The systematics of the reducta complex of the burrowing freshwater crayfish *Engaewa* Riek

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The Effect of Brief Education and Dispositional Variables on Attitudes Toward Harm Minimisation Among a University Student Population

Amy McAlpine

A report submitted in Partial Fulfillment of the Requirements for the Award of Bachelor of Arts (Psychology) Honours, Faculty of Computing Health and Science, Edith Cowan University

Submitted October 2007

I declare that this written assignment is my own work and does not include:

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Signed ........................................

Date 30.10.07
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Abstract

Attitudes are essential to understanding the individual within the context of their social world (Perloff, 2003). Australia’s policy toward drug use and drug-related harm encompasses a harm minimisation approach (Ministerial Council on Drug Strategy [MCDS], 2004). Harm minimisation seeks to ameliorate the social, economic and health consequences of drug use through a comprehensive framework of supply reduction, demand reduction, and harm reduction policies and programs (MCDS, 2004). This paper reviews the relevant literature on attitudes towards harm minimisation, both internationally and in Australia. Indeed, Australian research suggested (Bammer, 1995; Lawrence, Bammer & Chapman, 2000) that there is a heavy media influence toward strictly abstinence-oriented policies which influenced public opinion. Other Australian research (Makkai & McAllister, 1998; Single & Rohl, 1998) suggested a shift in the public consciousness toward viewing drug use and drug-related harm as primarily a health, not a moral issue. Research by Goddard and colleagues (2002, 2003, 2006) and Quick (2007) suggested that after exposure to harm minimisation principles there was a shift in attitudes toward acceptance of harm minimisation. Overall this research suggested that public attitudes may be shifted towards acceptance of harm minimisation which is the philosophy of Australia’s current National Drug Strategy, through exposure to evidence on the efficacy of harm minimisation strategies.

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Supervisors: Associate Professor Lynne Cohen and Dr. David Ryder

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The Effect of Brief Education and Dispositional Variables on Attitudes Toward Harm Minimisation Among a University Student Population

Attitude theory has underpinned social psychological research since the early 1900's (McGuire, 1986). Early sociologists and behaviourists defined social psychology as the study of attitudes (McGuire, 1986). The focus within the study of attitudes has evolved over the last century with three distinct periods: first, the attitude measurement era from the 1920s to 1930s, second, the attitude change era in the 1950s and 1960s, third the attitude structure era in the 1980s and 1990s (McGuire, 1986). Decades of research on attitude theory have provided insight into the importance of understanding the individual within the context of his/her social world. Attitudes may provide information regarding an individual's motivation and personal psychology (Perloff, 2003). Attitudes can also provide personal information about a person's likes and dislikes, and the way they perceive the world (Zimbardo & Lieppe, 1991). Attitude theory has also been central to understanding phenomena within the social world such as group norms, social policies and political policy (Cohen, O'Connor, & Blackmore, 2002).

With particular reference to political policy, attitudes held by the public may influence the formation of policy (Palmer & Short, 1994). An example of a political policy within Australia is the approach to drug use, drug users, and drug-related harm. The guiding principle of the Australian National Drug Strategy (Ministerial Council on Drug Strategy [MCDS], 2004) embraces the philosophy of harm minimisation. This viewpoint takes a pragmatic approach to alcohol and other drug issues by recognising that people will, as part of cultural, social, and religious mores, continue to use psychoactive substances (Ryder, Walker, & Salmon, 2006). Australia's drug policy has evolved over the years from prohibition and punitive approaches to more tolerant, health-focused
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approaches (Makkai, 1994; MCDS, 2004). The interaction between society and the political system assumes that the wider community’s values, norms, and attitudes influence the formation of policy (Palmer & Short, 1994). It may be that the current policy of harm minimisation is a reflection of the wider community’s attitude towards the importance of the health and well-being of users. However this view may not necessarily be reflected in the literature.

The purpose of this paper is to review the current literature on attitudes, their contribution toward harm minimisation, and how these attitudes may be mediated by dispositional variables such as authoritarianism and need for closure. Initially the literature on attitude theory will be reviewed, followed by a description of harm minimisation and of the dispositional variables. The core literature on attitudes towards harm minimisation will then be examined. Methodological limitations and directions for future research will also be discussed.

Attitudes, Harm Minimisation, and Dispositional Variables

**Attitudes**

Historically, there has been no single accepted definition of attitudes (Eagly, 1992; Zanna & Rempel, 1988). Several definitions concern some degree of evaluation toward a person, object, or issue (Beck, 2004; Eagly, 1992; Zanna & Rempel, 1988). Perloff (2003) endeavours to combine elements of several conceptions of attitudes and offers the definition that attitudes are: “a learned, global evaluation of an object (person, place or issue) that influences thought and action.” (p. 39).

Within the above definition, several core elements can be identified. First, attitudes are learned. Attitudes are not formed until a person encounters an attitude object, (a person, place or thing) or information concerning the attitude object (Eagly & Chaiken, 1998, cited in Perloff, 2003, p. 40). Therefore attitudes are formed through the process of
socialisation, attitudes such as, for example, prejudice and religious discrimination (Perloff, 2003). There is little evidence of a genetic basis for the formation of attitudes (Perloff, 2003).

Second, attitudes are seen as an evaluative tendency (Eagly, 1992, Petty, Wegener, & Fabrigar, 1997) which is usually connected to an affective response which judges the attitude object with some level of favour or disfavour (Eagly, 1992, Petty et al., 1997). Attitudes such as prejudice, sexual orientation, or religious orientation are usually charged with emotional reactions that are at the centre of the evaluation of the attitude object (Perloff, 2003).

Third, attitude theory states that attitudes influence thought and behaviour (Perloff, 2003). Attitudes can act as cognitive shortcuts, helping to categorise people and events (Perloff, 2003). Attitudes are thought to also influence behaviour, as they guide our actions, for example, in communicating to the world our beliefs and values (Perloff, 2003). However the link between attitudes and overt behaviour is not always consistent (Perloff, 2003). The elements of affect, cognition, and behaviour form the basis of tripartite models of attitude structure (Zanna & Rempel, 1988). These theories of attitude structure will be discussed below.

Attitudes serve several functions including providing knowledge, utilitarian, social ajustive, social identity, value-expressive, and ego-defensive functions (Perloff, 2003). Zanna and Rempel (1988) suggested that attitudes are items of social knowledge. Functional theories of attitudes help to explain how attitudes fulfil needs and provide motivation (Perloff, 2003). These functional theories help to explain why people hold certain attitudes.

The knowledge function of attitudes helps create cognitive shortcuts by providing a framework to interpret incoming stimuli (Perloff, 2003). An attitude helps filter stimuli
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in an efficient manner which reduces the time required to process information. For example, religious or spiritual attitudes about the meaning of death and life, including beliefs about the afterlife, may help individuals confronted with a grief situation. The knowledge function of attitudes may help an individual make sense of the world (Perloff, 2003).

A utilitarian function for attitudes aids motivation to avoid punishment and pursue rewards (Perloff, 2003). A positive attitude toward an activity helps to maintain motivation to complete the activity (e.g. exercise) and gain the rewards on completion (Perloff, 2003). A positive attitude contributes towards maintaining motivation towards exercising, thereby gaining the rewards of health.

A social adjustive function assists people to become socially accepted by aligning with others who hold similar attitudes. (Perloff, 2003). Adopting a certain attitude towards an object (person, place or thing), facilitates acceptance amongst social groups (Perloff, 2003). This social adjustive function of attitudes help individuals adjust to peer, or reference groups (Perloff, 2003).

The social identity function refers to when an individual expresses certain attitudes to convey who they are (Perloff, 2003). For example, purchasing products with a particular advertising image communicates to the world a certain set of beliefs about an individual’s identity (Perloff, 2003). This function helps to inform others of our current status and who we strive to become (Perloff, 2003).

The value-expressive function communicates an individual’s beliefs and values (Perloff, 2003). For example, where an individual holds moral beliefs, they may have an attitude that favours abstention from sex before marriage. The value-expressive function of attitudes demonstrates an individual’s core values, such as religiosity, morality, or respect for authority.
Finally, the ego-defensive function may protect an individual from unpleasant emotional and psychological experiences. For example, an individual may adopt a laissez-faire attitude towards study to protect from the fear of failure, thereby justifying a lack of engagement and subsequent poor marks. Attitudes underpin much of our interaction with the social world.

Similar to the debate over a single definition of attitudes, there is a lack of consensus among researchers concerning the structure of attitudes. One of the first theories of attitudes proposed by Thurstone and Chave (1929, cited in Beck, 2004, p. 353) stressed an affective response. This approach is reflected in Fishbein and Ajzen’s (1975, cited in Perloff, 2003) expectancy-value approach. This model states that an attitude can be a product of the strength of one’s beliefs or expectations about an attitude object, and the way you feel about, or evaluate the attitude object (Perloff, 2003). The expectancy-value approach emphasises the interaction of two characteristics, affect and cognition, in the formation of attitudes.

A three component or tripartite model of attitudes including cognition, affect, and conation (behaviour), has been suggested by several theorists such as Katz and Stotland (1959), Rosenberg and Hovland (1960) (cited in Cohen, O’Connor, & Blackmore, 2002), and Zanna and Rempel (1988). Cognition involves the thoughts, ideas, beliefs, and knowledge about the attitude object. Affect involves the positive or negative feeling or evaluation of the attitude object. Similar to Fishbein and Ajzen’s Expectancy-value theory, cognition and affect may also interact, where thoughts and ideas about an object may influence the way one feels about the object, or vice versa (Beck, 2004). Lastly, behaviour may be influenced by the attitude one holds, such as political attitudes influencing the choice of vote, or the attitude may be informed by past behaviours or behavioural intentions (Beck, 2004). Zanna and Rempel (1988) viewed attitudes along
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three classes of information; cognitive, affective and behavioural, which help to
categorise stimuli. They proposed that these three classes can influence an attitude
separately or in combination with each other. They suggested that an attitude need not be
based on all three components or types of information; affective, cognitive, and
behavioural (Zanna & Rempel, 1988).

However, the research on the attitude-behaviour relationship has been criticised
claiming an attitude-behaviour relationship found conflicting results. The review found
that attitudes at best were only slightly related to overt behaviour. The attitude-behaviour
relationship focuses on intention to act, where attitudes influence behaviour through their
impact on intentions (Eagly, 1992), for example, the theory proposed by Azjen and
Fishbein (1980; Fishbein & Ajzen, 1975, cited in Fishbein & Yzer, 2003) termed the
Theory of Reasoned Action. This theory states that the strength of an individual’s
intention to act is a function of two factors; the individual’s attitude (positive or negative
evaluation) toward performing the behaviour, and how the individual perceives others’
estimation of the importance of performing or not performing the behaviour, named ‘the
subjective norm’ (Fishbein & Yzer, 2003, p. 165). The theory maintains that attitude does
not play a direct role in influencing one’s behaviour, rather attitude influences the
thoughts and beliefs surrounding the evaluation of performing the behaviour, or one’s
intention to act.

In the 1950s, Hovland investigated attitude change (Petty, Wegener, & Fabrigar,
1997; Perloff, 2003). Much of the research focused on persuasion and how message
content, presentation, and cognitive responses mediated attitude change (Petty et al.,
defined attitude change as simply “that a person’s evaluation is modified from one value
to another”. Research based on cognitive process models of persuasion (e.g., Chaiken, 1980, cited in Eagly, 1980; Petty & Cacioppo, 1984, Petty, Tormala, Hawkins, & Wegener, 2001, cited in Wang & Chen, 2006) found that when personal relevance toward an issue is high, this is a strong determinant of attitude change. These research findings are important in establishing the best methods of persuasion and presentation of arguments for attitude change towards certain issues that may have high personal relevance, such as political and moral issues.

Research on attitudes continues to be a significant area within psychology. Functional theories of attitudes illustrate how important attitudes are in understanding the individual within the context of their social world. Whilst the link between attitudes and overt behaviour has been criticised, they do inform intentions to act. Attitudes are not regarded as static as they may change. An understanding of individuals’ attitudes toward social phenomena may provide insight into the dynamics between public opinion and social and political policy.

Harm Minimisation

A brief review of the 2004 National Drug Strategy Household Survey (Australian Institute of Health and Welfare [AIHW], 2005; AIHW, 2007) shows that, in 2004, 41% of Australians aged 14 and over drank alcohol weekly, 17% of Australians aged 14 and over smoked tobacco daily, and 38% of Australians aged 14 and over had ever used an illicit drug in their lifetime. In terms of the health costs of drug use, an estimated 8% of the burden of disease in 2003 was attributed to tobacco, 2% to alcohol, and 2% to illicit drugs. The burden of disease, which highlights some of the harms associated with drug use, includes, but is not limited to, mental health issues such as depression, anxiety and psychosis, blood borne viruses (BBV) such as hepatitis C and Human Immunodeficiency Virus (HIV), and both fatal and non-fatal overdoses (AIHW,
There is much evidence for the measurable costs in terms of treatment and rates of disease. However, other harms from drug use, including disruption to family, social and work life, and contact with the judicial system are not presented in data collection surveys such as the AIHW National Household Survey, perhaps because they are not as amenable to direct measurement.

Australia has gained an international reputation for a progressive policy response to the harms from drug use (Single & Rohl, 1998). Since 1985, Australia has circumvented the morality debate about drug use and has focused on maintaining the health of the population (Ministerial Council on Drug Strategy [MCDS], 2004). The current National Drug Strategy (MCDS, 2004) is a collaborative venture between public health and law enforcement, building partnerships in the areas of treatment, prevention, research and education. The focus of the policy ensures a strategic balance of approaches to target the social, economic, and health costs of both licit and illicit drug use by preventing uptake of use and reducing the harmful effects of use (AIHW, 2007; Single & Rohl, 1998; Wellbourne-Wood, 1999). In countries other than Australia, such as Canada and USA, this philosophy is termed harm reduction; however, in Australia this approach is termed harm minimisation (MCDS, 2004). In Australia, the term harm reduction refers to one of three strategies (outlined below) adopted under the harm minimisation approach. The term harm minimisation will be used throughout this paper to refer to the overall philosophy incorporated in the National Drug Strategy that includes a wide range of policies and programs (including harm reduction), aimed at ameliorating the social, economic and health consequences of drug use at the individual and community level, including abstinence-oriented strategies (MCDS, 2004).

Harm minimisation operates within the current legal boundaries of drug laws, and does not necessarily require changes to the legal status of certain drugs in order for
effective harm minimisation strategies to be implemented (Lenton & Single, 1998). There are three main strategies in the current NDS that are under the comprehensive harm minimisation philosophy: supply reduction, demand reduction, and harm reduction. Supply reduction uses law enforcement and the drug laws to control the amount of the drug available to the community. Policies and programs designed to disrupt the production and supply of drugs include border control, legal sanctions, sale, age, and advertising restrictions (Anderson, 1994; MCDS, 2004). Demand reduction aims to prevent the uptake of harmful drug use. Policies and programs include education responses, methadone maintenance and other substitution and abstinence-oriented treatment services (e.g., Naltrexone, Subutex), creating supportive environments, community action, and development of personal skills (Anderson, 1994; MCDS, 2004). Finally, harm reduction includes efforts to reduce the direct harm to the individual and the community associated with the use of the drug amongst those who continue to use drugs. These policies and programs include needle and syringe exchange programs to prevent the spread of blood borne viruses, alternative routes of administration to find safer ways to consume the drug, and using half of the amount of the drug supplied on first administration to prevent overdoses (Anderson, 1994; MCDS, 2004).

The success of the harm minimisation principle can be seen in the reduction of drug-related harm for tobacco and alcohol, the reduction of morbidity and mortality from benzodiazepines through restrictions on prescriptions and substitution of other, less potentially harmful drugs, and containment of HIV from injecting drug use through needle and syringe exchange programs, targeted education programs, and higher availability of substitution treatment such as methadone (Hawks & Lenton, 1995). The success of these strategies is evident in the comprehensive approach to targeting the prevention of uptake of use, reduction of actual use, as well as targeting the harms
associated with those who continue to use, or cannot currently be expected to stop use (Lenton & Single, 1998).

**Dispositional Variables**

In 1998, MacCoun offered the idea of attitudinal opposition to harm minimisation. He stated that American citizens may oppose harm minimisation policy on an attitudinal continuum ranging from consequentialist to nonconsequentialist grounds (MacCoun, 1998). Consequentialist opposition is characterised by the belief that harm reduction strategies may inadvertently increase harm or increase use. This attitude reflects opposition on the grounds of ignorance of the facts and evidence of the efficacy of harm minimisation. As consequentialist individuals are ignorant of the facts of harm minimisation, they may increase their acceptance of harm minimisation through education about the efficacy of evidence-based harm minimisation strategies, especially strategies that are not offset by an increase in actual drug use. In contrast, nonconsequentialist attitudes may be underpinned by a number of psychological principles, including the dispositional trait, authoritarianism (MacCoun, 1998). This view is characterised by a strong belief in law and order, absolute support for authority, an expression of hostility toward members who are not within their social group, and intolerance for alternative behaviour (MacCoun, 1998), prejudice, rigid thinking and rigid attitudes (Adorno, Frenkel-Brunswick, Levinson, & Sanford, 1950, cited in Beck, 2004 p. 349). Individuals with authoritarian dispositions are also more likely to favour punitive drug policies, where they feel users deserve to suffer the harms associated with drugs, as a consequence of their use (MacCoun, 1998). Nonconsequentialist opposition is opposition on moral grounds. These views represent opposite ends of the continuum where consequentialist opposition, due to ignorance, may decrease when individuals are exposed to education about harm reduction. Conversely, nonconsequentialist opposition on moral grounds may
be fixed due to dispositional variables, such as authoritarianism, which influences rigid attitudes (MacCoun, 1998).

Authoritarianism correlates positively with a Need for Cognitive Closure. This psychological construct was defined in 1996 by Kruglanski and Webster as “individuals’ desire for a firm answer to a question and an aversion toward ambiguity” (p. 264). An individual’s need for closure will motivate their behaviour toward attainment of a definitive answer, bias their choices of activities toward those pursuits that provide closure, produce negative responses when their attempts at closure are thwarted, and produce positive responses when closure is gained (Kruglanski & Webster, 1996). The Need for Closure Scale (Kruglanski, Webster, & Klem, 1993) correlates at .28 with scales of dogmatism, authoritarianism, and intolerance of ambiguity (Beck, 2004). Therefore individuals who score highly on the Need for Closure Scale will usually hurry to judgement and to make a decision on an issue without waiting for all available evidence, displaying rigid thinking (Kruglanski & Webster, 1996). Kruglanski et al. (1993) stated that high need for closure individuals may become attached to the closure, biasing the attention toward information that preserves the obtained decision.

There is evidence of a genetic basis for the dispositional variable authoritarianism, and as need for closure and authoritarianism are correlated, there may be a genetic basis for need for closure, just as many personality traits may be inherited (Beck, 2004). However individual differences may be due to socialisation and individual histories (Beck, 2004).

Attitudes toward Harm Minimisation

The following review of the current literature specifically on attitudes toward harm minimisation will initially focus on overseas studies that examine attitudes among certain populations in Canada. The review will then focus on the available Australian
literature including attitudes among treatment professionals, and the media influence on driving harm minimisation policy. Finally, the paper will examine the literature available on the relationship between attitudes to harm minimisation and dispositional variables.

A study by MacDonald and Erickson (1999) investigated the attitudes of judges in Ontario, Canada, toward harm minimisation. The study was a cross-sectional design, with criminal division court judges chosen to participate as they mainly hear drug, assault and criminal cases. A total of 268 judges were mailed a questionnaire containing a request for demographic information and statements on knowledge of and attitudes to drugs and the law. A response rate of 34.6% (89 judges) was obtained. It was found that, of the respondents, increased and more accurate knowledge of drugs was significantly related to increased likelihood of favouring harm minimisation approaches. The authors suggested that if this relationship between knowledge of drugs and favourable attitudes toward harm minimisation is causal, perhaps educational campaigns targeted at accurate knowledge may facilitate social change. However, because the participants were judges, they may already be oriented toward seeking out information particularly relevant to their area of expertise, such as drug use. Perhaps current attitudes influenced their knowledge of drugs and a desire to seek out alternative approaches to criminal justice strategies, such as the harm minimisation approach.

Furthermore, a limitation of the study is the application of the findings to the influence of knowledge on public attitudes, specifically because of the limited population from which the sample was drawn. Judges are required to achieve a high standard of education, and display certain cognitive skills, such as the ability to consider and integrate all available evidence. These factors and abilities may not be present in the broader population, making the research findings less generalisable. The authors suggested, however, that the judiciary is in a special position whereby judges are able to influence
public attitudes through the use of alternative sentencing options, lending legitimacy to the harm minimisation philosophy (MacDonald & Erickson, 1999).

A further research study by Ogborne and Birchmore-Timney (1998) examined attitudes toward harm minimisation of staff at addiction treatment centres in Ontario, Canada. The treatment centres included assessment and referral centres, detoxification centres, outpatient services, and long and short term residential programs. A total of 2048 questionnaires were distributed to staff members with direct clinical contact with clients. Out of the 925 responses, assessment and referral services obtained the highest rate of response (70%), and detoxification centres had the lowest rate of response (32%). The self-completed questionnaire requested demographic information and responses to indicate attitudes toward several harm minimisation strategies, including needle exchange services, methadone maintenance services, and prescription of heroin.

With regard to type of agency, overall there was the highest acceptance of harm minimisation strategies among staff at assessment and referral agencies, and at outpatient settings. The most acceptable harm minimisation strategy over all types of agency was needle exchange (82%). Methadone maintenance gained the most support at both assessment/referral and outpatient settings. In each type of agency there was minority support (15-35%) for heroin prescription. The authors suggested that the finding of the influence of the setting on treatment ideologies is consistent with the current literature. The higher acceptance of harm minimisation strategies among outpatient and assessment/referral settings reflects beliefs in a greater range of treatment options, not restricted to abstinence. Harm minimisation strategies overall were generally not as accepted by those staff who adhered to a disease model of addiction, where abstinence is viewed as the ultimate treatment goal. In fact, support for harm minimisation had a statistically significant negative relationship with belief in the disease model. Staff with
these attitudes mainly worked in detoxification and residential programmes. Other variables under review such as level of education and management responsibilities, where management may influence staff attitudes through training, were not significant.

Whilst the findings from the study are supported by other research findings that maintain the relationship between treatment setting and treatment ideology, it should be noted that there was a low response rate (45%), and that the majority of respondents were from agencies that were more accepting of harm minimisation strategies, such as assessment and referral and outpatient settings. The authors suggest that the low response rate from detoxification centres and outpatient settings may be due to the influence of managers' attitudes. Those managers who are less supportive of harm minimisation methods may be less encouraging of staff to participate in a harm minimisation survey.

These different rates of response throughout the agency type might therefore skew the appearance of the approval of harm minimisation strategies. It would be useful to bear in mind this issue of company culture in influencing participation and sampling techniques in other research, which might be a worthwhile topic for further research inquiry.

Moreover, this study illustrated that the attitude of staff within Alcohol Tobacco and Other Drugs (ATOD) treatment settings are aligned with the treatment ideology, either harm minimisation or abstinence-oriented. Future research would need to investigate whether similar exposure to harm minimisation strategies would shift attitudes amongst the general public in an Australian population.

Furthermore a similar study was carried out in Australia by Caplehorn, Lumley, Irwig, and Saunders (1998) who examined staff attitudes within a treatment setting. Staff members working at ten Sydney methadone maintenance programs were surveyed in 1989 and 1992. The surveys consisted of two questionnaires including a 14-item Abstinence Orientation Scale and a six-item Disapproval of Drug Use Scale. These Likert
scale questionnaires measured support for abstinence-oriented policies and punitive outcomes for drug use respectively. Of the 90 staff approached in 1989 and 92 staff approached in 1992, a total of 33 staff participated in both surveys. The respondents were mainly either psychiatric or general nurses, or doctors, or had degrees in social work or psychology. A small proportion of respondents (8% in 1989 and 12% in 1992) had no tertiary qualifications.

The mean scores obtained in the Abstinence Orientation Scale between 1989 and 1992 showed a shift in attitudes away from abstinence oriented policies. Interestingly, this shift was not reflected in the Disapproval of Drug Use scores, meaning that staff had changed attitudes toward policy without changing beliefs about punishment of drug users. The authors suggested that the attitude shift is related to changes in the official policy of the NSW public methadone program and education on harm minimisation and methadone maintenance. In 1989 the NSW public methadone program policy stated a requirement for drug-free outcomes for maintained patients (Caplehorn et al., 1998). In 1989 changes to the policy redirected the main aim of the policy to improving users’ health and well-being, which may be obtained through both reduction and elimination of use (Caplehorn et al., 1998). Staff members were also paid to attend a national methadone conference in 1991 that provided information about harm minimisation and retention of patients on methadone during maintenance. Therefore shifts in staff attitudes were more likely due to education on the policy of harm minimisation, marking the move away from abstinence-oriented policies, but not altering staff beliefs about users. Whilst this study involved Australian participants who were exposed to harm minimisation education, it did not involve the general public, therefore it is unclear whether these findings would be generalisable.
As this literature has suggested, attitudes are linked with treatment settings. As participants were from medical backgrounds, such as doctors and nurses, responses to the survey were more likely to be oriented to medical models of addiction. Furthermore, as suggested above, attitudes in the organisation may be influenced by the culture created by management. All eleven staff at one clinic declined participation in the survey. The inclusion of participants from a strongly abstinence-oriented background is one limitation which is compounded by the scales used which do not actually measure acceptance of harm minimisation policy, rather they examine orientation to abstinence-based policy. Therefore low scores suggest only low acceptance of abstinence-based policy, which does not translate to high acceptance of harm minimisation policy. Harm minimisation policy does not preclude abstinence as a treatment goal. The results of the study do not show instrumental shifts in attitude toward drug use and users as there was no significant change in attitudes on the Disapproval of Drug Use scale. This suggests that exposure to harm minimisation education may actually not be sufficient to shift attitudes toward drug use and users.

Changes in attitudes amongst treatment worker staff as reported in the Caplehorn et al. (1998) study, may not be reflected in changes in attitude toward drug policy amongst the general public. A study by Bammer (1995) reviewed the outcome of a public survey distributed during an assessment phase of the feasibility of a heroin trial in the Australian Capital Territory (ACT). Support from the community for the heroin trial was greater when the stated aim included eventually obtaining abstinence (39% from ACT and 36% nationally). When the statement was changed to focus on improving the quality of life of the user, without necessarily trying to maintain abstinence, support dropped to around 20%. The main conclusion drawn from the survey data was that public opinion did not support the view that harm minimisation works without abstinence, nor that aiming to
help users lead stable home, social, and work lives while still maintained on heroin should be part of a long term strategy. Public opinion supported the attitude that abstinence should be the ultimate outcome of any long term drug strategy.

In the period between August 1 and August 19, 1997, Lawrence, Bammer, and Chapman (2000) assessed the opinions and views put forward by the seven major newspaper media outlets in Australia, including The Daily Telegraph, Sydney Morning Herald, Herald-Sun, The Age, Canberra Times, Courier-Mail, and The Australian. The coverage reviewed related to the decision made on July 31, 1997, by the Australian Ministerial Council on Drug Strategy (MCDS), to conduct a 6-month pilot study of heroin prescription to dependent users. A review of the attitudes represented by the papers found an inordinate push by the Daily Telegraph to frame and define the issue of the heroin trial and influence public attitudes. Out of all the media outlets, the Daily Telegraph was found to have provided the most coverage on heroin and related issues, contributing to 28% of the total coverage. Most of the newspaper's coverage was found to have a negative bias, as demonstrated by their portrayal of heroin users, the opposition to policies that are seen as supportive of users, and placing people opposed to heroin prescription and harm reduction in a more prominent position within the newspaper. This issue received less attention by other newspapers which provided a more balanced coverage of the subject matter.

The authors link this apparent campaign by the Daily Telegraph to reframe the issue and push public opinion to an intervention by the Prime Minister to overturn the decision made by the MCDS and veto the trial. Coverage by the Daily Telegraph highlighted comments made by John Howard to the effect that support for the trial “would send the wrong signal to the community” (Brough, 1997, cited in Lawrence, Bammer & Chapman, 2000, p. 254). The Daily Telegraph framed this comment through discourse
suggesting surrender in the war on drugs, and therefore a loss for the morally righteous, the “government as a drug peddler” (Lawrence et al., 2000, p. 259), non drug users as deserving citizens as they pay their taxes, which are now to be used to supply drugs to addicts, and framing users as deserving of punishment as they have chosen a life of deviance. Other discourse within the articles covered in the review claimed to uncover facts about the trial that were hidden by trial proponents. The authors suggest that this set up a dichotomy of ‘us’, the readership of the Daily Telegraph, the moral, sensible, honest, taxpaying public, and ‘them’, deceivers, morally loose, drug pusher advocates of the trial. The Prime Minister’s comments were used by media outlets to frame bias and push public opinion to the point where the Prime Minister actually reversed a decision of the MCDS aligned to the stated government policy, a policy adhering to the principles of harm minimisation. Whether public attitudes were influenced by the media, or the media engaged in tactics to focus public opinion, there was certainly a significant relationship between attitudes and the media, to a point where it influenced the political agenda.

Especially for members of the public who oppose harm minimisation on nonconsequentialist (moralistic) grounds, opposition by an authority figure would align strongly with the dispositional trait of authoritarianism, which supports law and order, holds rigid attitudes and gives absolute support for authority.

In an earlier review of public opinions toward drug use, Makkai and McAllister (1998) analysed public opinion surveys between 1985 and 1995. This period of time was characterised by changes in the ways of dealing with and viewing drug issues. In 1985 the National Campaign Against Drug Abuse (NCADA, the precursor to the current National Drug Strategy) introduced the concept of harm minimisation. It was characterised by changes to legislation including restrictions on tobacco advertising and sponsorship,
decriminalisation of possession of small amounts of marijuana in some jurisdictions, and changes to criminal law for trafficking.

The major goal of the NCADA was to increase public awareness about drugs and their consequences. To gauge public awareness, five opinion surveys were given at two-to-three year intervals over the ten year period. To be included in the review, a question had to appear at least twice over all surveys, however only one question appeared in all five surveys. Some questions were repeated, but with slight variations to the way they were asked or to the way they were scaled. The authors stated that these problems were addressed in the analysis and they were able to present interesting results, which are outlined below.

An aim of the survey was to discover which drugs people think are part of the drug problem. The main drugs consistently identified were heroin, cocaine, marijuana, tobacco and alcohol. However heroin dropped from 52% in 1985 to 30% in 1995. Alcohol rose from 6% in 1985 to 14% in 1995, and tobacco rose from 1% in 1985 to 5% in 1995. These figures show a change in the public consciousness to more awareness of the harm caused by licit drugs.

Questions in the surveys relating to the opinion of the consequences of drug use included recognition of excessive alcohol use, and smoking. Heroin use was identified as a concern in 1985, but opinion changed concerning sharing needles, syringes and other injecting equipment, rather than actual use per se by 1995. The public health consequences of the risk of the spread of blood borne viruses through the sharing of injection equipment are reflected in increased awareness by the public. By 1995 the majority of respondents identified alcohol use as the most serious concern, followed by smoking, again both licit drugs.
Public opinion has mainly favoured bans on cigarette advertising and availability, with 65% in 1988 supporting the bans, decreasing slightly to 62% in 1991. Evidence suggests this majority is increasing as bans and other demand and supply reduction strategies become generally more accepted as social norms. Alcohol policies during this period focused mainly on supply reduction measures, involving sale restrictions (e.g., age and opening hours), and pricing. Some demand reduction measures were introduced including lower taxes on low alcohol beers, and encouraging consumption of low alcohol products at sporting and other public events. Respondents favoured demand control options consistently, with the main focus on measures that control public consumption of alcohol.

Although analysis was hampered in the survey by changes in the way the question was presented and scored, support for cannabis legislation reform showed a general upward trend. In this period, there was a large and stable majority opposed to legalisation. The report suggests that public opinion has a close relationship to policy options toward cannabis, suggesting that the public may be receptive to possible changes. Indeed, there have been several changes to cannabis legislation in many Australian states since 1995 (MCDS, 2004), which signifies further changes in public attitude.

As mentioned previously (Lawrence et al., 2000), attitudes towards the use of drugs, such as heroin and cocaine, are largely influenced by the mass media, which portrays use of these drugs as criminal and immoral. A strong majority of respondents favour continued prohibition and increased penalties for sale and supply, with a strong opposition to legalisation of heroin and cocaine for personal use. This pattern is also repeated for amphetamines (Makkai & McAllister, 1998).

There were methodological problems with the surveys. To be included in the review, a question had to appear at least twice over all surveys, yet only one question
appeared in all five surveys. Some questions were repeated, however with slight variations to the way they were asked or to the way they were scaled. There were also changes in sampling and in the method of coding over the five surveys. Whilst the authors stated that they addressed problems of oversampling in urban centres and from adolescent populations through weighting participants to adjust to the national population, it may have affected the consistency of results. Furthermore, the 1985 survey consisted solely of a personal interview, with subsequent surveys including an interview and a sealed self-completion booklet for more sensitive questions. Nevertheless, a review of the opinions show a shift in public attitudes toward the drug problem to a focus on prevention of harm from both licit and illicit drug use, and a more health focused approach. Since these changes in attitudes occurred within ten years of the introduction of harm minimisation to the national drug strategy it would be interesting to measure the current attitudes of the general public in relation to drug and alcohol issues.

A study by Grindle and Goddard (2002) examined current attitudes toward harm minimisation strategies in an American Midwestern University sample. Participants in the study were 116 students who were previously exposed to harm minimisation strategies through coursework. Variables studies included their temperance mentality (i.e., the degree to which drug use is morally evaluated) and level of need for cognitive closure. The results of this research indicated that the acceptance of harm minimisation was higher in participants who had more previous exposure to education on harm minimisation, and had lower levels of temperance mentality and need for closure. Therefore the more familiar the strategies were to the participant and the less moralistic and close-minded the participant was, the higher the acceptance of harm minimisation.

This research was further examined by Goddard (2003) in exploring the acceptance of harm minimisation among a sample of treatment professionals in America’s
Midwest. Goddard presented a 2-hour continuing education program to 137 treatment professionals. The presentation included details of harm minimisation philosophy and specific harm minimisation strategies. Goddard pre- and post-tested participants’ attitudes to harm minimisation using the Harm Reduction Acceptability Scale (HRAS, the term harm reduction is used in the scale as it is America’s term for harm minimisation). Post-testing revealed increased acceptance of harm minimisation, and indeed, the author comments, treatment professionals were pleased to learn of a greater range of treatment options other than abstinence.

Further research by Goddard, Bonar, and Ryan (2006) closely replicated the study from 2002. The researchers used a revised edition of the HRAS, the Harm Reduction Acceptability Scale-Revised (HRAS-R) which amended the original scale from use within a professional population to use within a non-professional population. The HRAS-R is also suitable for a student population. The results supported the original findings for the effect of education on attitudes towards harm minimisation. Dispositional variables such as temperance mentality and close-mindedness also reduced the acceptability, however an effect for education was still found even when participants scored highly on these scales. Goddard’s research provides important evidence on the acceptance of harm minimisation among a characteristically resistant, or close-minded population. However, it is important to investigate whether these findings can be generalised to an Australian population. Previous research in this area with the Australian public is notably lacking, with the exception of a similar replication of Goddard’s study (Quick, 2007).

A study conducted by Quick (2007) measured the effects of exposure to education in attitudes toward harm minimisation amongst a sample of West Australian University students. Quick also investigated the effects of temperance mentality and need for closure on acceptance of harm minimisation. A total of 484 students completed the HRAS-R,
Attitudes Toward Harm Minimisation

Temperance Mentality Questionnaire, and the Need for Closure Scale. All students had varying levels of exposure to harm minimisation education; with Sports Science students (low exposure), Psychology students (medium exposure) and Addiction Studies students (high exposure). Quick found that students with high exposure to harm minimisation education had the highest levels of acceptance of harm minimisation. Results also indicated that participants with higher exposure to harm minimisation education, and higher levels of acceptance of harm minimisation, scored lower on the Temperance Mentality questionnaire. These results suggest that because participants with greater acceptance of harm minimisation have been exposed to more education, they do not have a nonconsequentialist attitude (opposition on moral grounds). There were no significant results found for the impact of Need for Closure on participants’ acceptance of harm minimisation.

Quick’s research integrated instruments developed for overseas populations (HRAS-R, TMQ and NFCS) into research on attitudes toward harm minimisation among the Australian population. However, as the study is a cross-sectional design, it is not possible to determine whether participants were opposed to harm minimisation on consequentialist or nonconsequentialist grounds prior to exposure to education. It is therefore difficult to conclude if education has a specific effect in changing attitudes mediated by dispositional variables such as authoritarianism and need for closure. Additionally, as the sample population was drawn from a university sample, participants may already be predisposed to being open-minded and ready to form an opinion based on informed education. This is particularly relevant for the Addiction Studies students who displayed the greatest acceptance of harm minimisation. It could be argued that Addiction Studies students, by choosing to enrol in this subject, demonstrate a want to treat drug
users or help improve drug policy, and therefore are likely to be more accepting of strategies that take a more pragmatic approach.

Through an evaluation of the National Drug Strategy, Single and Rohl (1998) have identified a change of attitude in the public towards drug use and drug users. Results revealed an increased tolerance toward AIDS victims, a focus from targeting users to traffickers, and an overall change in attitude towards seeing drug issues as primarily a health, not a moral issue. Nor are our responses required to be overly punitive, such as heavy criminal penalties for users that bring users into contact with the judicial and prison system. The authors suggested that Australia was moving toward the approach adopted by Holland (a country with strong harm minimisation policy approaches), who view users as “Dutch citizens who use drugs” (Single & Rohl, 1998, p.76). The attitude of the Australian public is changing from identifying users in pejorative terms such as ‘junkies’ and ‘druggies’, to an approach where substance users are viewed as “Australian citizens who use drugs” (Single & Rohl, 1998, p. 76).

Conclusion

Attitude theory has been central to social psychology since early last century. Attitude measurement provides insight into an individual’s needs, motivations and evaluation of world issues such as prejudice, religiosity, sexuality, morality, and other social and political policies. Attitude theory helps to understand the individual within the context of their social environment. There is no single accepted definition of attitudes, yet most current theories include notions of evaluation: namely, an affective response, and an effect on thoughts and behaviour. Theories on the structure of attitudes include attribution x evaluation theories, and tripartite theories of three classes of information, affective, cognitive, and behavioural. Attitudes are also not static, they often do change. Theories of attitude change involve the possible influence of the personal relevance of message
arguments. Future attitude change research may provide insight into effective ways to influence public opinion and help to understand dynamics between people’s attitudes and social phenomena.

An overview of the literature on attitudes toward the philosophy of our national drug strategy, harm minimisation, reveals that within some specific populations, such as treatment professionals and the judiciary, there is an acceptance of some harm minimisation strategies, including demand and supply reduction. Public opinion, both in Australia and overseas, is more complex to measure in regards to overall harm minimisation. Strategies that seek to improve users’ health and well-being are more accepted if the long term outcome includes abstinence. However, a complicated issue is made more ambiguous by black and white responses by politicians, endorsed and given attention by biased media, which seems to polarise harm minimisation and abstinence approaches.

With the exception of Goddard and colleagues’ (2002; 2003; 2006), and Quick’s (2007) research, there is no literature available on the direct measurement of the public’s attitude toward harm minimisation with consideration of other psychological factors which may mediate attitudes. Much of the research targets either specific populations, or specific harm minimisation strategies, with few studies conducted in Australia (Caplehorn, Lumley, Irwig, & Saunders, 1998; Lawrence, Bammer, & Chapman, 2000; Makkai & McAllister, 1998, Single & Rohl, 1998). Apart from Quick (2007), previous Australian studies that have addressed the attitudes of the general public towards harm minimisation strategies have not been currently validated and are hampered by methodological problems such as sampling and measurement errors. Future research in this area needs to target the broader public’s attitude toward harm minimisation, and how attitudes may be changed by exposure to evidence-based information on Australia’s
national policy. In addition, investigations into how these changes in attitudes may be mediated by psychological factors, e.g. need for closure, and other dispositional variables, should be examined. Furthermore, whilst the limited current research may show changes in attitudes, it is less clear if these changes affect overt behaviour. Other factors such as social desirability and a “Not In My Back Yard” (NIMBY) mentality may affect the intention to act that plays a part in linking attitude to behaviour (Fishbein & Yzer, 2003). A measure of the general public’s current attitudes toward drug use and users, and acceptance of our national drug strategy, and an examination of how these attitudes can be changed could perhaps be steps toward achieving some cohesiveness between public opinion and drug policy.
References


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The Effect of Brief Education and Dispositional Variables on Attitudes Toward Harm Minimisation Among a University Student Population

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The Effect of Brief Education and Dispositional Variables on Attitudes Toward Harm Minimisation Among a University Student Population

Abstract

The current study aimed to investigate the effects of brief education and dispositional variables such as consequentialism (opposition on moral grounds) on the attitudes towards harm minimisation within a sample of West Australian University students. Harm minimisation is the philosophy of Australia’s National Drug Strategy. Previous research by Goddard and colleagues (2002; 2003; 2006), and Quick (2007) found that education had an effect on acceptance of harm minimisation as measured by the Harm Reduction Acceptability Scale (HRAS), and that attitudes were shifted toward acceptance of harm minimisation even amongst participants who displayed opposition on nonconsequentialist grounds as measured by the Temperance Mentality Questionnaire (TMQ) and the Need for Closure Scale (NFCS). The current study was a between subjects pre and post test design measuring attitudes toward harm minimisation using the Harm Reduction Acceptability Scale-Revised (HRAS-R) before and after a brief education intervention (Harm Minimisation Fact Sheet), and opposition toward harm minimisation as measured by the NFCS. A total of 114 students from Edith Cowan University participated in the research. The mean scores on the HRAS-R indicated that the sample had a good acceptance of harm minimisation. A series of t-tests were performed to examine differences between groups. There were no significant effects, indicating that there was no effect for education on attitudes toward harm minimisation, and scores obtained on the HRAS-R were not mediated by scores on the NFCS. Future research in this area is warranted, however the sample should be drawn from a broader Australian population. The inclusion of the NFCS in further research is questionable, and the inclusion of the Temperance Mentality Questionnaire may be more useful in indicating whether the constructs of consequentialist and nonconsequentialist opposition is applicable to an Australian population.

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Supervisors: Associate Professor Lynne Cohen and Dr. David Ryder

Submitted:
The Effect of Brief Education and Dispositional Variables on Attitudes Toward Harm Minimisation Among a University Student Population

Introduction

Decades of research on attitude theory have provided insight into the importance of understanding the individual within the context of his/her social world and phenomena such as group norms, social policies and political policy (Cohen, O'Connor, & Blackmore, 2002). With particular reference to political policy, attitudes held by the public may influence the formation of policy (Palmer & Short, 1994). An example of a political policy within Australia is the approach to drug use, drug users, and drug-related harm. The guiding principle of the Australian National Drug Strategy (Ministerial Council on Drug Strategy [MCDS], 2004) embraces the philosophy of harm minimisation. This viewpoint takes a pragmatic approach to alcohol and other drug issues by recognising that people will, as part of cultural, social, and religious mores, continue to use psychoactive substances (Ryder, Walker, & Salmon, 2006). Australia’s drug policy has evolved over the years from prohibition and punitive approaches to more tolerant, health-focused approaches (Makkai, 1994; MCDS, 2004). The interaction between society and the political system assumes that the wider community’s values, norms, and attitudes influence the formation of policy (Palmer & Short, 1994). It may be that the current policy of harm minimisation is a reflection of the wider community’s attitude towards the importance of the health and well-being of users. It would therefore be of value to understand a population’s current attitude to Alcohol Tobacco and Other Drug (ATOD) policy, and how these attitudes may be influenced by education.

Attitudes

Historically, there has been no single accepted definition of attitudes (Eagly, 1992; Zanna & Rempel, 1988). Several definitions incorporate some degree of evaluation
toward a person, object, or issue (Beck, 2004; Eagly, 1992; Zanna & Rempel, 1988). Perloff (2003) endeavours to combine elements of several conceptions of attitudes and offers the definition that attitudes are: “a learned, global evaluation of an object (person, place or issue) that influences thought and action.” (p. 39).

Within the above definition, several core elements can be identified. First, attitudes are learned. Attitudes are not formed until a person encounters an attitude object, (a person, place or thing) or information concerning the attitude object (Eagly & Chaiken, 1998, cited in Perloff, 2003, p. 40). Therefore attitudes are formed through the process of socialisation, for example, prejudice and religious discrimination (Perloff, 2003). Second, attitudes are seen as an evaluative tendency (Eagly, 1992, Petty, Wegener, & Fabrigar, 1997) which is usually connected to an affective response which judges the attitude object with some level of favour or disfavour (Eagly, 1992, Petty et al., 1997). Third, attitude theory states that attitudes influence thought and behaviour (Perloff, 2003). Attitudes can act as cognitive shortcuts, helping to categorise people and events (Perloff, 2003). Attitudes are thought to influence behaviour, as they guide our actions, for example, in communicating to the world our beliefs and values (Perloff, 2003). However the link between attitudes and overt behaviour is not always consistent (Perloff, 2003). The elements of affect, cognition, and behaviour form the basis of tripartite models of attitude structure (Zanna & Rempel, 1988).

A three component or tripartite model of attitudes including cognition, affect, and conation (behaviour), has been suggested by several theorists such as Katz and Stotland (1959), Rosenberg and Hovland (1960) (cited in Cohen, O'Connor, & Blackmore, 2002), and Zanna and Rempel (1988). Cognition involves the thoughts, ideas, beliefs, and knowledge about the attitude object. Affect involves the positive or negative feeling or evaluation of the attitude object. Cognition and affect may also interact, where thoughts
and ideas about an object may influence the way one feels about the object, or vice versa (Beck, 2004). Lastly, behaviour may be influenced by the attitude one holds, such as political attitudes influencing the choice of vote, or the attitude may be informed by past behaviours or behavioural intentions (Beck, 2004). Zanna and Rempel (1988) viewed attitudes along three classes of information; cognitive, affective and behavioural, which help to categorise stimuli. They proposed that these three classes can influence an attitude separately or in combination with each other. They suggested that an attitude need not be based on all three components or types of information; affective, cognitive, and behavioural (Zanna & Rempel, 1988). The tripartite model of attitude theory is widely adopted in psychological theory and research today and is useful for examining attitudes toward political policy such as Australia’s National Drug Strategy (MCDS, 2004).

Harm Minimisation

Australia has gained an international reputation for a progressive policy response to the harms from drug use (Single & Rohl, 1998). Since 1985, Australia has circumvented the morality debate about drug use and has focused on maintaining the health of the population (Ministerial Council on Drug Strategy [MCDS], 2004). The current National Drug Strategy (MCDS, 2004) is a collaborative venture between public health and law enforcement, building partnerships in the areas of treatment, prevention, research and education. The focus of the policy ensures a strategic balance of approaches to target the social, economic, and health costs of both licit and illicit drug use by preventing uptake of use and reducing the harmful effects of use (AIHW, 2007; Single & Rohl, 1998; Wellbourne-Wood, 1999). In countries other than Australia, such as Canada and USA, this philosophy is termed harm reduction; however, in Australia this approach is termed harm minimisation (MCDS, 2004). In Australia, the term harm reduction refers to one of three strategies (outlined below) adopted under the harm minimisation approach.
The term harm minimisation will be used throughout this paper to refer to the overall philosophy incorporated in the National Drug Strategy that includes a wide range of policies and programs (including harm reduction), aimed at ameliorating the social, economic and health consequences of drug use at the individual and community level, including abstinence-oriented strategies (MCDS, 2004).

Harm minimisation operates within the current legal boundaries of drug laws, and does not necessarily require changes to the legal status of certain drugs in order for effective harm minimisation strategies to be implemented (Lenton & Single, 1998). There are three main strategies in the current NDS that are under the comprehensive harm minimisation philosophy: supply reduction, demand reduction, and harm reduction. Supply reduction uses law enforcement and the drug laws to control the amount of the drug available to the community. Policies and programs designed to disrupt the production and supply of drugs include border control, legal sanctions, sale, age, and advertising restrictions (Anderson, 1994; MCDS, 2004). Demand reduction aims to prevent the uptake of harmful drug use. Policies and programs include education responses, methadone maintenance and other substitution and abstinence-oriented treatment services (e.g., Naltrexone, Subutex), creating supportive environments, community action, and development of personal skills (Anderson, 1994; MCDS, 2004). Finally, harm reduction includes efforts to reduce the direct harm to the individual and the community associated with the use of the drug amongst those who continue to use drugs. These policies and programs include needle and syringe exchange programs to prevent the spread of blood borne viruses, alternative routes of administration to find safer ways to consume the drug, and using half of the amount of the drug supplied on first administration to prevent overdoses (Anderson, 1994; MCDS, 2004). Whilst Harm
Minimisation is the philosophy of Australia's National Drug Strategy, it may not be well understood or accepted by the public.

**Dispositional Variables**

In 1998, MacCoun offered the idea of attitudinal opposition to harm minimisation. He stated that American citizens may oppose harm minimisation policy on an attitudinal continuum ranging from consequentialist to nonconsequentialist grounds (MacCoun, 1998). Consequentialist opposition is characterised by the belief that harm reduction strategies may inadvertently increase harm or increase use. This attitude reflects opposition on the grounds of ignorance of the facts and evidence of the efficacy of harm minimisation. As consequentialist individuals are ignorant of the facts of harm minimisation, they may increase their acceptance of harm minimisation through education about the efficacy of evidence-based harm minimisation strategies, especially strategies that are not offset by an increase in actual drug use. In contrast, nonconsequentialist attitudes may be underpinned by a number of psychological principles, including the dispositional trait, authoritarianism (MacCoun, 1998). This view is characterised by a strong belief in law and order, absolute support for authority, an expression of hostility toward members who are not within their social group, and intolerance for alternative behaviour (MacCoun, 1998), prejudice, rigid thinking and rigid attitudes (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950, cited in Beck, 2004 p. 349). Individuals with authoritarian dispositions are also more likely to favour punitive drug policies, where they feel users deserve to suffer the harms associated with drugs, as a consequence of their use (MacCoun, 1998). Nonconsequentialist opposition is opposition on moral grounds. These views represent opposite ends of the continuum where consequentialist opposition, due to ignorance, may decrease when individuals are exposed to education about harm reduction. Conversely, nonconsequentialist opposition on moral grounds may
be fixed due to dispositional variables, such as authoritarianism, which influences rigid attitudes (MacCoun, 1998).

Authoritarianism correlates positively with a Need for Cognitive Closure. This psychological construct was defined in 1996 by Kruglanski and Webster as “individuals’ desire for a firm answer to a question and an aversion toward ambiguity” (p. 264). An individual’s need for closure will motivate their behaviour toward attainment of a definitive answer, bias their choices of activities toward those pursuits that provide closure, produce negative responses when their attempts at closure are thwarted, and produce positive responses when closure is gained (Kruglanski & Webster, 1996). The Need for Closure Scale (Kruglanski, Webster, & Klem, 1993) correlates at .28 with scales of dogmatism, authoritarianism, and intolerance of ambiguity (Beck, 2004). Therefore individuals who score highly on the Need for Closure Scale will usually hurry to judgement and to make a decision on an issue without waiting for all available evidence, displaying rigid thinking (Kruglanski & Webster, 1996). Kruglanski et al. (1993) stated that high need for closure individuals may become attached to the closure, biasing the attention toward information that preserves the obtained decision. Measuring the need for closure for a population may be useful for guiding strategies that affect attitude, such as formation of drug and alcohol policy. A population that displays high need for closure may not be as accepting of alternative strategies that require acceptance of others outside their own social group, alternative strategies to punitive enforcement and punishment of users, and a requirement to appreciate the subtleties of a political and social issue such as seeing drug use and drug-related harm as a public health issue rather than a moral and/or legal issue.
Attitudes toward Harm Minimisation

A study by Caplehorn, Lumley, Irwig, and Saunders (1998) examined staff attitudes toward a harm minimisation program within a treatment setting. Staff members working at ten Sydney methadone maintenance programs were surveyed in 1989 and 1992. The surveys consisted of two questionnaires including a 14-item Abstinence Orientation Scale and a six-item Disapproval of Drug Use Scale. These Likert scale questionnaires measured support for abstinence-oriented policies and punitive outcomes for drug use respectively. The mean scores obtained in the Abstinence Orientation Scale between 1989 and 1992 showed a shift in attitudes away from abstinence-oriented policies. Interestingly, this shift was not reflected in the Disapproval of Drug Use scores, meaning that staff had changed attitudes toward policy without changing beliefs about punishment of drug users. This suggests that exposure to harm minimisation education may actually not be sufficient to shift attitudes toward drug use and users.

Changes in attitudes amongst treatment worker staff as reported in the Caplehorn et al. (1998) study, may not be reflected in changes in attitude toward drug policy amongst the general public. A study by Bammer (1995) reviewed the outcome of a public survey distributed during an assessment phase of the feasibility of a heroin trial in the Australian Capital Territory (ACT). Support from the community for the heroin trial was greater when the stated aim included eventually obtaining abstinence (39% from ACT and 36% nationally). When the statement was changed to focus on improving the quality of life of the user, without necessarily trying to maintain abstinence, support dropped to around 20%. The main conclusion drawn from the survey data was that public opinion did not support the view that harm minimisation works without abstinence, thus abstinence should be the ultimate outcome of any long term drug strategy.
In the period between August 1 and August 19, 1997, Lawrence, Bammer, and Chapman (2000) assessed the opinions and views put forward by the seven major newspaper media outlets in Australia, including The Daily Telegraph, Sydney Morning Herald, Herald-Sun, The Age, Canberra Times, Courier-Mail, and The Australian. The coverage reviewed related to the decision made on July 31, 1997, by the Australian Ministerial Council on Drug Strategy (MCDS), to conduct a 6-month pilot study of heroin prescription to dependent users. A review of the attitudes represented by the papers found an inordinate push by the Daily Telegraph to frame and define the issue of the heroin trial and influence public attitudes. The authors link this apparent campaign by the Daily Telegraph to reframe the issue by highlighting comments made by John Howard to the effect that support for the trial "would send the wrong signal to the community" (Brough, 1997, cited in Lawrence, Bammer & Chapman, 2000, p. 254). The Prime Minister’s comments were used by media outlets to frame bias and push public opinion to the point where the Prime Minister actually reversed a decision of the MCDS aligned to the stated government policy. This shows a significant relationship between attitudes and the media, to a point where it influenced the political agenda. Especially for members of the public who oppose harm minimisation on nonconsequentialist (moralistic) grounds, opposition by an authority figure would align strongly with the dispositional trait of authoritarianism, which supports law and order, holds rigid attitudes and gives absolute support for authority.

In an earlier review of public opinions toward drug use, Makkai and McAllister (1998) analysed public opinion surveys between 1985 and 1995. In 1985 the National Campaign Against Drug Abuse (NCADA, the precursor to the current National Drug Strategy) introduced the concept of harm minimisation. The major goal of the NCADA was to increase public awareness about drugs and their consequences. Results of the
survey indicated shifts in public awareness on the harms of drug use. This was demonstrated by identifying sharing of needles and injecting equipment as a major risk, rather than actual heroin use. Results also indicated increased awareness by the public of the harms associated with licit drugs such as alcohol. Demand reduction strategies were consistently favoured, especially those that restricted sale (e.g., age and opening hours), indicating a focus on the public consumption of alcohol. Overall the results of the survey indicated an increased awareness in the community about the risks and consequences associated with drug use.

Through an evaluation of the National Drug Strategy, Single and Rohl (1998) have identified a change of attitude in the public towards drug use and drug users. Results revealed an increased tolerance toward AIDS victims, a focus from targeting users to traffickers, and an overall change in attitude towards seeing drug issues as primarily a health, not a moral issue. The authors suggested that Australia was moving toward the approach adopted by Holland (a country with strong harm minimisation policy approaches), who view users as “Dutch citizens who use drugs” (Single & Rohl, 1998, p.76). The attitude of the Australian public is changing from identifying users in pejorative terms such as ‘junkies’ and ‘druggies’, to an approach where substance users are viewed as “Australian citizens who use drugs” (Single & Rohl, 1998, p.76).

A study by Grindle and Goddard (2002) examined current attitudes toward harm minimisation strategies in an American Midwestern University sample. Participants in the study were 116 students who were previously exposed to harm minimisation strategies through coursework. Variables included their temperance mentality (i.e., the degree to which drug use is morally evaluated) and level of need for cognitive closure. The results of this research indicated that the acceptance of harm minimisation was higher in participants who had more previous exposure to education on harm minimisation, and had
lower levels of temperance mentality and need for closure. Therefore the more familiar the strategies were to the participant and the less moralistic and close-minded the participant was, the higher the acceptance of harm minimisation.

This research was further examined by Goddard (2003) in exploring the acceptance of harm minimisation among a sample of treatment professionals in America’s Midwest. Goddard presented a 2-hour continuing education program to 137 treatment professionals. The presentation included details of harm minimisation philosophy and specific harm minimisation strategies. Goddard pre- and post-tested participants’ attitudes to harm minimisation using the Harm Reduction Acceptability Scale (HRAS, the term harm reduction is used in the scale as it is America’s term for harm minimisation). Post-testing revealed increased acceptance of harm minimisation, and indeed, the author comments, treatment professionals were pleased to learn of a greater range of treatment options other than abstinence.

Further research by Goddard, Bonar, and Ryan (2006) closely replicated the study from 2002. The researchers used a revised edition of the HRAS, the Harm Reduction Acceptability Scale-Revised (HRAS-R) which amended the original scale from use within a professional population to use within a non-professional population. The HRAS-R is also suitable for a student population. The results supported the original findings for the effect of education on attitudes towards harm minimisation. Dispositional variables such as temperance mentality and close-mindedness also reduced the acceptability, however an effect for education was still found even when participants scored highly on these scales. Goddard’s research provides important evidence on the acceptance of harm minimisation among a characteristically resistant or closed-minded population (Goddard, 2003). However it is important to investigate whether these findings can be generalised to an
Australian population. Previous research in this area with the Australian public is notably lacking, with the exception of a similar replication of Goddard’s study (Quick, 2007).

A study conducted by Quick (2007) measured the effects of exposure to education in attitudes toward harm minimisation amongst a sample of West Australian University students. Quick also investigated the effects of temperance mentality and need for closure on acceptance of harm minimisation. A total of 484 students completed the HRAS-R, Temperance Mentality Questionnaire, and the Need for Closure Scale. All students had varying levels of exposure to harm minimisation education; with Sports Science students (low exposure), Psychology students (medium exposure) and Addiction Studies students (high exposure). Quick found that students with high exposure to harm minimisation education had the highest levels of acceptance of harm minimisation. Results also indicated that participants with higher exposure to harm minimisation education, and higher levels of acceptance of harm minimisation, scored lower on the Temperance Mentality questionnaire. These results suggest that because participants with greater acceptance of harm minimisation have been exposed to more education, they do not have a nonconsequentialist attitude (opposition on moral grounds). There were no significant results found for the impact of Need for Closure on participants’ acceptance of harm minimisation.

Quick’s research integrated instruments developed for overseas populations (HRAS-R, TMQ and NFCS) into research on attitudes toward harm minimisation among the Australian population. However, as the study is a cross-sectional design, it is not possible to determine whether participants were opposed to harm minimisation on consequentialist or nonconsequentialist grounds prior to exposure to education. It is therefore difficult to conclude if education has a specific effect in changing attitudes mediated by dispositional variables such as authoritarianism and need for closure.
Additionally, as the sample population was drawn from a university sample, participants may already be predisposed to being open-minded and ready to form an opinion based on informed education. This is particularly relevant for the Addiction Studies students who displayed the greatest acceptance of harm minimisation. It could be argued that Addiction Studies students, by choosing to enrol in this subject, demonstrate a want to treat drug users or help improve drug policy, and therefore are likely to be more accepting of strategies that take a more pragmatic approach.

A review of the Australian literature shows a shift in public attitudes toward the drug problem to a focus on prevention of harm from both licit and illicit drug use, and a more health focused approach. Since these changes in attitudes occurred within ten years of the introduction of harm minimisation to the national drug strategy it would be interesting to measure the current attitudes of the general public in relation to drug and alcohol issues.

Building on previous studies by Goddard and colleagues (2002; 2003; 2006) and Quick (2007) the aim of the current study was to investigate the effects of brief education and dispositional variables such as consequentialism on the attitudes towards harm minimisation within a sample of West Australian University students. As Quick’s (2007) previous research was cross sectional, the current study aimed to measure a more generalised population with pre- and post-testing to better determine shifts in attitudes toward harm minimisation as mediated by Need for Closure. The research questions for this study were:

1) Does exposure to the philosophy and efficacy of harm minimisation lead to a positive shift in attitude towards harm minimisation?

2) To what extent is exposure to education mediated by dispositional variables such as consequentialism as measured by scores on the Need for Closure Scale?
It was hypothesised that there will be a positive shift in attitude towards harm minimisation after exposure to the philosophy and efficacy of harm minimisation, and that participants who score low on the need for closure scale will show significant positive change in attitude toward harm minimisation. It was also anticipated that the intervention of the harm minimisation fact sheet will show an effect for the education intervention, therefore participants who score highly on the need for closure scale may also show positive change toward harm minimisation, although this change may be small.

Method

Study Design

The quantitative research design was a cross-sectional, independent samples (between subjects) pre- and post-test design. The first dependent variable (DV) was attitudes towards harm minimisation as measured by scores obtained on the Harm Reduction Acceptability Scale Revised (HRAS-R) (Appendix B) developed by Goddard, Gauspohl, and Breitenbecher, (2003). The second DV was dispositional variables such as consequentialism and non-consequentialism, as measured by scores obtained on the Need For Closure Scale (NFCS) (Appendix C) developed by Kruglanski, Webster, and Klem (1993). The independent variable (IV) was a brief education intervention consisting of the Harm Minimisation Fact Sheet (Appendix D) developed by the researcher.

Participants

After gaining ethics approval for the project through the Edith Cowan University Faculty of Computing, Health and Science Human Ethics subcommittee, participants for this study were recruited through liaising with the Undergraduate Co-ordinators and lecturers within the Edith Cowan University Faculty of Computing, Health and Science. A total of 114 students in the Psychology and Epidemiology units participated in the first round of research at pre-test (before intervention). There were 29 males and 85 females.
Ages ranged from 17-57 years ($M = 25.72$, $SD = 10.24$). Of the original 114 participants, a total of 84 students representative of the original sample participated in the research at post-test (after intervention). This represents a 73.68% response rate at the post-test stage. Participation was completely voluntary and anonymous, with no identifying information collected at any time. Students were accessed at an agreed time with the lecturer during their lectures. Students were asked to participate in the research and were advised that non-participation would in no way affect assessment of their coursework. Students were provided with an information letter (Statement of Disclosure, Appendix A) which explained the study. At pre-test (before intervention) students who were interested in participating in the research study were handed the questionnaires to complete. At post-test one week later, half the students were asked to complete the questionnaire a second time, without an intervention (after intervention/no education). The other half of the students were asked to read the Harm Minimisation Fact Sheet (Appendix E) and then asked to complete the questionnaire again (after intervention/education). This participant pool was also shared by another researcher.

*Materials*

Participants were asked to read a statement of disclosure outlining the research and then were asked to complete the following questionnaires:

1. Demographics questionnaire (Appendix B) that requested information including age, gender, level of education, own personal drug use, other's drug use, and prior understanding of the harm minimisation concept. As the participant pool was shared, there were some questions in this questionnaire that were not relevant to the analysis in this study.

2. The Harm Reduction Acceptability Scale-Revised (HRAS-R) (Appendix C). This scale was developed for a non-professional population and is psychometrically similar to the
original HRAS (Quick, 2007). Data available for the original HRAS has shown this scale to have moderately high internal consistency (Cronbach’s alphas ranging from .877 pre-test to .929 post-test), and 3 week test-retest reliability ($r = 0.825$) (Goddard, 2003). The HRAS is able to discriminate between those who are exposed to harm minimisation education and those who adhere to more of a zero tolerance, or abstinence-focused, approach to alcohol and other drug issues (Goddard, 2003). The questionnaire was scored using a 5-point Likert scale from 1 = strongly agree to 5 = strongly disagree which asks participants to indicate their measure of agreement on 25 statements.

3. The Need for Closure Scale (NFCS) (Appendix D). This questionnaire was developed to self-report one’s need for cognitive closure along a continuum ranging from high need for closure to high need to avoid closure. The NFCS has proven reliability (Cronbach’s alpha = .84) and 12 week test-retest reliability ($r = .86$) (Kruglanski, Webster, & Klem, 1993). Participants were asked to indicate their measure of agreement on 42 statements presented using a 6-point Likert scale from 1 = strongly disagree to 6 = strongly agree.

4. Half of the original sample population acted as an experimental group and were provided with an information fact sheet on Harm Minimisation (Appendix E) before being asked to complete the HRAS-R a second time (post-test). This fact sheet, developed by the researcher from evidence-based literature, provides evidence for the efficacy of the Harm Minimisation approaches presented in the questions of the HRAS-R, and acted as an education intervention.

Procedure

At pre-test, participants were accessed during lecture times as agreed with the lecturers. The nature and outline of the study was explained to all potential participants by the researcher. Those students who were interested in participating in the research were issued with a materials pack including a Statement of Disclosure, Demographics
questionnaire, the Harm Reduction Acceptability Scale-Revised (HRAS-R) questionnaire, The Need for Closure Scale (NFCS), and an envelope. The Statement of Disclosure was read verbatim to students by the researcher, detailing complete voluntary and anonymous participation, and the right to withdraw at any time. Students were provided with the opportunity to seek further information or clarify issues regarding the research. Students were also asked to mark each envelope with the last four digits of their home phone or mobile number so participants could be matched at pre-test and post-test. Students who chose to participate in the research were asked to complete the questionnaires and place the materials in the envelope provided. Students who did not wish to participate were asked to place all materials in the envelope. Consent was implied by completion of the questionnaires. All envelopes were collected by the researcher.

At post-test at the same time in the week following, students were again asked to complete the questionnaires. However, on this occasion the original sample was split into two groups, with participants randomly assigned to one of the two groups. The first group was called the After intervention/no education group and were asked to complete the questionnaires with no additional information provided. This group acted as a control group. The second group called the After intervention/education group were asked to read an information sheet prior to completing the questionnaires, thereby acting as the experimental group. The information sheet (Appendix D) contained a short paragraph on harm minimisation, followed by factual information on the efficacy of harm minimisation strategies. All envelopes were collected by the researcher. At pre-test all questionnaires were coded as 1 = before intervention. At post-test all questionnaires were coded as 2 = after intervention/no education or 3 = after intervention/education. The HRAS-R was also reverse scored on questions 1, 4, 9, 13, 18, 21, 23, and 25. The NFCS was reverse scored on questions 2, 5, 12, 15, 17, 18, 19, 20, 22, 24, 27, 28, 34, 37, 38, and 42.
Results

Prior to data entry, questionnaires were coded (including reverse scoring on the HRAS-R and NFCS) and incomplete questionnaires were identified. Participants were matched at pre-test and post-test by the same last four digits of their phone number written on the envelope. Data was then entered into SPSS version 14. Participants who were coded as After intervention/no education were matched to their pre-test and coded in SPSS as the control group. Participants who were coded as After intervention/education were matched to their pre-test and coded in SPSS as the intervention group. Data was screened for missing cases and outliers. Missing cases were coded as zero. If a questionnaire included too many missing cases (for example no responses on the last page of the NFCS) it was excluded from the data set ($N = 9$). No assumptions were deemed violated therefore no data transformation was required.

Table 1

Mean scores for the HRAS-R at pre-test (before intervention)

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Score (range 1-5)</th>
<th>Standard deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Group</td>
<td>2.71</td>
<td>.53</td>
<td>52</td>
</tr>
<tr>
<td>Intervention Group</td>
<td>2.56</td>
<td>.55</td>
<td>53</td>
</tr>
</tbody>
</table>

An independent samples $t$-test was performed on the mean scores for the HRAS-R obtained at the pre-test stage. These results are summarised in Table 1. The results were not significant $t(103) = 1.39, p > .05$, indicating that there were no differences on HRAS-R scores between the groups at the pre-test stage.
Table 2

Mean scores for the NFCS at pre-test (before intervention)

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Score (range 1-6)</th>
<th>Standard deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Group</td>
<td>3.63</td>
<td>.51</td>
<td>52</td>
</tr>
<tr>
<td>Intervention Group</td>
<td>3.83</td>
<td>.46</td>
<td>53</td>
</tr>
</tbody>
</table>

An independent samples $t$-test was performed on the mean scores for the NFCS obtained at the pre-test stage. These results are summarised in Table 2. The results were not significant $t(103) = -2.079, p > .05$, indicating that there were no differences on NFCS scores between the groups at the pre-test stage.

Table 3

Mean scores for the HRAS-R at post-test (after intervention)

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Score (range 1-5)</th>
<th>Standard deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Group</td>
<td>2.67</td>
<td>.51</td>
<td>45</td>
</tr>
<tr>
<td>Intervention Group</td>
<td>2.42</td>
<td>.50</td>
<td>39</td>
</tr>
</tbody>
</table>

An independent samples $t$-test was performed on the mean scores for the HRAS-R obtained at the post-test stage. These results are summarised in Table 3. The results were not significant $t(82) = 2.20, p > .05$. The researcher acknowledges that comparison of post-test mean scores on the HRAS-R do not add to the analysis as it does not compare shifts in attitude between groups, however these results have been included to maintain the flow of analysis.
An independent samples t-test was performed on the mean scores for the NFCS obtained at the post-test stage. These results are summarised in Table 4. The results were not significant $t(82) = 2.20, p > .05$. The researcher acknowledges that comparison of post-test mean scores on the NFCS do not add to the analysis, however these results have been included to maintain the flow of analysis.

The differences in scores between participants pre-test and post-test mean HRAS-R scores were then calculated and entered into SPSS version 14. An independent samples t-test was performed to investigate the differences in scores for the control group at pre-test and post-test compared to the differences in scores for the intervention group at pre-test and post-test. These results are summarised in Table 5 and indicate that there was an increase in the mean scores on the HRAS-R of .01 for the control group, and a decrease of
.17 in mean scores on the HRAS-R for the intervention group. However, these results were also found to be non-significant \( t(82) = 1.08, p > .05 \), and represented a small effect size Cohen’s \( d = .24 \). These results indicate that there was no effect for the brief education intervention on scores obtained on the HRAS-R.

Table 6

NFCS mean differences scores

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Difference Score (range 1-6)</th>
<th>Standard deviation</th>
<th>( N )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Group</td>
<td>-.01</td>
<td>.66</td>
<td>45</td>
</tr>
<tr>
<td>Intervention Group</td>
<td>-.08</td>
<td>.63</td>
<td>39</td>
</tr>
</tbody>
</table>

Again, to maintain the flow of analysis, the differences in scores between participants pre-test and post-test mean NFCS scores were then calculated and entered into SPSS version 14. An independent samples \( t \)-test was performed to investigate whether there were any differences between the control group and intervention group in their differences between pre- and post-test scores on the NFCS. These results are summarised in Table 6. These results were also found to be non-significant \( t(82) = .488, p > .05 \). These results indicate that there was no effect for the brief education intervention on scores obtained on the NFCS.

An Analysis of Covariance (ANCOVA) was performed to examine any mediating effects of the NFCS on HRAS-R scores, with the NFCS mean scores as the covariate. No significant differences were found \( F(1,80) = .077, p > .05 \). This indicates that scores on the NFCS do not have a mediating effect on scores on the HRAS-R.
The current study aimed to investigate the effects of brief education and dispositional variables such as consequentialism on the attitudes towards harm minimisation within a sample of West Australian University students. As previous research (Goddard, 2002; 2003; 2006) was for overseas populations, or simply cross sectional (Quick, 2007), the current study aimed to measure a more generalised Australian population with pre- and post-testing to better determine shifts in attitudes toward harm minimisation as mediated by Need for Closure.

The results of the current study do not support the hypothesis that exposure to the philosophy and efficacy of harm minimisation leads to a positive shift in attitude towards harm minimisation, as no significant differences between groups were found. The results of the current study also do not support the hypothesis that exposure to education may be mediated by dispositional variables such as consequentialism as measured by scores on the Need for Closure Scale, as no significant differences were found.

Even though the non-significant results indicate that there were no differences between the control and intervention group at both pre-test and post-test, the mean scores obtained on the HRAS-R indicate a measure of attitudes toward harm minimisation. As the HRAS-R is designed to discriminate between those who are exposed to harm minimisation education and those who adhere to more of a zero tolerance, or abstinence-focused, approach to alcohol and other drug issues, the mean scores obtained on the HRAS-R suggest that the current sample already has a good acceptance of harm minimisation policy, as shown by the relatively low mean scores across groups and across time (2.42 group 2 post-test-2.71 group 1 pre-test).

In comparison to previous research by Goddard and colleagues (2002, 2003, 2006) which measured a characteristically conservative American population, the current results
may reflect an Australian population that is more accepting of harm minimisation.

Goddard’s research showed shifts in attitudes from a zero tolerance approach, which more closely reflects America’s current approach to drug use and drug related harm, to a harm minimisation approach. This is in contrast to an Australian population, which has had an official policy on drug use and drug-related harm since 1985 which has incorporated a harm minimisation approach. Acceptance of these strategies may be reflected in the current sample which displayed a baseline attitude which was already accepting of harm minimisation. These results also may support previous Australian research (Makkai & McAllister, 1998; Single & Rohl, 1998) which suggested that the attitudes of Australians were shifting toward viewing drug use and drug-related harm as a public health issue, requiring strategic responses across prevention, education and law enforcement domains, rather than a primary focus on punitive measures.

Furthermore, as the sample displayed acceptance toward harm minimisation, the intervention of the brief education harm minimisation fact sheet may do little to further enhance acceptance, especially within the current study design. Goddard’s previous research included education interventions such as two-hour continuing education programs, or sampling based on hours exposed to drug and alcohol education, which was replicated in Quick’s (2007) study. These education interventions are clearly more intensive than a brief information fact sheet, and may include education on other drug and alcohol issues such as models of dependence and addiction, and models of the interactions between the drug user, the actual drug, and the environment, which may influence a participant’s view of drug use and drug-related harm toward a more pragmatic approach. Where education interventions were brief, such as presenting one paragraph on harm minimisation, this was juxtaposed against a paragraph on the ‘War on drugs’, a zero tolerance approach. Presenting two paragraphs in this manner may polarise the issue for a
participant, which in Goddard's previous research, participants were found to favour harm minimisation. However in the current study design, it is understandable that brief education presented solely on harm minimisation may lack sufficient power to further shift attitudes that are already accepting of the presented approach. Future research may have to consider the mode and method of education in relation to the proposed sample, especially in regards to a broader population where some methods of education delivery may be more effective than others.

The mean scores obtained on the NFCS indicate a moderate need for cognitive closure amongst the current sample. Previous research by Quick (2007) did not find a significant effect for the NFCS and this was supported in the current study by non-significant results across groups for both pre-test and post-test, and non-significant results for a mediating effect of NFC on HRAS-R scores. This indicates that there is no support in the current sample for consequentialist or nonconsequentialist opposition to harm minimisation. However the moderate need for closure within the current sample may be due to the effects of university education, which enhances critical thinking skills, an ability to weigh up costs and benefits to the individual and society, and open-mindedness. The limitations of sampling from a university population will be further discussed below.

As the NFCS appears to not be an effective measure of possible opposition to harm minimisation especially within a university population, and perhaps within a broader Australian population, it is questionable whether NFC is a useful construct to characterise the Australian population. Further research with the temperance mentality questionnaire (as Quick found significant results with this), with the broader Australian population which samples from different socio-economic classes and different education backgrounds, may help determine whether the conceptualisation of consequentialist and nonconsequentialist opposition adequately applies to an Australian population.
Limitations

As the current sample was drawn from a University population, limitation factors such as demand characteristics and social desirability cannot be discounted. As mentioned previously, tertiary education enhances critical thinking and exposes students to social and political issues. Especially in an academic data collection setting students may be exposed to previous research collection and methods, which is particularly the case in the current study where students were sampled from first year psychology units. This may skew results in two ways; either creating an awareness in the participants of demand characteristics, therefore the participant may make more effort to provide truthful responses, or they may bias their responses by anticipating what the researcher is looking for. Socially desirable responses may also bias results from participants who may understand or anticipate what the ‘correct’ or desired attitudes may be from their studies. However as attitudes contain an effective component, emotive statements in the HRAS-R such as “Women who use illegal drugs during pregnancy should lose custody of their babies” may encourage more truthful responses.

The use of Likert scales is common in psychological research due to practical advantages however they may limit the power of analysis. Likert scales are often not sensitive enough and limit the information available to the researcher. As there are only small differences in the scores, this may limit results to small effect sizes. The lack of sensitivity also makes it difficult to make any confident or generalisable statements about the conclusions drawn from data (Martin, 2004). As well as not being a sensitive measure, Likert scales are subjective, not objective measures, therefore the researcher is reliant on truthfulness and comprehension on the part of the participant (Martin, 2004). As noted by the researcher during the current study, participants had their own conceptualisations of illicit drugs, where some participants included or excluded prescription drugs, which
affected the way they wanted to respond to the statements. However Likert scales are frequently used in psychological research as they are able to give a good indication of attitudes and are practical with larger sample sizes (Martin, 2004).

Conclusion

The results of the current study indicate that the sample held attitudes that are aligned to the philosophy of Australia’s current National Drug Strategy, harm minimisation. This supports other Australian research (Makkai & McAllister, 1998; Single & Rohl, 1998) conducted since the inclusion of harm minimisation practices in the national policy in 1985, that indicates the Australian consciousness is shifting towards a pragmatic, public health focused approach to drug use and drug-related harm. The education intervention of a harm minimisation fact sheet was not sufficient to shift attitudes toward further acceptance of harm minimisation, however this may be due to the fact that it was not juxtaposed with the zero tolerance approach, or simply that it was not enough to fully inform participants of other factors involved in drug and alcohol education, such as models of dependence and addiction and models that look at factors such as the user, the drug and the environment. The NFCS in the current research did not have any mediating effect on attitudes, and this is supported by previous research on an Australian university population (Quick, 2007). The use of the scale in further research may not be warranted as the scale’s ability to measure Australian opposition to harm minimisation is questionable. Indeed further research is warranted in this area, however a sample should be drawn from a broader Australian population with varying degrees of socio-economic status, perhaps with the inclusion of the Temperance Mentality Questionnaire in order to investigate if Australians oppose harm minimisation on the consequentialist grounds of ignorance of the evidence, or on nonconsequentialist moral
grounds, and to provide evidence for the validity of these constructs for an Australian population.
References


Dear Student,

As part of our fourth year of study at Edith Cowan University, we are interested in looking at people's attitudes towards Australia's National Drug Strategy, which addresses drug use and drug-related harms. As well as investigating attitudes, we are also looking at how attitudes may be influenced by brief education. The titles of our projects are "The Effects of Dispositional Variables on the Attitudes Towards Harm Minimisation Among Undergraduate University Students in Western Australia" (Jasmine Juniper, Postgraduate Diploma, Psychology), and "The Effect of Brief Education and Dispositional Variables on Attitudes Toward Harm Minimisation Among a University Sample Population" (Amy McAlpine, Psychology, Honours).

I am requesting your participation in this research. You will be required to complete three questionnaires that should take approximately 10-15 minutes of your time. There are no right or wrong answers. In one week's time, participants will be asked to complete the survey again, however half the participants will be asked to read a short information sheet prior to completing the survey. No identifying information will be requested or collected at any time, and all information will be kept confidential. All questionnaires will be numerically coded. The answers you provide will be kept for analysis for a final thesis; however individual responses will not be identifiable. Participation is completely voluntary and you may withdraw from the study at any time from one or both surveys without prejudice, and will in no way impact on your coursework or assessments.

This research has been approved by the Faculty of Computing, Health and Science Ethics Committee at Edith Cowan University. This research is unlikely to cause distress, however the following services are available: Alcohol and Drug Information Services (ADIS), 1800 198 024, or the Edith Cowan University Psychological Service Centre, 9301 0011.

If you would like to participate in this research, please complete the questionnaire attached to this letter. Once completed please place it in the envelope provided. If you would not like to participate in this research, please place all the materials in the envelope provided. Your envelopes will be collected by the researchers.

If you require any additional information in regards to this research, please contact Amy: 0410 649 457, or amcalpin@student.ecu.edu.au, or Jasmine: 0417 955 428, or jjuniper@student.ecu.edu.au. If you would like to speak with the supervisors of this research please contact either Associate Professor Lynne Cohen (6304 5575, l.cohen@ecu.edu.au), or Dr David Ryder (6304 5452, david.ryder@ecu.edu.au). If you want to speak to someone independent of this research, please contact Dr Dianne McKillop on 6304 5736 or d.mckillop@ecu.edu.au.

Thank you for your time and attention.

Amy McAlpine (Researcher)

Jasmine Juniper (Researcher)
Appendix B

DEMOGRAPHICS QUESTIONNAIRE

Please fill in your answers in the section provided.

1. What is your age? ____________________________________________

2. What is your gender? (Please circle the relevant response)
   - Male
   - Female

3. Year of study?
   - First
   - Second
   - Third
   - Other (please specify) ________________

4. Is this unit being studied by you as part of your major, minor, or as an elective?
   - Major
   - Minor
   - Elective
   - Other (please specify) ______________________

5. As part of your current degree, are you studying or have you studied at least one unit in Addiction Studies?
   - Yes
   - No

6. Are you aware of the meaning of the term “harm minimisation”?
   - Yes
   - No

If yes, please define in your own words ____________________________________________
7. Please indicate your level of alcohol use over the past 12 months:
   - Never
   - Less than monthly
   - Monthly
   - Weekly
   - Daily or almost daily

8. Please indicate your level of tobacco use over the past 12 months:
   - Never
   - Less than monthly
   - Monthly
   - Weekly
   - Daily or almost daily

9. Please indicate your level of other drug use (e.g. cannabis, ecstasy, amphetamines, etc) over the past 12 months (please remember all information is anonymous and all records will be kept confidential).
   - Never
   - Less than monthly
   - Monthly
   - Weekly
   - Daily or almost daily

10. Is there anyone close to you (e.g., friend, family member, significant other) who is currently experiencing an alcohol or other drug problem?
    - Yes
    - No
Appendix C

HRAS-R

For each of the following statements, circle the number that corresponds to your personal attitude:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree</th>
<th>Disagree</th>
<th>Strongly nor Disagree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
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</tbody>
</table>
| 2 | (1) People with alcohol or drug problems who want to reduce, but not eliminate their alcohol or drug use are in denial.  
   | 1              | 2     | 3             | 4        | 5                      |          |
| 3 | (2) Injecting drug users should be taught how to use bleach to sterilize their injecting equipment.  
   | 1              | 2     | 3             | 4        | 5                      |          |
| 4 | (3) A choice of treatment goals, including abstinence, reduced use of drugs or alcohol, and safer use of drugs or alcohol should be discussed with all people seeking help for drug or alcohol problems.  
   | 1              | 2     | 3             | 4        | 5                      |          |
| 5 | (4) People who live in government-funded housing should be required to be drug free.  
   | 1              | 2     | 3             | 4        | 5                      |          |
| 6 | (5) In order to reduce problems such as crime and health risks, doctors should be permitted to treat drug addiction by prescribing heroin and similar drugs.  
   | 1              | 2     | 3             | 4        | 5                      |          |
| 7 | (6) If their drug use does not interfere with their day-to-day functioning (for example, their ability to work, attend school, or maintain healthy relationships), women who use illegal drugs can be good mothers to infants and young children.  
   | 1              | 2     | 3             | 4        | 5                      |          |
| 8 | (7) Drug users should be given accurate information about how to use drugs more safely (for example, how to avoid overdose or related health hazards).  
   | 1              | 2     | 3             | 4        | 5                      |          |
| 9 | (8) People with drug or alcohol problems who are not willing to accept abstinence as their treatment goal should be offered alternative treatments that aim to reduce the harm associated with their continued drug or alcohol use.  
   | 1              | 2     | 3             | 4        | 5                      |          |
For each of the following statements, circle the number that corresponds to your personal attitude:

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strongly Agree</td>
<td>2</td>
<td>Agree</td>
<td>3</td>
</tr>
</tbody>
</table>

(9) In most cases, nothing can be done to motivate clients who refuse to admit that they have drug or alcohol problems except to wait for them to “hit bottom.”

1 2 3 4 5

(10) To reduce crime and other social problems associated with illegal drug use, substitute drugs such as methadone should be prescribed.

1 2 3 4 5

(11) Prisons should provide sterilising tablets or bleach in order for inmates to clean their drug injecting equipment.

1 2 3 4 5

(12) As long as clients are making progress toward their treatment goals (for example, holding a job or reducing their involvement in crime), methadone maintenance programs should not kick clients out of treatment for using street drugs.

1 2 3 4 5

(13) Measures designed to reduce the harm associated with drug or alcohol use are acceptable only if they eventually lead clients to pursue abstinence.

1 2 3 4 5

(14) People with drug and alcohol problems may be more likely to seek professional help if they are offered treatment options that don’t focus on abstinence.

1 2 3 4 5

(15) Substitute drugs such as methadone should be an available treatment option for people addicted to drugs like heroin.

1 2 3 4 5

(16) People whose drug use does not interfere with their day-to-day functioning should be trained to teach other drug users how to use drugs more safely (for example, how to inject more safely).

1 2 3 4 5

(17) Making clean injecting equipment available to injecting drug users is likely to reduce the rate of HIV infection.

1 2 3 4 5

(18) Abstinence should be the only acceptable treatment option for people who are physically dependent on alcohol.

1 2 3 4 5
For each of the following statements, circle the number that corresponds to your personal attitude:

1. Strongly Agree  
2. Agree  
3. Neither Agree nor Disagree  
4. Disagree  
5. Strongly Disagree

(19) It is possible to use drugs without necessarily misusing or abusing drugs.
   1  2  3  4  5

(20) Pamphlets that educate drug users about safer drug use should be detailed and explicit, even if those pamphlets are offensive to some people.
   1  2  3  4  5

(21) Substitute drugs such as methadone should only be prescribed for a limited period of time.
   1  2  3  4  5

(22) To reduce the spread of HIV and other blood-borne infections, drug injectors should be given easy access to clean injecting equipment.
   1  2  3  4  5

(23) Women who use illegal drugs during pregnancy should lose custody of their babies.
   1  2  3  4  5

(24) People with alcohol or other drug problems should be praised for making changes such as cutting down on their alcohol/other drug consumption or switching from injectable drugs to oral drugs.
   1  2  3  4  5

(25) Abstinence should be the only acceptable treatment goal for people who use illegal drugs.
   1  2  3  4  5
NEED FOR CLOSURE SURVEY

Read each of the following statements and decide how much you agree with each according to your beliefs and experiences. Please respond according to the following scale.

1. Strongly Disagree
2. Moderately Disagree
3. Slightly Disagree
4. Slightly Agree
5. Moderately Agree
6. Strongly Agree

1. I think that having clear rules and order at work is essential for success.
2. Even after I've made up my mind about something, I am always eager to consider a different opinion.
3. I don't like situations that are uncertain.
4. I dislike questions which could be answered in many different ways.
5. I like to have friends who are unpredictable.
6. I find that a well ordered life with regular hours suits my temperament.
7. When dining out, I like to go places where I have been before so I know what to expect.
8. I feel uncomfortable when I don't understand the reason why an event occurred in my life.
9. I feel irritated when one person disagrees with what everyone else in a group believes.
10. I hate to change my plans at the last minute.
11. I don't like to go into a situation without knowing what I can expect from it.
12. When I go shopping, I have difficulty deciding exactly what it is that I want.
13. When faced with a problem, I usually see the one best solution very quickly.
14. When I am confused about an important issue, I feel very upset.
15. I tend to put off making important decisions until the last possible moment.
16. I usually make important decisions quickly and confidently.
17. I would describe myself as indecisive.
18. I think it is fun to change my plans at the last moment.
19. I enjoy the uncertainty of going into a new situation without knowing what might happen.
20. My personal space is usually messy and disorganised.
21. In most social conflicts, I can easily see which side is right and which is wrong.
22. I tend to struggle with most decisions.
23. I believe that orderliness and organisation are among the most important characteristics of a good student.
24. When considering most conflict situations, I can usually see how both sides could be right.
25. I don't like to be with people who are capable of unexpected actions.
26. I prefer to socialise with familiar friends because I know what to expect from them.
27. I think that I would learn best in a class that lacks clearly stated objectives and requirements.
28. When thinking about a problem, I consider as many different opinions on the issue as possible.
29. I like to know what people are thinking all the time.
30. I dislike it when a person's statement could mean many different things.
31. It's annoying to listen to someone who cannot seem to make up his or her mind.
32. I find that establishing a consistent routine enables me to enjoy life more.
33. I enjoy having a clear and structured mode of life.
34. I prefer interacting with people whose opinions are very different from my own.
35. I like to have a place for everything and everything in its place.
36. I feel uncomfortable when someone's meaning or intention is unclear to me.
37. When trying to solve a problem, I often see so many possible options that it's confusing.
38. I always see many possible solutions to problems I face.
39. I'd rather know bad news than stay in a state of uncertainty.
40. I do not usually consult many different opinions before forming my own view.
41. I dislike unpredictable situations.
42. I dislike the routine aspects of my work (studies).
Harm minimisation is the guiding philosophy of Australia's current National Drug Strategy (MCDS, 2004). Harm minimisation sees drug use as normal and common, whether drugs are legal or illegal (Ryder, Walker, & Salmon, 2006). Indeed, many of us engage in drug use on a Friday night at the pub, or grabbing a well needed coffee during lecture break. Drug use is then seen as a public health issue, not a moral issue, and harm minimisation strategies seek to maintain the health and well being of both the community and drug users (MCDS, 2004).

Harm minimisation can involve demand reduction strategies, such as education, and supply reduction strategies, such as legal sanctions. However harm minimisation also includes trying to reduce the harms associated with use, while not necessarily trying to reduce actual use of the drug (Single & Rohl, 1997). One example of a strategy many of us may be familiar with is going out, knowing we will drink alcohol, and deciding to get a taxi home, stay at a friends, or arrange for one person not to drink and who will drive us home.

Harm minimisation is also evidence-based, which means that strategies are grounded in strong research that provides support for the fact that what we are doing is having a positive effect, and that it is better than doing nothing at all (Ryder et al., 2006). Here are some effective harm minimisation strategies:

- Needle and Syringe Exchange Programs have contributed to the decrease in the spread of blood borne viruses such as HIV and Hepatitis C, and decreases in overdose (Fischer, Rehm, Kim, & Robins, 2002). They have also been shown to decrease risk behaviour amongst injecting drug users, increase awareness of hygiene and safer practices, and have encouraged greater controlled use (Fischer et al, 2002).

- Substitute prescribing such as Methadone Maintenance (a heroin substitute) has been shown to reduce heroin use, reduce crime associated with use, reduce injection-related risks and premature death amongst users (Hawks & Lenton, 1995)
The above facilities help to establish contact with users and improve access to treatment and other health services, thereby improving health and social outcomes for both individuals and the community (Single & Rohl, 1997).

Complete abstinence does not necessarily have to be the final treatment outcome. Many people are able to reduce use, use in a safer way, and not have recurring social, physical and economic consequences of their use (Sobell, Ellingstad, & Sobell, 2000).

Many drug users can also reduce, stop use, or use in a controlled way without seeking treatment services. This phenomenon, called ‘natural recovery’ or ‘untreated change’ highlights the fact that drug use does not necessarily equate to a disease that must be treated, an addiction that can’t be controlled, or something from which people must completely abstain (Sobell, Ellingstad, & Sobell, 2000).
Guidelines for Contributions by Authors

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