the group that completed tests in both years. All papers were marked and a sample of 25 completed questionnaires was submitted for double coding by an experienced coder. Any variations in marking were rectified and a marking protocol established for the items not covered in the scoring manual (Hy & Loevinger, 1996).

The second administering of the WUSCT took place in 2001, 12 months after the first test. This time lag was necessary because of the difficulty in accessing senior school students at the end of the academic year and because it was desirable to leave as long a gap as possible between the two tests if growth was to be ascertained. In this case the test paper and a covering letter was sent the following year individually by mail to the address given by each student. An incentive of a ten dollar petrol voucher for each of the first ten replies received was provided for early return of these but, after discarding a few responses for a variety of coding errors, only 54 questionnaires remained that could be used for a comparison across both years. Of these 27 were from SADD members (6 male and 21 female), 11 from students who had been in SADD in 2000 but left at the end of that year (4 male and 7 female), and 16 were non-members (8 male and 8 female). This is summarised in Table 3.

Intensive interviews took place with students throughout the 2000 academic year during the same period that the WUSCT was being administered. All interviews followed the same format and a common questionnaire was used (Appendix 2). All interviews were also captured on audio-tape to allow for future analysis. It had originally been intended to conduct sixty interviews but the time taken to complete each interview and the geographic spread of willing students meant that only half this number could be completed in the time available.

Sixteen of the students interviewed were members of SADD and 14 were not. Of the SADD members all were female. Of the non-SADD members, 8 were female

and 6 were male. Two of the SADD students interviewed identified themselves as Maori. All of the other students claimed to be of European ethnic origin. The average age for both groups was 16 ½.

Table 3

Participant Gender and SADD affiliation

Group	Number	Gender		SADD	Non-SADD	SADD 1st Yr only
		F	M			
SCT-Y 2000	148	100	48			
SCT-Y 2001	54	36	18	27	16	11
Interview	30	24	6	16	14	0

In 2001 after plans to videotape SADD meetings had been abandoned, it was decided as a substitute to send a survey questionnaire to those schools considered by the SADD Trust to have active SADD groups. The questionnaire (Appendix 3) was designed to gain information about the priority activities within SADD groups and used some of the questions asked in the 1994 evaluation (with the permission of BRC Social Research). This enabled a better exploration of some of the research questions and enabled progress to be assessed against recommendations made in the earlier evaluation. The questionnaire was mailed to 48 key contact people within the schools considered most active. The national SADD Coordinator provided a list of names for this purpose. Each contact person was asked to complete the questionnaire as part of a group activity at their next SADD meeting and to return it in a reply paid envelope provided. The response would therefore be a group consensus. Disappointingly, only 16 group responses were received. This is nevertheless a 33% response rate, which is high for this type of postal survey. BRC Social Research informed (personal communication, July, 2001) that a 5-10% response rate is the norm.

Summary

After preliminary research trials and an extensive literature review, a number of sub-questions were developed to help provide some evidence that would allow the main

research question "Is SADD effective?" to be answered. The sub-questions settled upon were:

(i) Do students who belong to SADD attain high levels of moral or ego development at a faster rate than other students of the same age do?

(ii) Does SADD operate in a way that is consistent with what is considered good practice in peer education models?

(iii) What indications are there in the stories of those interviewed that the SADD message is having a positive effect on safety culture within the school and peer group?

(iv) Has SADD been successful in attaining the mission set in its strategic plan?

Three different methods of data gathering were utilised. These included administering the WUSCT on two occasions a year apart to a sample of students, some of whom belonged to SADD and some not; conducting personal interviews with a subgroup of students who had completed the WUSCT; and sending a thirty-question multiple choice questionnaire to all active SADD groups.

CHAPTER 4

RESULTS

This research project aimed to answer the following main question: "Is the SADD organisation effective?" Subsumed by that question were the following:

(i) Do students who belong to SADD attain high levels of moral or ego development at a faster rate than other students of the same age do?

(ii) Does SADD operate in a way that is consistent with what is considered good practice in peer education models?

(iii) What indications are there in the stories of those interviewed that the SADD message is having a positive effect on safety culture within the school and peer group?

(iv) Has SADD been successful in attaining the mission set in its strategic plan?

As mentioned in the previous chapter the final measuring instruments chosen for the research were the Washington University Sentence Completion Test (WUSCT), individual student interviews using a modified form of the original questionnaire and a survey of SADD group activity. The results achieved are outlined below.

Washington University Sentence Completion Test

In the year 2000 the WUSCT was administered to 148 students. The students came from a range of High Schools and several pre-employment groups for students who had left school. Every effort was made to ensure a balance of students from rural and urban areas, of differing socioeconomic backgrounds, gender and SADD membership. There was nevertheless a gender imbalance with only 48 of those completing the test being male and 100 female.

For various reasons, a large number of these students failed or were unable to complete the second questionnaire in 2001. These had been posted to students at the address provided the previous year. Many students had moved or chose not to return the test paper in 2001. It was possible to match the questionnaires for 54 students who had completed the test paper in both years. Of these, eighteen were male and 36 female. Ten of the males and 36 of the females were members of SADD when they completed the WUSCT in 2000 but four males and seven females had left school and SADD by the time they answered the 2001 WUSCT.

The test papers for both years for the 54 students were marked using the manual "Measuring Ego Development" (Hy & Loevinger, 1996) and a Total Protocol Rating (TPR) was established for each student for each year. This rating determines the operating ego level. In 2000 a random sample of twenty-five test papers had been marked and assigned a TPR. These papers were double coded by an experienced user of the WUSCT to ensure reliability.

Variations in coding of individual answers were rectified and the lessons learned applied to the final coding in 2001. At that time an additional random sample of 25 papers was independently coded and a TPR applied. The independent review showed that the consistency level of 80% needed to ensure reliability was well exceeded. Where an item score varied by more than one level between the two markers, an agreed score was substituted and ego level calculated. While some students had slight increases or decreases in item score, in only two of the twenty-five cases was the final ego level altered as a result. Of these two, one increased by one TPR and the other decreased by one. The changes were made and have been included in these results.

The TPR was calculated for the 54 students who completed test papers in both years. For the students who completed the WUSCT in 2000 only, item scores were given but a TPR was not calculated. The TPR for each year was examined and the change noted. Twenty-five of the fifty-four students showed no change. Twelve increased their TPR score by one, six by two and one student increased by three. Nine students had a TPR one lower than the year before and one student dropped by two, as is shown in Table 4.

Table 4

Changes in Ego Level from 2000-2001

Group	**Number**	**Change**					
		-2	**-1**	**0**	**+1**	**+2**	**+3**
SADD	27	1	6	12	7	1	
Non-SADD	16	0	1	7	2	5	1
SADD (Yr 1 only)	11	0	2	6	3	0	0
TOTAL	54	1	9	25	12	6	1

The student scores were divided into three groups for comparison. The first group consisted of SADD students, group two was non-SADD students and the third and smallest group was those students who had been members of SADD in 2000 but had left the organisation (and school) prior to the second administration of the WUSCT. The groups numbered 27, 16 and 11 respectively.

Table 5

Changes in Average Ego Level from 2000-2001

Group	**Number**	**AverageAge**		**Average Ego Level 2000**	**Average Ego Level 2001**	**Change**
		Yrs	**Mths**			
SADD	27	17	7	4.85	4.89	+0.04
Non-SADD	16	18	3	3.69	4.56	+0.87
SADD (Yr 1 only)	11	18	6	5.00	5.09	+0.09

The results can be seen in Table 5, with the highest rate of change being in the non-SADD group where the average ego level increased by 0.87. By contrast the SADD group and the mixed group showed slight increases of 0.04 and 0.09 respectively. The mixed group had the highest average age of the three groups but these students were only 3 months older on average than those in the non-SADD group. The SADD group was the youngest being almost a year younger on average than the other two groups.

Although the increase in ego level was greatest for the non-SADD group, their total score and average ego level was lower than either of the other groups. The average item sum score in this group was 164.13 as against 170.81 for the SADD group and 175.45 for the mixed group. The average ego level for the non-SADD group was 4.56 compared with 4.89 for the SADD group and 5.09 for the mixed group.

Table 6

Ages and Ego Levels in each group in 2001

Age in Years	Number in Each Group			Total Protocol Rating (Ego Level)					
	SADD	Non-SADD	Mixed	2	3	4	5	6	7
15	4				1	2	1		
16	3						1	1	1
16		1					1		
17	10					4	4	2	
17		9		1		4	3	1	
18	8					2	4	2	
18		4				1	2	1	
18			8		1		4	3	
19	2						2		
19		1					1		
19			3				3		
20		1				1			
Totals	27	16	11	1	2	14	26	10	1

The question to be answered, however, is whether the SADD students tested in 2001 had attained high ego levels faster than those of the same age in the other two groups. Table 6 shows the spread of ages and ego levels from the 2001 WUSCT results. This shows no marked variation in ego levels between the groups. The spread for each age in each group is similar. The SADD group has the youngest students with four aged fifteen and three aged sixteen. The non-SADD group has the oldest student but at the ages of seventeen and eighteen (where the bulk of students fall) the spread of ego levels is similar. As an indication at age seventeen 40% of SADD students were at an ego level of 4 (conformist), 40% at level 5 (self-aware) and 20% at level 6 (conscientious). By comparison 11% of the non-SADD students were at level 2 (impulsive), 45% were at level 4, 33% at level 5 and 11% at level 6. At the age of eighteen the results for the two groups were exactly the same with 25% of students at level 4, 50% at level 5 and 25% at level 6. These results are illustrated in Table 7. It is important to note, however, that with the small group size percentages are of no statistical value and are provided merely to illustrate the pattern. The difference is not statistically significant. There was a trend for older students to have higher ego levels on average and this is consistent with Loevinger's contention that growth continues throughout adolescence but stabilises in adulthood (Westenberg, Blasi & Cohn, 1998, p.134)

Table 7

Percentages of Ego Levels at age 17 and 18 in each group

Group and Age	Percentage at each level			
	Level 2 Impulsive	Level 4 Conformist	Level 5 Self-Aware	Level 6 Conscientious
SADD - 17 years		40%	40%	20%
Non-SADD - 17 years	11%	45%	33%	11%
SADD - 18 years		25%	50%	25%
Non-SADD - 18 years		25%	50%	25%

Although the research question asks whether SADD students had achieved higher ego levels than other students of the same age, it also asks whether there was any indication that membership of SADD had stimulated faster development than for other students. In order to answer this we need to look at increases or decreases in ego level across the SADD and non-SADD students of various ages. This is illustrated in Table 8. Note that the students in the mixed group have not been used in this comparison since they can not show the influence of SADD membership one way or the other. Similarly the results for the 15 year old students and the 20 year old were not shown as there were no students of the same age in the other group with whom to compare them. Clearly there is no indication of accelerated growth in these results although the small numbers in each group make the results unreliable. Of the four students who were sixteen years old in 2001, two (both SADD students) had ego levels one lower than the year before while the other two (one in each group) remained the same. At age seventeen and eighteen there were differing patterns. For over 50% of the non-SADD students (5/9) at 17 there was no change in ego level compared with only 30% of SADD students. More 17 year old SADD students increased in ego level (5/10) than non-SADD students (3/9) but the increase was greater for the non-SADD students. At age eighteen the non-SADD students had clearly superior results to the SADD students. For 62.5% of the eighteen year old SADD students (5/8) there was no change. Of the rest, one went down one level and two went up, one of these by two levels. All four of the non-SADD students increased their scores; three of these by two levels. This mixture of results provides no support for the hypothesis that SADD membership stimulates accelerated ego development.

Table 8

Changes in Ego Level from 2000-2001 in age cohorts

Group and age in 2001.	Number	Change				
		-1	0	+1	+2	+3
SADD 16 years	3	2	1			
Non-SADD 16 years	1		1			
SADD 17 years	10	2	3	5		
Non-SADD 17 years	9	1	5		2	1
SADD 18 years	8	1	5	1	1	
Non-SADD 18 years	4			1	3	
SADD 19 years	2		1	1		
Non-SADD 19 years	1			1		
TOTAL	38	6	16	9	6	1

Student Narratives

All of the students who completed the WUSCT in 2000 were asked if they were also prepared to be interviewed. Those who volunteered were subsequently interviewed using the questionnaire developed through the earlier trials (Appendix 2). It had been intended to interview up to sixty students with an even spread of SADD and non-SADD students. As it transpired this was not possible both because of the time involved in each interview and because there was an insufficient number of volunteers.

In all, thirty students were interviewed. Sixteen of these were members of SADD at the time and fourteen had never been members. All of the SADD members interviewed were female. Two of these identified themselves as being of Maori ethnic origin. The remainder were all European New Zealanders. Eight of the non-SADD students were female. Six were male. All fourteen of these students identified themselves as European.

The majority of the students (14) were 17 years of age at the time of the interview, four were 18. The remaining students were younger with one being only 13 years old at interview. The interviews were taped and the tapes later transposed and analysed. Analysis concentrated on the research questions as much as was possible. Groups of questions looked at culture, particularly safety culture. Knowledge of SADD

and its activities was a key component of this, particularly with non-SADD students. Attitudes towards drink-driving and new driving licence restrictions were other indications of safety culture. The second major theme for SADD students was peer education. Evidence that activities undertaken were consistent with good practice in peer education was sought.

The first few questions asked were designed to get the students talking about the sub-cultures within their school or institution and to identify where they and the average SADD member would fit. Most of the students were able to identify sub-groups without difficulty. The sub-groups regularly identified were the nerds (also called geeks, intellectuals and loners), the popular or cool kids, the sporty ones and the druggies. Interestingly, however, when asked what group they belonged to, while some claimed to be in the cool group, most students claimed not to belong to any of the sub-groups identified but belonged instead to the large mass of normal or ordinary students or, as one student put it "the happy-go-in-betweens".

Those students who were themselves members of SADD identified SADD members as either normal or cool. More than half of the non-SADD students had either not heard of SADD or had so little contact with the organisation that they were not prepared to categorise SADD members. Those who did classified them as nerds, intellectuals or popular kids. Laurenson's (1992) contention that SADD students "are just the normal kids who love to party" is certainly shared by most SADD students. Those non-members who are aware of the organisation, however, still see SADD as an elitist group of "goody-goods" or "girly-swots" as one non-SADD student referred to them.

The next bracket of questions was designed to get a feel for the students' attitudes towards driving, the law and drinking. The attitudes expressed by all those interviewed were remarkably similar. Both SADD and non-SADD students stated that the recent changes to the driving licence system were good but believed the additional test to get a full licence to be imposing unnecessary burdens on them. Both groups expressed similar attitudes towards the change in the drinking age from twenty to eighteen, seeing it as both positive and negative. A commonly expressed view was that they were mature enough to drink at eighteen and had the law not changed they would have been required to do so illegally. The change in the law had made this unnecessary. The majority made the point, however, that the new law would need to be stringently enforced to prevent even younger people from buying and consuming alcohol on

licensed premises. The respondents from both groups expressed the view that those younger than eighteen were not mature enough to manage their consumption of alcohol.

When asked about driving after drinking both groups admitted that there were students who still did it but when pressed they claimed not to know any of them. As one male non-SADD student said:

> *A lot of people think its wrong but then there's people who just think you know they're that pissed that they're just like bullet-proof. That they won't crash and if they do crash then they don't know what to do.*

Another non-SADD student, when asked what he thought of the advertising slogan "If you drink then drive you're a bloody idiot" commented:

> *Fully true, Eh.*

SADD students expressed similar attitudes but were quick to point out that:

> *We're not against you drinking, we're just against you driving drunk.*

The SADD students also believed that SADD was responsible for the general shift in drink-driving attitudes in young people. A 16 year old female SADD member said:

> *What we do through promoting the ideas kind of reaches out and gets to people who aren't in it and I think for a lot of them it just makes them think about it. I mean by having this constant presence of SADD you kind of are forced to consider it.*

When asked if she felt that SADD was influencing the attitudes of those not in the organisation another member claimed:

> *They listen, they do listen. They think that they're blocking out the message but you know that they're getting the message. But it won't be until one of them stands up and says 'Hey we've got to stop this' that it will change for that group.*

Opinions about the influence SADD has had on attitudes is one area where the two groups varied. The non-SADD students did not believe they had been influenced by the organisation and in many cases they were either not aware it existed or very vague about it. When asked, "Have you ever heard of an organisation named SADD?" a female non-SADD student replied:

> *No, I've been down South.*

Lack of any knowledge of the organisation was the majority response. Some non-SADD students had heard of the organisation, however, and were quite clear about its purpose. One 17 year old female stated:

> *They (SADD) are lobbying to stop it.*

The "it" in this case referred to lowering the drinking age. Another stated that:

> *they're a group of people that are against drink driving. I can't really remember. I know somebody came to school and talked to us. That was ages ago.*

Yet another stated:

> *I'd heard about it but I didn't really know anything about it. Wasn't there another one?*

When pressed further it transpired that the other one referred to was an organisation called "Tu Badd" that works with young Maori to prevent alcohol abuse.

The last part of the questionnaire was for SADD students only and asked questions about their motivation to join, activities undertaken as members and how membership had affected their lives. The responses were disappointingly lacking in narrative complexity with one member claiming that:

> *Some people just see SADD as a way they can enter competitions.*

Very few of the students interviewed had signed the "Will to Live" contract with their parents and none of those had ever activated it. The "Will to Live" is a contract between the student and their parent or caregiver in which the student undertakes never to get into a car with a driver who has been drinking. In return the parent promises to respond to a call for a ride or help at any time without question. Several expressed the sentiment that they had not activated the contract because they would not allow themselves to get into a situation where it was necessary.

When asked about the type of activities undertaken as part of SADD one student said they had

> *a slave auction to raise funds and make students aware of SADD. We've also spoken in assembly and we're going to hand out will to lives. We were going to do a dead day but that got cancelled by management because they thought too many people would cry or get upset.*

This was a typical response. Despite being prompted not one student could recall discussions at SADD meetings in which issues were raised and values challenged. The majority seemed to have joined SADD because they knew someone who was a

member. A few claimed that they "wanted to make a difference" but by far the majority saw SADD as a way of improving their social life.

Nevertheless it must be noted that all SADD students interviewed were proud of their membership of the organisation and felt strongly that SADD had been successful both in assisting their personal development and in influencing youth culture. They believed they had achieved considerable success in being accepted by Government agencies as the voice of youth and in fairly representing the views of students to national and local legislators.

Students Against Driving Drunk (SADD) Group Questionnaire

In 2001 after plans to videotape SADD meetings had been abandoned, it was decided as a substitute to send a survey questionnaire to those schools considered by the SADD National Coordinator to have active SADD groups. Results from the questionnaire are provided in detail in Appendix 11.

The questionnaire (Appendix 3) was designed to gain information about the priority activities within SADD groups and used some of the questions asked in an earlier examination of SADD. The questionnaire was mailed to 48 key contact people within the schools considered most active. Each contact person was asked to complete the questionnaire as part of a group activity at his or her next SADD meeting so that the response would be a group consensus. Disappointingly, only 16 group responses were received. This repeated the experience of the earlier evaluation (Sullivan & Buchanan, 1994) and suggests that the conclusion drawn in that report, that SADD overstates its support in high schools, is not in error. An earlier indication of lack of support had been shown by the response of schools to the initial approach to take part in all aspects of this research project. A large number of high schools (141) were contacted by the researcher prior to the commencement of the research. The schools approached had been recommended as those with "active" SADD groups, yet a substantial number (10 of 141) claimed not to have a SADD group at all.

The first few questions in the questionnaire were designed to get a feel for the demographics of the average SADD group. The responses showed that the average group was small and met infrequently. The vast majority of members were female and European. Nine of the sixteen respondents claimed to have fewer than ten members in their group. When asked what ethnic groups were represented in the group 15 of the 16

respondents said they had European members (one response was from a Maori boys' school), four had Maori representation, two had Pacific people represented and various other ethnic groups were represented in five SADD groups. When asked about gender, only one group said females represented less than 50% of their membership (probably the Maori boys' school), two claimed that representation was about 50-50 and thirteen said that more than 50% of their members were female. Two responses came from all-girl schools.

SADD meetings are usually held at school, usually held at interval and are not attended by staff of the school in the majority of cases. Fifteen of the sixteen respondents claimed that their meetings were always held at school and the same number claimed their meetings were usually held at intervals (including lunchtime). In only four cases is a teacher always present at meetings. In three schools a teacher sometimes attends but nine schools claimed that a teacher is never present at meetings.

According to the SADD Strategic Plan (1998) one of the core functions of SADD is to "promote positive alternatives to drink driving"(p.6). It was surprising, therefore, that only three of the sixteen respondents chose "debating alternatives to drink driving" as one of the activities that time is spent on in their meetings. Eleven of the respondents claimed to spend time "debating the best ways to promote SADD" and the same number spent time "planning SADD activities". The remainder spent time as follows:

Debating best ways to increase membership	7 responses
Planning media activities	6 responses
Debating topical issues related to youth drinking/driving	5 responses
Fundraising	3 responses
Role-play (Crash Bash etc.)	2 responses

The activities that were conducted or planned in SADD groups were dominated by assembly talks and advertising. Nine respondents had organised assembly talks and eight had placed advertising. Eleven respondents were planning to conduct one or other of these activities in the near future. The total list of activities conducted or planned is shown in Table 9.

Table 9

SADD Group Activities (16 Responses)

Activity	**No. Conducted**	**No. planned**
Assembly talks	9	11
Advertising (all types)	8	11
Mock Crash	3	7
Dead Day	3	7
Crash Bash competition	3	1
Mock Funeral	2	2
Making a video of your SADD group	2	1
Sausage Sizzle	2	0
Lunchtime concert	1	5
Interschool Sport	1	1

Mock crashes involve SADD groups working with local emergency services personnel to enact a crash scenario. This usually involves SADD students being made-up as "victims" and placed in a wrecked car. Other students watch as the emergency services go about the task of rescuing the "victims". The purpose of the exercise is to have students think about the consequences of crashes.

Similarly "dead days" and "mock funerals" are intended to have students thinking about consequences. On a "dead day" participating students come to school wearing black (with white faces) to represent alcohol related deaths on the roads. They are not allowed to communicate with other students. This is intended to give the students an idea of what it is like to have friends die in a crash.

"Crash bash" is a drama competition held in several parts of New Zealand in which students from different high schools put together a play or dance routine around the drink-driving theme and deliver these in competition. One of the criteria for determining a winner is the impact the play has had on the target audience. As part of the philosophy of peers leading peers it has been assumed that this is more likely to influence student behaviour than is a play (such as "Too much Punch for Judy") that is delivered by professional adult actors. These types of activity that encourage reflection are the types promoted by Cohn (Westenberg, Blasi & Cohn, 1998) as being likely to

stimulate ego development. They are also consistent with Topping's definition of peer education (Topping & Ehly, 1998).

Summary

There were three sources of data gathered in this research. Student's scores on the WUSCT were taken twice, a year apart. Interviews were conducted with both SADD and non-SADD students about perceptions of SADD as an organisation, and responses to a questionnaire about activities conducted within the SADD organisation were gathered. How this data can be interpreted will be discussed in Chapter 5.

CHAPTER 5

DISCUSSION

Background

This research was designed to evaluate the effectiveness of the organisation Students Against Driving Drunk (SADD) in a number of different ways. The SADD organisation consisted of a national coordinator and three regional coordinators who were paid to support the voluntary SADD teams existing in 55% (SADD Strategic Plan, 1998, p.2) of New Zealand High Schools at the time this evaluation commenced. The timing of the evaluation, as it transpired, could not have been worse. Not long after the initial trial, the national SADD Trust announced that they were in financial difficulties and were having to release all three regional coordinators. The organisation was to continue with one full time coordinator. This must have had an impact on both the organisation's effectiveness and this research. The research was compelled to rely more than had been planned on information from grass roots members. Nevertheless, it was reasoned that if the organisation is being effective that should be where it shows.

The findings in this research are even more important now for they will provide information that will help potential sponsors to determine whether to assist the organisation to re-group. It may also assist the SADD Trust to determine how or if to make the organisation more effective.

As the research progressed it was necessary on a number of occasions to return to the research literature. This, and the value of hindsight, identified weaknesses in the research methodology such that direct evidence could not be obtained to answer some of the research questions. There were, however, inferences that could be drawn. In this chapter the results of the research will be discussed by looking at the pre-project trials then each of the research methods. Subsequently each of the sub-questions will be discussed in turn and the chapter concludes with a discussion of the main or grand tour question.

Pre-project trials

The early trials proved a useful learning experience in a number of ways. The questions were developed to a point where they were beginning to stimulate student

narratives. They were not, however, sufficiently developed for use in a full-scale application. The two Maori students interviewed found it more difficult to build narratives, which may have indicated a cultural bias in the questions and, for this reason also, required further development. The questions used to probe responses improved with the project. With further development they formed a useful basis for comparing the SADD students with a representative sample of those that did not belong to SADD. The questions and dilemma used are attached as Appendix 1a and Appendix 1b.

Most of the students interviewed in the initial trials appeared to be functioning at quite high levels in Kohlberg's hierarchy. Two students appeared to be working at the conventional level while the remaining students appeared to be operating at post-conventional levels, although this coding was subjectively assigned without the benefit of the training required. As one student pointed out "the dummies and druggies have usually left school before they get to our age". Whether or not it is valid to assume as the student did, that those remaining at school for year 12 and 13 have higher intelligence, it is true that year 12 and 13 students measure higher in socioeconomic standing than the average (Ministry of Education, 1996). Research has shown (Clayton, 1997; Sheehan et al, 1998) that young people, particularly men, of lower socioeconomic standing have the highest rate of alcohol related road crashes. If, therefore, the research project was to see whether SADD had been effective in raising the safety culture of all youth (not just an elite sample) it was necessary to widen the project to include interviews with teenagers who had left school.

The dilemma modelled on Kohlberg's Heinz dilemma, once revised, was effective in provoking thinking but it could not be coded in a way that provided confidence that the measures were valid and reliable, without Kohlberg's extensive training. There was insufficient time to obtain this training and there was some doubt about the suitability of this method given Gilligan's (Gilligan, 1982, p.18) concerns of gender bias and the largely female membership of SADD. It was decided to drop the dilemma, therefore, and use Loevinger's (1987) Washington University Sentence Completion Test (WUSCT). This was considered more suitable as it measures the aspects of personality development considered relevant and was easier to code than Kohlberg's method.

Washington University Sentence Completion Test

As has been explained in previous chapters the definitions of ego development (which is what is measured by the WUSCT) and moral development share the characteristics of personality development relevant to this research. According to Loevinger the "ego is a holistic construct representing the fundamental structural unity of personality organisation" (Manners & Durkin, 2001, p.542). The three characteristics (Table 2, p.19) measured by the WUSCT through all stages are impulse control, interpersonal mode and conscious preoccupations. Loevinger maintains there to be an invariant sequence of ego development with each person passing through stages in sequence until they reach their individual developmental plateau. There is a tendency for people to develop rapidly in early adolescence but slow in late adolescence. But, as Holt (in Westenberg, Blasi & Cohn, 1998) put it, this

> does not imply that they can be given specific age slots. One person may pass rapidly through the sequence, attaining the main features of the Autonomous stage in adolescence, while others progress much more slowly to the same endpoint late in life. In either case, however, swift advances and plateaus alternate" (p.78).

The WUSCT was used in the final research project and its results were cross-checked or triangulated against the results of the interviews and the objective quantitative data gathering of the questionnaire. It proved to be a valuable tool in a number of ways. It provided valuable insight into the thinking of adolescents and it provided a valid measurement of current levels of thinking.

There are a number of limitations to the value in this particular study, however. The WUSCT questionnaires were all coded using the coding manual developed by Loevinger (Hy & Loevinger, 1996). The version of the test paper being used was the SCT-Y version specifically for adolescents (Appendix 4) developed by Westenberg (Westenberg, Blasi & Cohn, 1998). Westenberg is in the process of refining an English language coding manual specifically for this version but that was not available for this research. Every effort was made to ensure the reliability of coding but it is conceivable that validity could have been enhanced by using the manual specifically designed for the SCT-Y version.

The number of test papers able to be used in the final comparison was disappointingly low and made it difficult to identify trends. The initial approaches had secured over 200 students willing to complete the questionnaire in 2000. Of these 148 codable responses were received. The pool of respondents would have been larger if the researcher had personally administered the test at all schools. Lack of familiarity with the requirements meant, that for some of the questionnaires returned from some schools, the respondent could not be identified so could not be contacted for the subsequent test. In the second year all 148 were contacted by mail but only 54 responses were received. There were a variety of reasons for this. Young people of this age are mobile. Some, particularly the non-SADD students had changed addresses and their questionnaires were returned. One young man had been killed in a motor vehicle crash. The majority, for whatever reason, chose not to return them. Discussion with the researchers who had completed a previous SADD evaluation (BRC Social Research) suggested that the response rate was high for a postal survey. Nevertheless any future attempts to duplicate the use of this type of test over time would profit from finding alternatives to postal replies.

The WUSCT did provide information that assisted in answering the question " Do students who belong to SADD attain high levels of moral or ego development at a faster rate than other students of the same age do?" but the information would have been more compelling had there been a greater number of respondents. Nevertheless there were indications that were consistent with Loevinger's theory. Although, as mentioned above, there is considerable individual variation in development, we could expect that the group studied would conform to the average spread of ego levels for this age group. Westenberg (1998) had established average ego levels across three cohorts. He had established a spread of ego levels in the 13-18 age range with a relatively large sample of 1144 people (Westenberg, Blasi & Cohn, 1998, p.93). When we compare his results with those obtained in this research (Table 10) we see that the spread is similar. A higher percentage of New Zealand students are operating at the self-aware and conscientious stages but this could be because most New Zealand students were at the upper end of the age range assessed by Westenberg and therefore could be expected to fall at the upper end of the scale. This cross check gives some confidence that the results obtained are not as unreliable as the small number may suggest. The difference between the ego levels of the

SADD and non-SADD 17 year old students also points towards SADD members being more cognitively advanced than non-SADD. The full results and their relevance to Loevinger's theory will be discussed later in this chapter in discussion of the ego development question mentioned above.

Table 10

Distribution of Ego Levels across NZ and Dutch cohorts

Group and Age	**Level 2 Impulsive**	**Level 3 Self-Protective**	**Level 4 Conformist**	**Level 5 Self-Aware**	**Level 6 Conscientious**
Westenberg (13-18)	6.6%	30.9%	42.5%	16.6%	3.3%
SADD - 17 years			40%	40%	20%
Non-SADD - 17 years	11%		45%	33%	11%
SADD - 18 years			25%	50%	25%
Non-SADD - 18 years			25%	50%	25%

Student Interviews

The student interviews provided an interesting insight into the thinking of adolescents, both members and non-members of SADD. The interview questionnaire (Appendix 2) was not as successful, however, at stimulating "narrative". Although the students were asked to talk fully about each question, and many questions started with "What do you think about....?", the answers were truncated and prompts were required. This was particularly true of the interviews with non-SADD students, which tended to take longer, despite having fewer questions because each answer required several probing questions before it became clear what opinions the student held. Care was taken to avoid feeding the student closed questions that required only yes or no answers and which may or may not have reflected their true feelings.

The students all exhibited similar attitudes towards drink-driving and driver licensing laws. The vast majority of those interviewed agreed that it was unwise to drive

after drinking. Most students claimed it was not a fear of being caught that motivated the sentiment but an understanding that alcohol made them lose control and they were less responsible behind the wheel when affected. Many knew of people in their age group who had driven drunk but when asked what beliefs were likely to come out if they were discussing this with a group of friends, in most cases they said that their friends believed as they did.

In the case of the driving licence, the majority of students from both groups believed that the graduated driver licensing system was a good idea but that the recent changes removing the ability to reduce time on a learner licence, from six months to three months, was an unnecessary imposition to them as they were able to acquire the necessary skills in three months. So, while in some areas there was evidence of a safety culture in others they could not see that certain laws imposed on them had a safety purpose.

The questionnaire was not successful at eliciting information about SADD from non-members. When asked to "Tell me what you know about the organisation Students Against Driving Drunk", the common response was "nothing". When prompted about SADD and drink driving many could recall some reference or an occasion when a member had spoken to them at assembly or they had seen posters. None of the non-SADD students had heard of "The Will to Live" and they were all certain the organisation had not touched or influenced them in any way. All of the non-SADD students said they were extremely unlikely to join such an organisation or indeed, any organisation. In the view of one student:

> *Only geeks and losers need to join clubs.*

SADD students interviewed were all very positive about the organisation and their part in it. There is a lot of genuine enthusiasm at the school level and a general belief that their activities influence the behaviour of all students. As detailed in Chapter 4, this is summed up in the sentiment expressed by one student that:

> *What we do through promoting the ideas kind of reaches out and gets to people who aren't in it and I think for a lot of them it just makes them think about it. I mean by having this constant presence of SADD you kind of are forced to consider it.*

The nature of the responses need to be considered in light of a number of factors. Narrative research tells us that narrative complexity is associated with high ego levels. It was apparent that the more complex responses came from those students who belonged to SADD. This would tend to suggest that the SADD students should have been operating at higher ego levels than the non-SADD students. The results of the WUSCT bear this out. In 2000, when all interviews were conducted, the average ego level in SADD students was 4.85 against 3.69 for non-SADD students (see Table 5, p.43).

The comments relating to the drink-driving and drinking age laws need to be viewed with scepticism in light of comments made by Rosenwald and Ochberg (1992). They claimed that narrative would reflect cultural norms, particularly where the individual has not securely established their own values. In other words some of the individuals interviewed are likely to have phrased their responses to fit within what they saw as the prevailing social norms especially since the interviewer was a middle-aged member of the "establishment". This is especially true for the non-SADD members. It could be expected that SADD members by their very membership of an organisation committed to reducing drink-driving would be opposed to driving drunk and would be supportive of drink-driving laws. The relative lack of sophistication, lower educational achievement and lower ego levels in non-SADD students make it more likely that they would mould their narrative for the listener. If anything the interview evidence is that many students were suspicious and self-defensive.

It also needs to be borne in mind that at the time interviews were conducted students in both groups (except for those who later left SADD) were operating at levels between the self-protective and conformist. At the lower level students could expect to be wary, preoccupied with staying out of trouble or not getting caught and learning about rules and self-control. The conformist students would be expected to be moralistic and rule-bound and engage in "black and white" thinking. This is exactly what was portrayed in the majority of interviews.

SADD Group Questionnaire

When it became apparent that the difficulties involved in arranging to videotape SADD meetings and activities at school could not be surmounted in the time available it

was decided to send a written questionnaire to those high schools identified by the SADD National Coordinator as having the most active SADD groups. The questionnaire had thirty questions. These were all multiple-choice but provided opportunity for additional comments to be made. The questions in the second half of the questionnaire measured preferences on a five-point Likert scale. The questionnaire was intended to be completed as a group exercise so that the responses outlined the feelings of the SADD group rather than individuals.

While it was disappointing not to have had tapes to analyse, the questionnaire did provide interesting information on the demographics of SADD groups. A full summary of responses to the questionnaire is attached as Appendix 11. Having 16 questionnaires returned of the 48 sent out was disappointing, particularly as the 48 were supposed to be the most active of the 55% of high schools claimed to have active SADD membership (SADD Strategic Plan, 1998-2001). There must be some doubts about SADD's claim for active membership as a result of this. The size of the SADD groups responding would also give rise to doubts about the membership of active groups since, according to this data, most groups consisted of fewer than ten members.

The responses at first sight appeared shallow and indicated a narrow range of activities being undertaken, some of which had more to do with social agendas than the mission of SADD. On closer reflection, however, this may have had more to do with the way the questions were phrased in the questionnaire. There was plenty of evidence of activity. Most time was spent at SADD meetings on "debating best ways to promote SADD" or "planning SADD activities" rather than "debating alternatives to drink driving", but depending on what the activities planned were, these could have contributed to good practice in peer education. Some of the activities that groups had been involved in such as "working alongside teachers as peer educators in health & life skills classes" or "organising safe transport for after ball function" definitely did fit within the definition to a greater extent than the activities promoted by the SADD Trust to students. There was an indication in the responses that more work needs to be done by the SADD Trust in promoting the "Will to Live" contract if it considers it to be an effective strategy in preventing drink-driving. The number of contracts signed appeared uncertain from most of the responses which did not appear enthusiastic or committed.

There was a strong commitment to the organisation, however, with the vast majority of students finding membership worthwhile personally and there was a strong interest in training and conferences. The SADD Trust needs to capitalise on this enthusiasm at grass-roots level and ensure sufficient training and support is available to these students.

There will be more discussion on the questionnaire, interviews and WUSCT in the discussion that follows, on each of the research questions.

Do students who belong to SADD attain high levels of moral or ego development at a faster rate than other students of the same age do?

This question was explored by administering the WUSCT to a sample of students, some of whom belonged to SADD and some who did not. The test was administered to the same group of students twice with a twelve-month gap between the tests. Results were divided into three groups. The groups consisted of SADD members, non-SADD members and those who were members at the time of the first test but had left the organisation (and school) before the second.

The results achieved from the administration of the WUSCT did not support the hypothesis that SADD membership contributes to accelerated ego development across age groups. The group with the greatest rate of change was the non-SADD group, followed by the SADD group. The third (mixed) group showed no change. Both the level of change and the difference in numbers on each level at each age in both of the first two groups was too small (given the sample size) to be statistically significant. The results outlined in Table 10 on page 58 in which the spread of ego levels for SADD and non-SADD students was compared with those achieved in a Dutch study (Westenberg, Blasi & Cohn, 1998, p.93) showed New Zealand students to be working at higher levels than Dutch adolescents but that is to be expected since this group was proportionately older than the Dutch sample. Since an ego level of 5 (self-aware) is the median level for adults, the results of this research suggest that SADD members are generally somewhat higher in ego development than non-SADD members. There is an age effect (Westenberg et al, 1998, p.139), however, where change is more likely in younger participants who are still at school. This did not seem to be the case for SADD as the non-SADD, slightly older, students increased to a greater extent.

There are a number of possible explanations for the result. The SADD and mixed groups (who were SADD members at the time) had higher ego levels when measured in 2000. The WUSCT is hierarchical and currently has eight levels of ego development. The SADD group had an average Total Protocol Rating (TPR) or ego level of 4.85 and an average item sum score of 170 when first tested. The average TPR for the non-SADD group was 3.69 with an average score of 148. For the mixed group the average TPR was 5 and average score was 173. The following year the average TPR for the three groups was 4.89, 4.56 and 5.09 respectively. The average score for the non-SADD group had remained lower than for either of the other groups although the gap between them had closed. The average score for the non-SADD group was 165 in the second year while for the SADD and mixed groups the average scores remained virtually unchanged at 171 and 175 respectively. It is possible that through some sort of law of diminishing returns it could be expected that in the normal course of events the group with the lower initial average scores would improve in the course of a year more than the other two groups. It is also possible, using Perry's terminology (Loevinger, 1987, p.237) that the students are experiencing one of the three alternatives to growth (temporizing, retreat and escape) explained in Chapter two.

Another possibility for the lack of support for the hypothesis that SADD membership accelerates ego development is the relatively short time between tests. Manners and Durkin (2001) reported on

> a large-scale longitudinal study of male and female adolescents who had been previously tested on the WUSCT as a part of other studies. The combined participant sample represented a wide cross section of socioeconomic status (SES), ethnic background, and ability. The school grade at first testing ranged from Grade 6 to 11, and the retest period ranged from 1.5 to 6 years. There was an increase in ego stage on retest for all participants. This increase was significant for all except for those in which the retest interval was only 1.5 years, from Grade 11 to 12 and Grade 12 to 1st year of college (our emphasis) (p.556).

The students for whom the increase in ego stage was not statistically significant are in the same year and age group as those tested in this research. Our retest period was shorter so it could be even less likely that we would achieve a statistically significant result.

The hypothesis that SADD students would develop at a greater rate was based on the plus-one effect (Power et. al, 1989) observed by Blatt, a student of Kohlberg's. He noted that students who are constantly exposed to a level of reasoning one stage above their own move more quickly to the next level. Ego level too, has been shown to be stimulated through education. Cohn looked at a number of studies in order to ascertain what stimulates or inhibits growth. "At least eight studies (mainly comprised of high school students) have reported significant advances in WUSCT scores following such interventions" (Westenberg, Blasi and Cohn, 1998, p.141). Cohn noted that "environments that encourage perspective taking and reflectiveness are likely to facilitate movement away from the Conformist stage to the Self-Aware and, possibly, Conscientious stages" (Ibid p.142). SADD claims to provide such an environment.

For the plus-one effect to have been observed in this research required that the WUSCT could validly measure ego development. A recent critical review of the validity of ego theory and the WUSCT as a measuring device (Manners & Durkin, 2001) has concluded that "there is substantial empirical support for the conceptual soundness of ego development theory and the WUSCT" (p.541). More importantly, to achieve a plus-one effect required the SADD students to be regularly and consistently exposed to reflective discussions at a level of reasoning above their own. The SADD strategic plan states that one of the core functions of the organisation is to "promote positive alternatives to drink driving" (Students Against Driving Drunk, 1998, p.7). The researcher had been informed that this is done by regularly debating alternatives and confronting conflicting expectations in the manner of Kohlberg's dilemmas. This assumption provided the core on which the research was based. As it transpired the research found no evidence that this was the case.

A questionnaire was sent to each of the 48 SADD teams chosen by the national coordinator as the most active teams. Only 16 teams responded and of these only three claimed to debate alternatives to drink driving. There was no evidence in the list of activities undertaken by the groups (as outlined in the previous chapter) that any moral dilemmas were being confronted. Had a plus-one effect been observed, therefore it would

have occurred by other influences. In fact, some people did have an increase in ego level. The change was present in both the SADD and non-SADD groups. More change in the SADD group might have signalled a useful effect if indeed there had been challenging debates and discussions of moral dilemmas. Some of the activities reported as being undertaken by SADD groups may have stimulated reflective discussion of the type Cohn (Westenberg, Blasi & Cohn, 1998, p.142) claims may stimulate ego development but there is no evidence from this research to support or refute that possibility.

Does SADD operate in a way that is consistent with what is considered good practice in peer education models?

There is some dispute in the literature about what constitutes a good peer education model. There is also some dispute in SADD about whether the organisation provides peer education. SADD maintains that one of its key strengths is that it is peer-led but it sees itself as more of an advocacy group than an educational one.

SADD students interviewed maintained that SADD members were successful In influencing rather than putting pressure on their peers. There were strong indications of peer collaboration and social interaction in the student interviews. There is a strong sense of loyalty to the organisation. There is less evidence to suggest that those who belong to SADD have any feeling of commitment to leading or teaching their peers. Educational activities seem to be engaged in more for social reasons. As mentioned in Chapter 4, the type of activities undertaken by part of SADD were:

> *a slave auction to raise funds and make students aware of SADD. We've also spoken in assembly and we're going to hand out will to lives. We were going to do a dead day but that got cancelled by management because they thought too many people would cry or get upset.*

None of the SADD students interviewed could recall discussions at SADD meetings in which issues were raised and values challenged. The majority seemed to have joined SADD because they knew someone who was a member. A few claimed that they "wanted to make a difference" but by far the majority saw SADD as a way of improving their social life.

As outlined in Chapter 2, there is some evidence in the literature that peer tutoring and peer interventions can be effective in both raising achievement levels (Pressley & McCormick, 1995) and reducing risk taking (Laurenson, 1992; Evans, 1993). Evans (1993, p.24) reports on an alcohol intervention programme in Oklahoma entitled "Students Encouraging Peers Positively" or "StEPP Up". The report acknowledges the part played by SADD in this programme. In the StEPP Up programme however SADD students are trained and mentored by older college student "role models" and then return to an active involvement in their schools and communities.

In Chapter 2, components consistently mentioned in the literature (Lightfoot, 1997; Topping & Ehly, 1998; Coleman & Roker, 1998).as important for success in peer-led interventions were listed. These are:

1. Peer support should include teaching part of the programme;
2. The peer tutor should be seen as a role model by tutees;
3. The peer tutor should teach only part of the programme, in partnership with adult content experts;
4. The peer tutors must receive training and ongoing support that is both comprehensive and appropriate;
5. The programme must receive appropriate and ongoing support, including policy and financial resources; and
6. The peer group must have a voice in planning, resource development and evaluation of the programme.

If we accept these components as together making up "good practice" in peer education then they should be the criteria against which SADD is judged. The first criteria was that peers should be involved in teaching part of the programme. SADD does not usually get involved in health education programmes within schools, restricting its educational activities to members at SADD meetings. There are some exceptions to this. A number of students interviewed claimed to be used by teachers as resource people in the area of alcohol education and regularly asked to take part of the teaching of junior high school alcohol education programmes. A weakness of both the written questionnaire and the interview was that questions relating to involvement in "teaching" were not asked other

than as supplementary questions in interviews. If, however, it is the case that SADD students are not regularly involved in classroom health programmes for junior high school that is one area that could be explored for the future development of the organisation.

The second criteria is that the peer members acting as leaders or tutors need to be seen as role models. It is unlikely that is the case with SADD. The non-SADD students interviewed, who had heard of SADD, consistently classified SADD members as nerds, intellectuals or, as one student put it "girly-swots". With a membership of high achieving, high socioeconomic students who are predominantly white and predominantly female it is unlikely that SADD members would be seen as effective role models. It was recommended in a previous evaluation (Sullivan & Buchanan, 1994), that SADD needs to work at attracting a greater number of males into the organisation and to achieve greater ethnic diversity if it is to be successful as a role model organisation for youth. That recommendation is reiterated here.

Peer-led interventions seem to work best when done in collaboration with adults. There is certainly considerable adult involvement at the national level of the SADD organisation, in the area of funding and of employing, training and supervising coordinators and members. At the local level there seems to be little adult involvement. Only four of the sixteen respondents to the written questionnaire stated that a staff member is always present at SADD meetings and nine responses claimed that they never have representation. While attendance at meetings is not an issue in and of itself the only indication of ongoing adult involvement is through the national coordinator (claimed by the SADD Trust but not by the students as a member of the peer group). Perhaps relying on adolescent groups to run themselves allows them to be dominated by the social group functions rather than the intended educational and attitude change part of the organisation. It is also rather much to expect that these groups would see much point in attitude change activities for themselves. It is much more likely that they would see their task was to change others' attitudes. Consequently it is not surprising that the activities for cognitive development had very little attention. This may change if the function of the national coordinator could be more clearly that of an intermediary, securing older university students as role models and mentors, liaising with teachers to ensure SADD has some part in health education programmes, as well as facilitating frequent high-quality training sessions for members.

Another component in good practice models is that tutors receive comprehensive training and support. In this aspect SADD performs rather well. All students have access to an initial training day in the first school term and there is an annual conference for a week of the July school holidays. Thirteen of the sixteen respondents to the questionnaire had several members attend the training day. In nine cases four or more members attended. Given that most of the responding groups had fewer than ten members this is an extremely good result. The SADD conference after starting in the early 1990s with very small numbers is now regularly oversubscribed. Approximately 170 students attended the 2001 conference in the South Island. SADD members were generally positive about the conferences with 12 of the 16 questionnaire respondents claiming the conference gave them enough information to run their groups successfully. It seems that the opportunity to go to the conference must be seen as a benefit of belonging to a SADD group. Paradoxically nine of the 16 agreed with the statement that they "need more training for SADD activities to work properly" and if they are to adopt the approach mentioned previously that would certainly be the case.

The programme must receive appropriate and ongoing support, including policy and financial resources to comply with good practice. SADD fares quite well in this respect also. Most respondents (13/16) agreed that they get enough support from the coordinator and that the information supplied by the coordinator is adequate and helpful. They also liked (15/16) the style of the materials sent by SADD. Several SADD students interviewed also expressed their approval of the amount of say they have in the development of materials.

The final criteria of good practice is that the peer group must have a voice in planning, resource development and evaluation of the programme. Here again SADD fares quite well. There are two student representatives on the national SADD Trust not including the National Coordinator. Several students commented that the policy direction of the organisation is largely determined by the students at national conference although this is obviously subject to the approval of the SADD Trust. The SADD Trust provides funding for administration, employment of coordinators, training and the development and distribution of resources. Local SADD groups must find funding for their own activities

and for sending students to conference. Fund raising was one area raised by several students as an area in which they could use more training.

In summary then, it would seem that SADD does exhibit some of the characteristics of good practice in peer education but some areas could use improvement. In particular it appears that SADD could look at extending its role from peer support to active involvement in education at the lower high school levels. To do this effectively will require expanding the demographics of membership to include more male members and members from ethnic minorities. It should also work on broadening its appeal to students in lower socioeconomic groups. This would strengthen the adult support for the organisation, would provide a more effective channel for SADD messages and would place the intervention where research (Keefe, 1994) says it is most likely to positively influence behaviour. If SADD continues to maintain that it is peer-led but that its role is advocacy not education, then government funding support for the organisation is unlikely to be forthcoming. Government funding is not normally given to those organisations whose major function is to lobby Government. If the function of SADD is to assist in health education and advise Government on interventions likely to succeed with young people, then Government would have difficulty justifying any resistance to providing funding.

What indications are there in the stories of those interviewed that the SADD message is having a positive effect on safety culture within the school and peer group?

Since SADD came into existence in the mid-1980s the number of alcohol related crashes in the age group serviced by SADD has diminished, although the reduction in alcohol related harm among students has not decreased as a proportion of all alcohol related crashes in the past decade (Begg, et al, 2001, p.293). In fact there was an increase in the proportion of fatal and injury road crashes in which alcohol was a factor, for the student age group during this period. This may have been partially due to the recent lowering of the drinking age. SADD claims some credit for the reduction through the 1990s. Certainly there is some evidence in the interview responses that there have been changes in the attitudes of youth towards drinking and driving since SADD came on the scene. Both SADD and non-SADD students were equally supportive of the slogan used in Land Transport Safety Authority (LTSA) and Police advertising "If you drink then drive, you're a

bloody idiot". Both groups agreed it was, as one student said, "fully true, eh". This change in attitude has also been noted in LTSA annual attitude surveys. A report on these surveys (Land Transport Safety Authority, 2002) notes that there is now little public sympathy for those caught driving drunk, except in rural areas. This is a big change from the 1970's when the prevailing attitude was that it was just bad luck to get caught while driving drunk.

The SADD National Coordinator points to the submissions made by SADD on issues such as the lowering of the drinking age and the changing view of students and schools towards after-ball functions as evidence of the influence SADD has had on youth culture. Several factors make SADD's claim to be the catalyst in this change unlikely, however. Firstly drink driving crashes have diminished across all age groups over the same period and attitudes towards drink driving have improved across all age groups. In addition the interviews conducted with non-SADD students, who had little knowledge of SADD or its message but who held similar attitudes towards drink driving, suggest that factors other than SADD may have been more influential in bringing about the change.

Has SADD been successful in attaining the mission set in its strategic plan?

The mission in SADD's strategic plan 1998-2001 is "to reduce harm amongst students by promoting alternatives to drinking and driving through positive peer influences" (p.1). There are few indications of success in this mission although as mentioned at the beginning of this chapter the timing of this research caught the organisation at its lowest point.

There is evidence that SADD does provide a positive peer influence and does promote alternatives to drinking and driving. Many of the activities undertaken by SADD (assembly talks and drama competitions for example) do provide both alternatives to drink-driving and positive peer role models.

There is little in the research findings to suggest that the SADD mission is a strong influence on activity at the local level. In only three of the 16 groups that responded to the questionnaire were alternatives to drink driving debated openly. Several groups and students interviewed discussed the work done in the school to raise student awareness of the alternatives to drink driving, particularly near the time of the school ball. Mention was made of the use of the "Will to Live" as part of awareness raising. There is, however, no

evidence that this activity has reduced harm among students nor is there evidence that SADD's positive peer influence has any effect on students other than SADD members. Few non-SADD members had heard of SADD, yet many shared the attitudes towards driving after drinking, at least as expressed to the interviewer, as did SADD members.

Is the SADD organisation effective?

This is the main research question and can be answered by summarising the answers to the four sub-questions. Some indications of effectiveness that were not explored directly in this research became apparent through the research process. The position of the SADD National Coordinator on advisory groups run by the Ministry of Youth Affairs and the Alcohol Advisory Council provides some evidence that SADD is effective in promoting itself as the voice of youth within government. SADD is consulted at a national level on a number of issues relating to health promotion, drug and alcohol legislation, road safety and justice. The members advocate strongly for a greater say in youth issues by youth and provide submissions on important legislation. That the organisation is asked to appear before select committees is testimony to its effectiveness. These activities were mentioned in an interview with the SADD National Coordinator who provided press articles as verification. In the areas that were explored the organisation has been less able to demonstrate effectiveness.

Does membership of SADD contribute to accelerated ego development? This research found no evidence to support the hypothesis that membership of SADD contributes to accelerated ego development but did find some evidence that SADD members are more advanced in ego level than non-SADD adolescents of the same age. This is consistent with Loevinger's theory (Hy & Loevinger, 1996). Non-SADD students were operating, on average at the self-protective ego level when first assessed. Self-protective people lack long term goals and ideals. They "want immediate gratification and, if they can will exploit others for their ends. Seeing interpersonal relationships as exploitative, they are themselves wary and self-protective" (Ibid. p.5). People operating at this level are not likely to be interested in joining an organisation like SADD.

SADD members, however, were operating between the Conformist and Self-Aware stages. The Conformist stage:

> is the period of greatest cognitive simplicity: there is a right way and a wrong way, and it is the same for everyone all the time, or at least for broad classes of people described in demographic terms. What is conventional and socially approved is right. (Hy & Loevinger, 1996, p.5)

The Self-Aware stage is still basically a version of conformity but the "ability to conceptualize inner life expands; interpersonal relationships are described not merely as actions but also in terms of feelings" (Ibid. p.5). People at this stage still believe in rules of right and wrong but now with contingencies. Some things may be acceptable if you are a certain age or sex rather than because you are personally qualified. People operating at these levels, therefore are far more likely to be attracted to an organisation that seeks to prevent a socially unacceptable behaviour, driving after drinking.

Does SADD engage in good practice in peer education? There are some characteristics of effective peer education that apply to SADD but there are a number of areas in which it needs to improve if it is to be effective as a peer education organisation. SADD does not claim to be an educative organisation but to influence and lead peers. Research evidence in the areas of peer tutoring and peer mentoring suggests, however, that SADD would be more effective in influencing peers if it became more involved in educating younger students. This would conform to what is accepted as good practice in peer education and would enable SADD to influence adolescent students at a time when choices are being made and role models sought. This research found no evidence that the organisation currently engages in such practice as a general rule although there were isolated exceptions.

Does SADD positively affect safety culture within the school and wider peer group? SADD members feel strongly that involvement in their organisation is worthwhile and that members are having an influence on non-members. That view is not shared by non-members, however. The data collected in the interviews for this research provided no evidence to support the suggestion that SADD members are influential role models for students as a whole. The increasing numbers attending SADD conference is cited as evidence of increasing membership of SADD. That is indicative of some influence.

However, as mentioned previously, the lack of response to the questionnaires and the small numbers in each SADD group cast some doubt on the claim to have an increasing membership base. It seems unlikely, therefore that the SADD organisation has an effect on safety culture within schools and the peer group beyond their own members.

Has SADD achieved its mission? There is little in the data to suggest that SADD has achieved its mission or influenced safety culture within the peer group although there is a strong indication in the stories told by members that they believe this to be so. Lack of evidence may be more to do with the research methodology used in this research project than with the organisation. Such indicators as exist in the data collected in this project would not support that conclusion, however.

"Is SADD effective?". The answer to this question would therefore have to be that, while there are some indications of efficacy, more needs to be done if SADD is genuinely able to claim success as an effective peer-led youth organisation.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

Reason for study

This research arose out of concerns in 1998 that the organisation Students Against Driving Drunk (SADD) had no recent evaluation of its effectiveness as a peer-led youth organisation dedicated to "reduce harm amongst students by promoting alternatives to drinking and driving through positive peer influences" (p.1). SADD was having difficulty in attracting funding as a consequence of its inability to prove effectiveness and requested a new evaluation.

It was considered highly unlikely that evidence could be found to show a direct relationship between membership of SADD and reduction in youth drink-driving crashes so other methods of assessing effectiveness were sought.

Cognitive development and risk taking

At the time this research was considered there was some research activity in government into the area of youth risk-taking and the potential benefits in terms of road safety if risk taking could be reduced.

We know that the adolescents most likely to be involved in motor vehicle crashes are young men from lower socioeconomic backgrounds (Sheehan, Baum, Ferguson & Schonfeld, 1998), and that this group is also the most likely to exhibit risky behaviour (Williams & Smith, 1993). It is consistent with both Loevinger's and Kohlberg's developmental theories that those adolescents operating at higher moral or ego levels are less likely to take risks or be involved in traffic crashes. If they are operating at post-conformist levels on Loevinger's hierarchy (Self-Aware, Conscientious, Individualistic, Autonomous or Integrated), they would have the qualities that would allow them to anticipate consequences and inhibit risk taking, such as decision making, impulse control, conscious preoccupations and metacognition. At lower levels people are unable to think beyond the here and now. They want immediate gratification and can not accept responsibility for their actions. Blame is always assigned to others or to circumstances. They would be incapable of anticipating any negative consequences of their risk taking.

Does exposure to peer led discussion promote ego development

Developmental research had shown that it was possible to raise moral or ego levels through moral education (Power, Higgins & Kohlberg, 1989) or reflective peer discussion (Westenberg, Blasi, & Cohn, 1998). Blatt, one of Kohlberg's students, had shown, in what became known as the "plus-one" effect, that it was possible to achieve higher levels of moral development with moral education (Power et al., 1989). Cohn reports on a number of studies (in Westenberg, et al, 1998) where ego development has been stimulated through peer mentoring and tutoring.

SADD is a peer-led student organisation that claimed to regularly expose members to reflective debate about the consequences of one risky driving behaviour, drink-driving, and asks students to consider alternatives. It was hypothesised therefore that if it could be shown that SADD members move to high operating moral or ego levels more quickly than other students, and as there is some empirical support (Manners & Durkin, 2001) for the notion that high ego levels equate to lower risk taking behaviour, then it may be possible that SADD membership makes students less likely to engage in risky behaviours. This would be one measure of the organisation's effectiveness particularly if it could be shown that development occurred after the student joined the organisation and not that membership of the organisation was something that appealed only to those students already operating at high levels.

Research design and procedure

A research design was determined upon that would measure SADD and non-SADD students in a number of ways. Ego levels of SADD and non-SADD students were measured a year apart using the Washington University Sentence Completion Test (WUSCT) in order to determine growth. A sample of the students who undertook the WUSCT were interviewed to get a picture of their beliefs and attitudes and also to get some information on what activity was going on in the organisation that may have contributed to any effect observed. A questionnaire was sent to SADD groups to get a cross-check on the type of activity undertaken and to map the demographics of active SADD groups.

SADD and serious moral debate

It was assumed prior to commencement that SADD was actively involved in both peer education of the wider peer group and serious debate among members of how to resist the pressure to drive or be driven after drinking. No work was done prior to the main research to

check that assumption which proved, in the main, to be false. SADD was not responsible for this assumption. They claimed to be peer-led but at no time had claimed to be actively involved in peer education. They did claim that their activities positively affected the behaviour of non-members through indirect peer influence. This research saw numerous examples of SADD activities but found no evidence of any participation in debating moral dilemmas or alternative solutions to social problems. Had an effect such as the "plus-one" effect been observed it would have occurred from circumstances other than the moral education provided by SADD.

No significant difference was observed in patterns of personality development between the SADD and non-SADD students but the trends identified were in keeping with the literature. The ego levels were higher in SADD students than in non-SADD students. As mentioned in the previous chapter, it is unlikely that those students operating at levels below Conformist on Loevinger's scale (see Table 2, p.19) would be attracted to an organisation such as SADD. A feature of lower levels is a lack of long-term goals and ideals necessary to make the type of commitment SADD membership requires. In addition, older students scored higher than did younger students which is consistent with the hierarchical development proposed in Loevinger's theory. It also reflects research findings that development is rapid throughout adolescence but plateaus in early adulthood (Manners & Durkin, 2001)

Suggestions for improvements to research design regarding WUSCT

Although the findings were in line with the literature, it is difficult to observe patterns of development given the small size of the final sample. Although over 200 students completed WUSCT forms in 2000, only 54 valid forms were available for comparison after the 2001 administering of the test. Future research would need to ensure a more robust sample. If the attrition rate is typical then a sample of over 1000 students may be needed at the first administering. This has obvious resource implications which makes the value in doing this questionable for the purposes of determining the efficacy of SADD.

Another factor that made it difficult to determine trends in this research is the time lag between tests. A year was considered the minimum time lag for growth to be ascertained. This may not have been enough. The Redmore and Loevinger large-scale longitudinal study mentioned in Manners and Durkin (2001, p.555) found statistically significant correlation between test and retest in all samples except adolescents in which the retest interval was only a year and a half. Future research into adolescent personality development over time may do well to consider leaving two or three years between the baseline and post intervention

measures. A large longitudinal study would be necessary and would be of value if the WUSCT was to be used to test the proposition that more mature thinkers take fewer risks.

SADD's possible value

SADD has grown as an organisation since its early beginnings in 1985 both in student representation and in its local and national infrastructure. Its value and strength may be in giving a justification for idealistic young people to gather in a social situation and feel they are contributing to the public good. What SADD might do is act as a catalyst and a source of publicising positive messages about youth or youth initiated activities to policy makers and the wider public but it will need to make some change if it is to be effective as an agent of social change in the area of drink driving. In particular the organisation could benefit from increased emphasis on changing the demographics of the organisation to increase the representation of males and those from ethnic minorities. It is accepted that this will not be easy as prospective members will need to be operating at ego levels at the Conformist level or above to see any value in membership.

Recommendations

The recommendations coming out of this study fall into two categories. In the first place there are recommendations for increasing the efficacy of SADD if it is to meet its mission. Secondly there is a recommendation for future research into the relationship between risk taking and ego development.

While there is little doubt that those who choose to join SADD receive social benefits and self esteem from membership it could achieve more. It is recommended that:

- SADD consider becoming more active in the area of peer education and, in this regard, liaise with teaching staff to ensure greater use of SADD students as peer tutors in school health programmes;
- SADD make greater use of older students in tertiary institutions to train and mentor school-based SADD representatives;
- The job description of the National Coordinator and any regional coordinators be altered to reflect the change in focus;
- The National Coordinator facilitate more regular training sessions with students; and

- SADD consider ways to attract younger and more self-defensive adolescents to keep them from straying into antisocial or dangerous activities. This would strengthen the adult support for the organisation, would provide a more effective channel for SADD messages and would place the intervention where research (Keefe, 1994) says it is most likely to positively influence behaviour

No light was shed from this research on whether there is a direct link between ego level and risk taking or whether ego level can be stimulated by peer education. The literature review hinted at the potential and although the links are tentative the possibility is tantalising. Further longitudinal research work should be done to explore the linkages between education, adolescent ego development and risk taking. The research will need to control the variables more than was possible in this research with experimental groups receiving different types of educational intervention. Both the experimental and control groups should be carefully but randomly selected to include a balance of age, gender, ethnicity and socioeconomic level.

Conceptual issue of cognitive development and risk taking

Do higher ego levels correspond with lower levels of risk taking? "Loevinger regarded it as inappropriate to expect a clear one-to-one relationship between ego stage and overt behaviour" (Manners & Durkin, 2001, p.558). One study has shown itself to have predictive validity between ego development and behaviour. This was in the area of contraception. Further research in other areas of social behaviour that achieves similar results is required before this "can be said to have substantial empirical support" (Ibid, p.558). We know there is a direct correlation between high levels of unnecessary risk taking and injury, so research must be possible that would explore the predictive validity of the relationship between ego level and risk taking behaviour. If there is empirical support for that predictive validity then research needs to explore ways to increase ego levels through education in the manner of the plus-one effect achieved by Blatt in moral education. In these research areas may lie the key to dramatically lower adolescent mortality and morbidity figures across all areas of risk.

Final comments

This research aimed to evaluate the effectiveness of SADD by looking at the wider realm of adolescent personality development. This was probably unfair to SADD, as it has never claimed to be effective in stimulating personality development. It claims to be an

organisation in which young people lead their peers by motivating, enthusing and supporting them to think and act independently to avoid driving after drinking.

The research did identify areas of strength and suggested areas for improvement. It found that:

- Active SADD groups are not as widespread as expected;
- SADD groups are smaller than expected with the majority of groups having fewer than ten members;
- SADD group activities are outward focused rather than inward looking; and
- There is evidence that SADD is achieving the part of its mission related to "promoting alternatives to drinking though positive peer influences" but less evidence that this is leading to reduced harm among students.

There is evidence of considerable enthusiasm and positive strength in the SADD peer group. In particular:

- SADD members like the organisation;
- SADD members like influencing their peers;
- SADD members are probably more mature than other students of the same age; and
- SADD members like being given leadership training.

The SADD organisation could and should continue to be supported to maximise its strengths. There is also evidence that it is well placed to influence decision makers. If it is to truly influence peer safety culture, however, some change will be needed. It will need to reach a wider cross-section of youth sub-cultures. An earlier evaluation of SADD (Sullivan & Buchanan, 1994) had suggested that SADD needs to broaden its membership to in include a greater proportion of male and Maori students. That recommendation was reiterated here, but it is accepted that will be difficult.

One possible way to reach these students could be for SADD to become more active in peer education as defined by Coleman and Roker (1998). They said that it is "an approach which empowers young people to work with other young people, and which draws on the positive strength of the peer group. By means of appropriate training and support, the young people become active players in the educational process rather than passive recipients of a set message" (p.139). The literature provides compelling evidence (Coleman & Roker, 1998; Evans, 1993; Lightfoot, 1997; Topping & Ehly, 1998) of the efficacy of peer education particularly in the area of health. The SADD Trust must take a more active role in steering

the direction of SADD towards the models of efficacy in peer tutoring and peer mentoring that exist in abundance.

The New Zealand SADD movement is unique. The literature search found no evidence of similar organisations operating in this country. SADD may not be able to demonstrate efficacy in terms of reduced road trauma or enhanced safety culture but SADD groups in schools do gather together the enthusiasm of some students who will use their energies in promoting desirable attitudes and responsible behaviours. They can also inform adult groups on adolescent perspectives. These functions in and of themselves have value and merit support.

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Appendix 1a.

SADD Research Project Interview Schedule

Date_____ **Time**_____ **ID**_____

Questions

1. How old are you?
2. Tell me what you know about the organisation "Students Against Driving Drunk"(SADD)?
3. Do you belong to the organisation?
4. Why? /Why not?
5. How would you describe the sorts of people who belong to SADD?
6. How would you describe the sorts of people who do not belong to SADD?
7. How old were you when you chose to join?
8. Was there any personal experience eg. Losing a friend, that influenced your membership choice? Tell me about it.
9. How active were you or are you in the group?
10. Have you ever activated the "Will to Live" and called your parents to pick you up from a party? Tell me about it.
11. Had you ever had the opportunity to be interviewed by the media about SADD? Tell me about it.
12. What positive offshoots are there of SADD membership? eg. participation in the Hawke's Bay leadership camp.
13. Can you think of a time in which you intervened in someone else's behaviour because of your SADD convictions? Tell me about it.
14. Has there ever been a time when your principles were sorely tested? Did you succumb?
15. How has membership of SADD affected your lives?

Appendix 1b.

A SADD Dilemma

Two friends, Chris and Sam were invited to a rage at a remote farmhouse. Chris' father was persuaded to loan them his new car to get there on the conditions that Chris did not drink and that no one else drove the car.

At first the party was brilliant but later it got out of control as crowds of the heavy brigade gatecrashed. Chris and Sam decided to leave. The mocktails at the party must have been high octane because as they reached the open air Chris realised that driving was not an option. Sam was in training and had only drunk Diet Coke. Chris asked Sam to drive even though they both knew Sam only had a restricted licence. Sam reluctantly agreed.

The drive was pretty hairy, as Sam had never driven at night or on gravel roads. Finally, it happened. Sam came around a corner and froze as the tail of the car started to move sideways. The car spun right around and slammed into the bank on the other side of the road facing the way they had come.

Fortunately, neither friend was hurt but as they surveyed the damage they knew that would only last until Chris' dad caught up with them. Chris turned to Sam and said, "Dad will kill me. Can I spend the night at your place? I'll go home in the morning when I'm sober and tell him I did it."

1. Has either friend done anything wrong?
2. Should Sam be punished for breaking the law?
3. Should Chris be punished for not telling the truth?
4. Should Chris have driven the car?
5. Is it ever right to break the law?
6. The friends don't really believe that Chris' dad will kill them but is murder ever justified.

Appendix 2

SADD Research Project Interview Schedule

Date_____ **Time**_____ **ID**_____

Questions

1. If you had to describe the person you are in a way that you yourself would know it was you, what would you say?

2. In an American study, students identified the crowds who hang around together at school as jocks, loners, druggies, popular, nerds etc. What names would you give to the major crowds in your school?

3. Please provide a one-sentence description of each group

4. Can you describe the distinguishing features of each crowd - the appearance, attitudes, activities, hangouts, and so forth that typify members of each group?

5. Which crowd would you say you belong to?

6. Which crowds do your three closest friends belong to?

7. Do you have a driver licence? Learner, Restricted or Full?

8. What do you think of the change in the law to lower the drinking age?

9. Do you drink alcohol socially?

10. What do you think of the changes to the driving licence system?

11. According to the LTSA/Police TV Ads "If you drink then drive you're a bloody idiot". What do you think of this slogan?

12. If you were discussing this with a group of friends what beliefs are likely to come out of the group?

Appendix 2

13. Do any students drive after drinking?

14. If so, is there any one of the groups you mentioned earlier that these students are more likely to belong to? Which one?

15. Tell me what you know about the organisation "Students Against Driving Drunk"(SADD)?

16. Do you belong to the organisation?

17. Why? /Why not?

18. Which crowd would you say the average member of SADD belongs to?

19. Why did you place them there?

20. What effect do you believe the organisation has on the behaviour of those who choose not to join?

Remaining Questions for SADD members only.

21. How old were you when you chose to join?

22. Was there any personal experience eg. Losing a friend, that influenced your membership choice? Tell me about it.

23. What activities did you take part in with the group? (eg. Are you a committee member?)

24. Have you ever activated the "Will to Live" and called your parents to pick you up from a party? Tell me all about that incident.

25. Have you ever had the opportunity to be interviewed by the media about SADD? If so, describe the situation.

Appendix 2

26. What positive offshoots are there of SADD membership? (eg. participation in the Hawke's Bay leadership camp.)

27. Can you think of a time in which you intervened in someone else's behaviour because of your SADD convictions? Tell me about it.

28. Has there ever been a time when your principles were sorely tested? Did you succumb?

29. How has membership of SADD affected your lives?

Appendix 3

ID_____

Date_____

Evaluation for:
Students Against Driving Drunk

Conducted by:
Bill Robertson
Struan Enterprises
For Massey University

This questionnaire is part of a research project to evaluate the organisation Students Against Driving Drunk (SADD). Please take the time to answer each question individually or in a group. The results are important for the future funding of the organisation. Put your combined ideas on this **one** questionnaire; **don't make lots of copies.**

The information you provide is **confidential.** No person or school will be identified to SADD or anyone outside the Massey University research team.

Please put your questionnaire in the stamped, addressed envelope provided and post it back as soon as possible. Post back by **1 August please.**

---

1. How often does the SADD group at your school meet? (tick one)
Weekly ☐ Monthly ☐ Once a term ☐ When necessary ☐

2. How many students regularly attend these meetings? (tick one)
< 10 ☐ 10-15 ☐ 15-20 ☐ >20 ☐

3. Of the students who regularly attend, how many are female? (tick one)
< 50% ☐ About 50% ☐ > 50% ☐

4. Please place a tick alongside each of the following ethnic groups that are represented in your SADD group.
New Zealand European ☐
New Zealand Maori ☐
Pacific People ☐
Other ☐

5. How is the time spent at each of your SADD meetings? Tick as many of the following options as are relevant.
Debating alternatives to drink-driving ☐
Debating topical issues related to youth drinking/driving ☐
Debating best ways to promote SADD ☐
Debating best ways to increase membership ☐
Planning SADD activities ☐
Planning media activities ☐
Role-play (Crash Bash etc.) ☐
Other (please specify below) ☐

---

6. What activities has your SADD group been involved in this year? Tick as many of the following options as are relevant.

Crash Bash competition ☐
Mock Crash ☐
Lunchtime concert ☐
Assembly talks ☐
Mock Funeral ☐
Dead Day ☐
Advertising (all types) ☐
Making a video of your SADD group ☐
Other (Please specify below) ☐

7. Which of the following activities are being planned by your SADD group for later in the year?

Crash Bash competition ☐
Mock Crash ☐
Lunchtime concert ☐
Assembly talks ☐
Mock Funeral ☐
Dead Day ☐
Advertising (all types) ☐
Making a video of your SADD group ☐
Other (Please specify below) ☐

8. How many members of your SADD group attended a training day at the beginning of this year? (tick one)

0 ☐ 1 ☐ 2 ☐ 3 ☐ >3 ☐

9. If no members attended what was the reason for that? (Tick one)

There was no training day close enough ☐
We didn't receive notification until it was too late ☐
The date clashed with other commitments ☐
The school would not give us permission ☐
Our group was not formed at that time ☐
No one was interested ☐
Other (Please specify below) ☐

Appendix 3

10. Are your SADD meetings always held at school?
Yes ☐ No ☐

11. Do staff members from school attend your meetings? (Tick one)
Always ☐ Occasionally ☐ Never ☐

12. When are your meetings held? Tick as many of the following options as are relevant.
Before school ☐
During school time ☐
At intervals (including lunchtime) ☐
After school ☐

13. About how many contracts (both Will to Live and Lifesaver) have been distributed this year in your school?

14. How many of these contracts would you estimate have been taken home and discussed? (Tick one)
All or nearly all ☐
Most ☐
About half ☐
Less than half ☐
Hardly any ☐

Please rate the extent to which you agree or disagree with the following statements by circling a number from 1 to 5. Circle 3 if you are neutral, neither agreeing nor disagreeing

Disagree strongly | 1 | 2 | 3 | 4 | 5 | *Agree strongly*

15. Our SADD group gets enough support from the National Coordinator.
Disagree strongly | 1 | 2 | 3 | 4 | 5 | *Agree strongly*

16. Information provided by the Coordinator is adequate and helpful.
Disagree strongly | 1 | 2 | 3 | 4 | 5 | *Agree strongly*

17. We look forward to getting Planet SADD
Disagree strongly | 1 | 2 | 3 | 4 | 5 | *Agree strongly*

18. We like the style of materials sent to us by SADD.
Disagree strongly | 1 | 2 | 3 | 4 | 5 | *Agree strongly*

19. Conferences give us enough information to set up long term SADD Groups
Disagree strongly | 1 | 2 | 3 | 4 | 5 | *Agree strongly*

Appendix 3

20. We need more training for SADD activities to work properly

Disagree strongly	1	2	3	4	5	*Agree strongly*

21. Will to Live and Lifesaver contracts are an excellent way of helping to prevent drink-driving crashes involving students

Disagree strongly	1	2	3	4	5	*Agree strongly*

22. Assemblies are an effective way to introduce SADD

Disagree strongly	1	2	3	4	5	*Agree strongly*

23. Being involved with SADD is very worthwhile personally

Disagree strongly	1	2	3	4	5	*Agree strongly*

24. SADD has a high profile in our school this year.

Disagree strongly	1	2	3	4	5	*Agree strongly*

25. SADD had a higher profile in our school this time last year

Disagree strongly	1	2	3	4	5	*Agree strongly*

26. At our school we need more support for SADD from the staff.

Disagree strongly	1	2	3	4	5	*Agree strongly*

27. At our school there is at least one teacher we can usually rely on to help SADD.

Disagree strongly	1	2	3	4	5	*Agree strongly*

28. The school office passes on SADD material to us quickly

1	2	3	4	5	*Agree strongly*

29. SADD needs to broaden its focus as has SADD USA to encompass all destructive decisions including drugs and suicide as well as alcohol

Disagree strongly	1	2	3	4	5	*Agree strongly*

30. The SADD website provides all the information we need.

Disagree strongly	1	2	3	4	5	*Agree strongly*

Thank you: Please put your questionnaire in the envelope provided and post it back by **1 August.** If the envelope provided has been lost, please post to: Bill Robertson, P O Box 528, PARAPARAUMU or fax to 04 902 4770.

Appendix 4

SENTENCE COMPLETION FOR BOYS

Code # _____

Age: .....(years).....(months)

I am a member of SADD (Students Against Driving Drunk) Yes / No

Instructions: Complete the following sentences in any way that you wish.

1. If I had more money
2. When a child will not join in group activities
3. Raising children
4. When I am criticized
5. If I were in charge
6. Being with other people
7. The thing I like about myself is
8. My mother and I
9. What gets me into trouble is
10. Education
11. When people are helpless
12. When I am afraid
13. A good father
14. My biggest fear
15. I feel sorry
16. When they avoided me
17. Rules are
18. A girl has a right to

Appendix 4

Instructions: Complete the following sentences in any way that you wish.

19. When I get mad
20. Crime and delinquency could be halted if
21. Women are lucky because
22. I just can't stand people who
23. At times I worry about
24. I am
25. A boy feels good when
26. My main problem is
27. Good friends
28. The worst thing about being a man
29. A good mother
30. When I am with a girl
31. Sometimes I wish that
32. My father
33. If I can't get what I want
34. My conscience bothers me if
35. I felt proud that I
36. A man should always

Appendix 4

SENTENCE COMPLETION FOR GIRLS

Age: .....(years).....(months)

Code # _____

I am a member of SADD (Students Against Driving Drunk) Yes / No

Instructions: Complete the following sentences in any way that you wish.

1. If I had more money
2. When a child will not join in group activities
3. Raising children
4. When I am criticized
5. If I were in charge
6. Being with other people
7. The thing I like about myself is
8. My mother and I
9. What gets me into trouble is
10. Education
11. When people are helpless
12. When I am afraid
13. A good father
14. My biggest fear
15. I feel sorry
16. When they avoided me
17. Rules are
18. A girl has a right to

Appendix 4

Instructions: Complete the following sentences in any way that you wish.

19. When I get mad
20. Crime and delinquency could be halted if
21. Men are lucky because
22. I just can't stand people who
23. At times I worry about
24. I am
25. A girl feels good when
26. My main problem is
27. Good friends
28. The worst thing about being a woman
29. A good mother
30. When I am with a boy
31. Sometimes I wish that
32. My father
33. If I can't get what I want
34. My conscience bothers me if
35. I felt proud that I
36. A woman should always

Appendix 5

Massey University

Office of the Principal
Massey University
Albany Campus
Private Bag 102 904,
North Shore MSC,
Auckland,
New Zealand
Principal: 64 9 443 9799 ext 9517
Campus Registrar: 64 9 443 9799 ext 9516
Facsimile: 64 9 414 0814

28 June 2000

Bill Robertson
C/O Sue Watson
Health & Development, College of Education
Massey University
Palmerston North

Dear Bill

HUMAN ETHICS APPROVAL APPLICATION – MUHEC 00/040
EFFECTIVENESS EVALUATIVE STUDY OF THE ORGANISATION "STUDENTS AGAINST DRIVING DRUNK"

Thank you for your amended application details, which we recently received and have been placed on our files.

The amendments you have made now meet the requirements of the Massey University, Albany Campus, Human Ethics Committee and the ethics of your application, therefore, are approved.

Yours sincerely

Mike O'B

Dr Mike O'Brien
CHAIRPERSON,
MASSEY UNIVERSITY, ALBANY CAMPUS
HUMAN ETHICS COMMITTEE

cc. Sue Watson, Health & Development, College of Education, Massey University, Palmerston North

Appendix 6.

Massey University
COLLEGE OF EDUCATION
Te Kupenga o Te Mātauranga

Department of Health & Human Development
- Physical Education
- Guidance & Counselling
- Health Education
- Human Development

Private Bag 11 222,
Palmerston North,
New Zealand
Telephone: 64 6 356 9099
Facsimile: 64 6 351 3353

31 March 2000

The Principal

Dear

I am writing to inform you of a research project I am undertaking that requires access to senior secondary school pupils. I am therefore seeking your support and that of students at your school. As I have been a teacher I am mindful of the need to minimise disruptions to the academic programme. I appreciate that I have a responsibility to the school and the young people and their parents to take up as little of the students' valuable time as possible.

The research project will evaluate the effectiveness of the organisation Students Against Driving Drunk (SADD). Your school has been recommended to me as a school with a strong commitment to both student welfare and the SADD organisation. I know you understand how important it is to encourage young people to be more aware of their personal safety and that of others, and therefore to find out how SADD may be meeting those objectives. The resulting research report will be used by the national SADD Trust to make decisions on future activities but it will also be used by me to fulfil the requirements of Massey University for the degree of Master of Education.

The primary objective of this research is to answer the question "Is the SADD organisation effective?". Sub questions which will lead to the achievement of the primary objective include:

1. Have students who belong to SADD attained higher levels of ego development than other students of the same age?
2. Does SADD operate in a way that is consistent with what is considered best practice in peer education models? For the purposes of this research best practice in peer education is defined as *"an approach which empowers young people to work with other young people, and which draws on the positive strength of the peer group. By means of appropriate training and support, the young people become active players in the educational process rather than passive recipients of a set message"* (Coleman & Roker, 1998, p.139)
3. Has SADD been successful in attaining the objectives set in its strategic plan?
4. What indications are there in the stories of those interviewed that the SADD message is having a positive effect on the safety culture within the school and peer group?
5. What indications are there that the activities of the organisation are effective in changing the behaviour of other people?

To help me answer these questions I would be seeking the assistance of yourself and your students in three ways:

Appendix 6.

(a) I will provide an information sheet and consent form in which year 12 students will be asked to volunteer to complete a Youth version of the Washington University Sentence Completion Test. It is hoped the school will assist by distributing these to all year 12 students. This component is part of an International benchmarking study of ego development in adolescence and would be used in this study to assess differences in moral development between those students who join SADD and those who choose not to. The test takes about thirty minutes to administer. Ideally it could be done in class groups administered by classroom teachers. If this presents timing difficulties I would be happy to administer the test to those who volunteer during the lunch break if a suitable room could be made available.

It will be necessary in order to determine rates of development to test students twice with a twelve-month gap between tests. For this reason it is essential that I collect contact details for the students who agree to take part. Students will be asked to give their consent to being contacted again in 12 months.

Students will have the right to withdraw from this activity until the data from the first test is collated. Students may, of course, choose not to take part in the second test when contacted in twelve months. In this case their data from the first test will not be used for the SADD evaluation but it will still have been used for the international benchmarking study. So effectively the point at which they can no longer withdraw from the study is the point at which data from the first test has been collated.

(b) Those year 12 students who undertake the Sentence Completion Test will be approached by phone or mail and would be asked to take part in an additional interview. These would be individual (one-on-one) interviews, although candidates would be welcome to bring a support person if deemed necessary for reasons of comfort or culture. The interview would seek to uncover the students' beliefs about alcohol and driving and to determine their knowledge of SADD and its activities.

Each interview would take about thirty minutes. It is intended that they be held before school, after school and in the lunch break. It is hoped that the school could make a suitable private space available for this purpose.

Students will have the right to withdraw from the activity at any time until the tape from their interview has been transcribed. From that point on withdrawal will not be possible.

(c) The school SADD convenor will be asked to provide members of the SADD group at your school with an information sheet and consent form seeking permission to videotape SADD meetings, training days and any special projects. Consent forms will be collected by the convenor before any taping commences. These tapes will be analysed for evidence that the interactions contain the elements of the previously stated definition of best practice in peer education. The activities will also be compared against the model put forward by Thomas Lickona (Pressley & McCormick, 1995, p.282)of effective techniques for moral education to see how well they conform. It is hoped that the school will agree to make a video camera available for this purpose.

Appendix 6.

Students may wish to attend the meeting but not be videotaped. If any student feels that way taping will not proceed. If students consent to the videotaping they may still ask that the tape be turned off at any point. In this case the tape will not be used. Students who choose to remain for the videotaped session will not have the right to withdraw once the tape has been submitted for analysis but no personal information would be obtained or used from these tapes.

All research participants have rights, which will be safeguarded. The ethical principles recommended in the Massey University Code of Ethical Conduct will be followed. These are as follows:

1. **Participation is voluntary and requires informed consent.**
2. **All students have the right to decline to participate; to withdraw from the activity at any time prior to those times stipulated earlier in this letter; to ask to have a recording device turned off; to ask questions at any time and to receive information about the outcome of the activity.**
3. **The confidentiality of the data, the individuals and the schools will be guaranteed.**
4. **The researcher will take every precaution to ensure the research does not place the participant at risk.**
5. **The truthfulness principle requires that participants understand the true purpose of the research. There will be no deception.**
6. The researcher will endeavour to maintain social sensitivity, particularly cultural sensitivity throughout the research.

Should you require confirmation of Massey's involvement or if you wish to ask any questions relating to the conducting of the research they can be directed to my supervisor:

Sue Watson
Department of Health and Human Development
Massey University College of Education
Private Bag 11-222
PALMERSTON NORTH
Ph. 06 350 5799 Ext. 8882
Fax. 06 351 3367

I would welcome your agreement to approach students at your school with a request to participate in this research. I will follow this letter with a phone call in which I will be happy to answer any additional questions you may have.

Yours sincerely

Bill Robertson
Researcher
Ph 025 468 773

Appendix 7.

Massey University
COLLEGE OF EDUCATION
Te Kupenga o Te Mātauranga

Department of Health & Human Development
- Physical Education
- Guidance & Counselling
- Health Education
- Human Development

Private Bag 11 222,
Palmerston North,
New Zealand
Telephone: 64 6 356 9099
Facsimile: 64 6 351 3353

Dear Student

SADD RESEARCH INFORMATION SHEET

I am conducting research into the effectiveness of the organisation "Students Against Driving Drunk" (SADD) and am inviting students at your institution to take part. Please read this information sheet and consider taking part.

I need a large number of students to complete a Sentence Completion Test. This is not really a test. There are no right or wrong answers. You are given the beginnings of some sentences and asked to complete them. For example: "I hate people who....". This will give me a good sample of teenage opinions and will take you only about half an hour. In order for changes or growth to be determined I will be asking you to take part in a second test next year. The consent form asks you to provide address details and to consent to being contacted again. You will have the right to withdraw from this activity until the data from the first test is collated. You may, of course, choose not to take part in the second test when contacted in 2001. In this case the data from your first test paper will not be used for the SADD evaluation but it will still have been used for the international part of the research which is a teenage benchmarking study based in the Netherlands. So effectively the point at which you can no longer withdraw from the study is the point at which data from the first test has been collated.

The research will be used by the national SADD Trust to make decisions about the future direction of the organisation but it is also being used by me to fulfil the requirements of Massey University for a Master of Education degree. Should you require confirmation or if you wish to ask any questions relating to the conducting of the research they can be directed to my supervisor. Her contact details appear at the end of this sheet.

The questions to be answered in the evaluation are:

1. Is the SADD organisation effective?
2. Do students who belong to SADD display different personality development than other students of the same age?
3. Does SADD operate in a way that is consistent with what is considered best practice in peer education models? For the purposes of this research best practice in peer education is defined as *"an approach which empowers young people to work with other young people, and which draws on the positive strength of the peer group. By means of appropriate training and support, the young people become active players in the educational process rather than passive recipients of a set message"* (Coleman & Roker, 1998, p.139)
4. Has SADD been successful in attaining objectives set in its strategic plan?

Appendix 7.

5. What indications are there in the stories of those interviewed that the SADD message is having a positive effect on the safety culture within the school and peer group?
6. What indications are there that the activities of the organisation are effective in changing the behaviour of other people?

As a research participant you have rights which will be safeguarded. The ethical principles recommended in the Massey University Code of Ethical Conduct will be followed. These are as follows:

1. **Your participation is voluntary and requires your informed consent.**
2. **You have the right to decline to participate and to withdraw from the activity at any time until the times indicated earlier in this letter.**
3. **You have the right to ask questions at any time and to receive information about the outcome of the activity.**
4. **The confidentiality of the data, the individuals and the schools will be guaranteed.**
5. **The researcher will take every precaution to ensure the research does not place you at risk.**
6. **There will be no deception. You will understand the true purpose of the research.**
7. The researcher will endeavour to maintain social sensitivity, particularly cultural sensitivity throughout the research.

I would welcome your agreement to participate and am happy to answer any additional questions you may have.

Yours sincerely

Bill Robertson
Researcher
Ph 025 468 773

Supervisor:

Sue Watson
Department of Health and Human Development
Massey University College of Education
Private Bag 11-222
PALMERSTON NORTH

Ph. 06 350 5799 Ext. 8882
Fax. 06 351 3367

Appendix 8.

INTERVIEW/TEST, STUDENT CONSENT FORM

Name: _____

Address: _____

_____

_____

Phone: _____

Age: _____

Ethnic Group: _____

I have read the information sheet and this explained the details of the study to my satisfaction. I understand that I may ask questions about the study at any time.

I understand that I will be asked to complete a second test in twelve months and I consent to my contact details being retained and used for that purpose.

I understand that I have the right to withdraw from this activity until the data from the first test is collated.

I understand I can choose not to take part in the second test when contacted in twelve months but that my data from the first test will still have been used for the international benchmarking study if I do not withdraw from the study before the point at which data from the first test has been collated.

I understanding that researcher will not use my name without my permission. *(The information will be used only for this research and the publications arising from it).*

If I am taking part in the interview I understand that this will be audio taped and I understand I have the right to decline to answer any particular questions.

I also understand that I have the right to ask for the audio tape to be turned off at any time during the interview and to withdraw from the study at any time until the tape has been transcribed and analysed.

I agree/ do not agree to participate in the Sentence Completion Test part of the study under the conditions above and those set out in the information sheet.

I agree/ do not agree to be interviewed as part of the study under the conditions above and those set out in the information sheet.

I am/ am not a member of Students Against Driving Drunk (SADD).

Signed: _____ **Date:** _____

Appendix 9.

Massey University
COLLEGE OF EDUCATION
Te Kupenga o Te Mātauranga

Department of Health & Human Development
- Physical Education
- Guidance & Counselling
- Health Education
- Human Development

Private Bag 11 222,
Palmerston North,
New Zealand
Telephone: 64 6 356 9099
Facsimile: 64 6 351 3353

31 May 2000

Dear Parents

SADD RESEARCH INFORMATION SHEET

I am writing to inform you of a research project I am undertaking that requires access to senior secondary school pupils. I am therefore seeking your support and that of your children.

The research project will evaluate the effectiveness of the organisation Students Against Driving Drunk (SADD). It is important to encourage young people to be more aware of their personal safety and that of others, and therefore to find out how SADD may be meeting those objectives. The resulting research report will be used by the national SADD Trust to make decisions on future activities but it will also be used by me to fulfil the requirements of Massey University for the degree of Master of Education. I have been a teacher and am mindful of the need to minimise disruptions to the academic programme. I will ensure that this research takes up as little of the students' valuable time as possible.

The primary objective of the research is to answer the question "Is the SADD organisation effective?". Sub questions which will lead to the achievement of the primary objective include:

7. Do students who belong to SADD display different personality development than other students of the same age?
6. Does SADD operate in a way that is consistent with what is considered best practice in peer education models? For the purposes of this research best practice in peer education is defined as *"an approach which empowers young people to work with other young people, and which draws on the positive strength of the peer group. By means of appropriate training and support, the young people become active players in the educational process rather than passive recipients of a set message"* (Coleman & Roker, 1998, p.139)
7. Has SADD been successful in attaining the objectives set in its strategic plan?
8. What indications are there in the stories of those interviewed that the SADD message is having a positive effect on the safety culture within the school and peer group?
9. What indications are there that the activities of the organisation are effective in changing the behaviour of other people?

To help me answer these questions I would be seeking the assistance of your children in three ways:

Appendix 9.

(d) I will provide an information sheet and consent form in which year 12 students will be asked to volunteer to complete a Youth version of the Washington University Sentence Completion Test. It is hoped the school will assist by distributing these to all year 12 students. This component is part of an International benchmarking study of ego development in adolescence and would be used in this study to assess differences in moral development between those students who join SADD and those who choose not to. The test takes about thirty minutes to administer.

It will be necessary in order to determine rates of development to test students twice with a twelve-month gap between tests. For this reason it is essential that I collect contact details for the students who agree to take part. Students will be asked to give their consent to being contacted again in 12 months.

Students will have the right to withdraw from this activity until the data from the first test is collated. Students may, of course, choose not to take part in the second test when contacted in twelve months. In this case their data from the first test will not be used for the SADD evaluation but it will still have been used for the international benchmarking study. So effectively the point at which they can no longer withdraw from the study is the point at which data from the first test has been collated.

(e) Those year 12 students who undertake the Sentence Completion Test will be approached by phone or mail and would be asked to take part in an additional interview. These would be individual (one-on-one) interviews, although candidates would be welcome to bring a support person if deemed necessary for reasons of comfort or culture. The interview would seek to reveal the students beliefs about alcohol and driving and to determine their knowledge of SADD and its activities.

Each interview would take about thirty minutes. It is intended that they be held before school, after school and in the lunch break. Students will have the right to withdraw from the activity at any time until the tape from their interview has been transcribed. From that point on withdrawal will not be possible.

(f) The school SADD convenor will be asked to provide members of the SADD group at your school with an information sheet and consent form seeking permission to videotape SADD meetings, training days and any special projects. Consent forms will be collected by the convenor before any taping commences. These tapes will be analysed for evidence that the interactions contain the elements of the previously stated definition of best practice in peer education. The activities will also be compared against the model put forward by Thomas Lickona (Pressley & McCormick, 1995, p.282)of effective techniques for moral education to see how well they conform.

Students may wish to attend the meeting but not be videotaped. If any student feels that way taping will not proceed. If students consent to the videotaping they may still ask that the tape be turned off at any point. In this case the tape will not be used. Students who choose to remain for the videotaped session will not have the right to withdraw once the tape has been submitted for analysis but no personal information would be obtained or used from these tapes.

Appendix 9.

All research participants have rights, which will be safeguarded. The ethical principles recommended in the Massey University Code of Ethical Conduct will be followed. These are as follows:

7. **Participation is voluntary and requires informed consent.**

8. **All students have the right to decline to participate, to withdraw from the activity at any time, to ask to have a recording device turned off, to ask questions at any time and to receive information about the outcome of the activity.**

9. **The confidentiality of the data, the individuals and the schools will be guaranteed.**

10. **I will take every precaution to ensure the research does not place the participant at risk.**

11. **The participants will be told the true purpose of the research. There will be no deception.**

12. I will endeavour to maintain social sensitivity, particularly cultural sensitivity throughout the research.

Should you require confirmation of Massey's involvement or if you wish to ask any questions relating to the conducting of the research they can be directed to my supervisor who is:

Sue Watson
Department of Health and Human Development
Massey University College of Education
Private Bag 11-222
PALMERSTON NORTH

Ph. 06 350 5799 Ext. 8882
Fax. 06 351 3367

I would welcome your and your child's agreement to participate in this research. I have enclosed a consent form which I ask you to complete and have returned to the school.

Yours sincerely

Bill Robertson
Researcher
Ph 025 468 773

Appendix 10

SADD RESEARCH, PARENT CONSENT FORM

Name: _____

I have read the information sheet and this explained the details of the study to my satisfaction. I understand that should my child agree to take part in this research the following rights will be guaranteed:

- S/he may ask questions about the study at any time.
- **S/he has the right to withdraw from the sentence completion test portion of the study at any time until the data from the first test is collated. I understand that the data will also be used as part of an international benchmarking study and I understand that if s/he proceeds with the first test the data will be sent to the Netherlands for that purpose. I understand that once it has been sent withdrawal from that study will not be possible**.
- **S/he has the right to decline to participate in the videotaping, to ask for the video recorder to be turned off at any point and to withdraw from the activity at any time until the tape has been submitted for analysis.**
- S/he agrees to provide information to the researcher on the understanding that her/his name will not be used without permission. *(The information will be used only for this research and publications arising from this research project).*
- **S/he has the right to ask for the audio-tape to be turned off at any time while being interviewed and s/he may ask to withdraw from the study at any time until the tape has been transcribed and analysed**.

I agree/ do not agree that my child may participate in this study under the conditions set out above and those in the information sheet.

Signed: _____ **Date:** _____

Appendix 11

Evaluation for: **Students Against Driving Drunk**	**Number of Responses processed:**	**16**

1. How often does the SADD group at your school meet? (tick one)

Weekly	6	
Monthly	5	
Once a term		
When necessary	5	*Usually once a fortnight*

2. How many students regularly attend these meetings? (tick one)

< 10	9	
10-15	6	
15-20		
>20	1	

3. Of the students who regularly attend, how many are female? (tick one)

< 50%	1	
About 50%	2	
> 50%	13	*female school, all girls school*

4. Please place a tick alongside each of the following ethnic groups that are represented in your SADD group.

New Zealand European	15
New Zealand Maori	4
Pacific People	2
Other	5

5. How is the time spent at each of your SADD meetings? Tick as many of the following options as are relevant.

Debating alternatives to drink-driving	3
Debating topical issues related to youth drinking/driving	5
Debating best ways to promote SADD	14
Debating best ways to increase membership	7
Planning SADD activities	14
Planning media activities	6
Role-play (Crash Bash etc.)	2
Other (please specify below)	3

Fundraising, how to increase interschool relations, organising to get four of our group to Christchurch for the national conference

Appendix 11

6. What activities has your SADD group been involved in this year? Tick as many of the following options as are relevant.

Crash Bash competition	3
Mock Crash	3
Lunchtime concert	1
Assembly talks	9
Mock Funeral	2
Dead Day	3
Advertising (all types)	8
Making a video of your SADD group	2
Other (Please specify below)	6

Our whole SADD committee (4 people) attended a regional workshop

Interschool debate, sausage sizzle (x2), netball match against local boys school – boys in skirts, our girls in rugby gear, fundraiser – teacher annihilation (gala day), undie challenge, working alongside teachers as peer educators in health & life skills classes, organising safe transport for after ball function. There is not much interest in SADD in our school among the seniors so its hard to get involved in much. SADD Conference

This is a new group. Our activities have revolved around getting started. Joining Police on road blitz, meeting regularly with local CAAPs committe, surveying public re. Opotiki dollars for sober drivers campaign.

Mocktails, chalk drawing competition
We planned and carried through a role play of a crash and its affects on the people involved.

7. Which of the following activities are being planned by your SADD group for later in the year?

Crash Bash competition	1
Mock Crash	7
Lunchtime concert	5
Assembly talks	11
Mock Funeral	2
Dead Day	7
Advertising (all types)	11
Making a video of your SADD group	1
Other (Please specify below)	6

Not sure yet, interschool sports

Continuing involvement with $ for sober drivers campaign and CAAPs committee

Talent Quest, Mufti day, Staff vs SADD soccer match, SADD week

Compulsory signature on "will to live" contracts before seniors receive formal tickets
SADD slave auction
Afternoon concert and competitions. Poster competition
We are going to make SADD an organisation that is clear and present at our school ball/formal

Appendix 11

8. How many members of your SADD group attended a training day at the beginning of this year? (tick one)

0	3	
1		
2	2	
3	2	
>3	9	*4 or 5,*

9. If no members attended what was the reason for that? (Tick one)

There was no training day close enough	
We didn't receive notification until it was too late	1
The date clashed with other commitments	1
The school would not give us permission	
Our group was not formed at that time	2
No one was interested	
Other (Please specify below)	1

We were not aware of one, maybe info was sent prior to our restructuring for the year

10. Are your SADD meetings always held at school?

Yes	15
No	1

11. Do staff members from school attend your meetings? (Tick one)

Always	4	*only me, the teacher in charge of SADD*
Occasionally	3	
Never	9	

12. When are your meetings held? Tick as many of the following options as are relevant.

Before school	1
During school time	1
At intervals (including lunchtime)	15
After school	1

13. About how many contracts (both Will to Live and Lifesaver) have been distributed this year in your school?

A few, still arranging a big assembly talk – will distribute them then
About 100
None
35+
200
None this year but they will be at the mock crash
Lots, do not know the exact number
15
approx 300
None as yet but in our upcoming SADD week we will distribute lots.
About 150 will be given this week

Appendix 11

Plan to give out during SADD week
None yet. We are distributing these nearer the ball
50
None, we plan to give these when the tickets for the formal are given out and we will have a SADD rep at the junior report evening.

14. How many of these contracts would you estimate have been taken home and discussed? (Tick one)

All or nearly all 2
Most
About half 3
Less than half 5
Hardly any
No idea, none left lying around
N.A.

15. Our SADD group gets enough support from the National Coordinator.

Disagree strongly

1	2	3	4	5
	3	2	2	9

Agree strongly

16. Information provided by the Coordinator is adequate and helpful.

Disagree strongly

1	2	3	4	5
	2	1	4	9

Agree strongly

17. We look forward to getting Planet SADD

Disagree strongly

1	2	3	4	5
2		7	2	2

Agree strongly

Haven't had it this year, ?, never heard of it. What is this?

18. We like the style of materials sent to us by SADD.

Disagree strongly

1	2	3	4	5
	1	2	7	6

Agree strongly

19. Conferences give us enough information to set up long term SADD Groups

Disagree strongly

1	2	3	4	5
1		3	6	6

Agree strongly

Haven't been to one yet

20. We need more training for SADD activities to work properly

Disagree strongly

1	2	3	4	5
	4	3	7	2

Agree strongly

About approaching people for $

21. Will to Live and Lifesaver contracts are an excellent way of helping to prevent drink-driving crashes involving students

Disagree strongly

1	2	3	4	5
		8	4	4

Agree strongly

Appendix 11

22. Assemblies are an effective way to introduce SADD

Disagree strongly

1	2	3	4	5
			7	9

Agree strongly

23. Being involved with SADD is very worthwhile personally

Disagree strongly

1	2	3	4	5
			2	14

Agree strongly

24. SADD has a high profile in our school this year.

Disagree strongly

1	2	3	4	5
1	3	5	2	5

Agree strongly

25. SADD had a higher profile in our school this time last year

Disagree strongly

1	2	3	4	5
5	2	3	4	2

Agree strongly

26. At our school we need more support for SADD from the staff.

Disagree strongly

1	2	3	4	5
3		3	1	9

Agree strongly

27. At our school there is at least one teacher we can usually rely on to help SADD.

Disagree strongly

1	2	3	4	5
1	1	2	2	10

Agree strongly

28. The school office passes on SADD material to us quickly

Disagree strongly

1	2	3	4	5
	1	2	8	5

Agree strongly

29. SADD needs to broaden its focus as has SADD USA to encompass all destructive decisions including drugs and suicide as well as alcohol

Disagree strongly

1	2	3	4	5
2	2	6	2	4

Agree strongly

30. The SADD website provides all the information we need.

Disagree strongly

1	2	3	4	5
1	2	7	3	3

Agree strongly

Information doesn't change. Needs updating regularly. We would like to see what other schools are doing. Photos of other schools and students involved in activities.