

Final Report to the Alcohol Education and Rehabilitation Foundation

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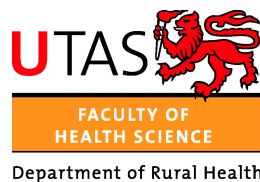
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Trialling ‘Social Norms’ Strategies for Minimising Alcohol-Related Harm Among Rural Youth (Social Norms Analysis Project)



TILES Mission:

To conduct and promote evidence based research that improves the quality of law enforcement and enhances community safety.

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List of Acronyms

AERF	Alcohol Education and Rehabilitation Foundation
DHHS	Department of Health & Human Services, Tasmania
DPEM	Department of Police and Emergency Management
EAP	Expert Advisory Panel
GDH	Geeveston District High School
HH	Huonville High School
MH	Mountain Heights School
RDH	Rosebery District High School
RTD	Ready-to-drink or premixed beverages
SN	Social Norms
SNAP	Social Norms Analysis Project
SPSS	Statistical Package for the Social Sciences
TILES	Tasmanian Institute of Law Enforcement Studies

Executive Summary

- This document is the Final Report to the Alcohol Education and Rehabilitation Foundation (AERF) for the Project 'Trialling Social Norms Strategies for Minimising Alcohol Related Harm Among Rural Youth' – the Social Norms Analysis Project (SNAP). SNAP is the first major Australian trial of the Social Norms (SN) approach to health promotion.
- SNAP was conducted by the University of Tasmania and a range of project partners during 2006 and 2007. The main deliverables for the project are this evaluation report, a portfolio of project outputs, a replication model (the 4Real Guide) and a financial report. A particular focus of the project has been the dissemination of results and input into both policy and practice.
- This report is divided into three sections. The first section discusses the issue of alcohol health promotion for young people and introduces the SN approach. The second section presents the evaluation results. The final section discusses the results and considers the broader implications of the project.
- The SN model is underpinned by work in the social sciences that demonstrates the powerful nature of the perceptions of what others think and do. SN interventions seek to identify and correct any misperceptions that exist among the target group, so that the social environment can become more supportive of safe (and non-) consumption of alcohol.
- Evaluation is an integral part of conducting a SN intervention. Both process and impact types of evaluation are involved. A Program Logic approach has guided the evaluation of SNAP, and simple logic models for this and other prevention approaches have been included in this report.
- Application of the SN model has involved, inter alia, the repeated administration of an anonymous survey at the target schools at three time-periods (baseline [T1], mid-intervention [T2] and post-intervention [T3]). Data-based media campaigns were conducted on the basis of the results following the T1 and T2 rounds of data collection at the trial schools (but not at the control school).
- The 'Key Messages' that were disseminated during the school-based campaigns were positive and affirming, with no 'scare tactics'. Posters, mouse-mats, rulers, drink bottles and a range of other promotional items were employed for message dissemination.
- At baseline, around one-third of the students report consuming alcohol less than once a month, with a further 25% consuming alcohol once or twice a month. A small proportion (around 5%) reported drinking several times a

week or more. There were no significant differences between male and female patterns of drinking.

- The student survey results demonstrate the existence of considerable misperception among the target group across a range of areas. Students underestimated the proportion of those who drink once a month or less, while they overestimated the proportion drinking once or twice a week or more. Similar misperceptions were observed in relation to drunkenness.
- Comparison of survey results over time reveals a definite downward trend across a range of measures at the trial schools following the first media campaign. In some cases, there was a subsequent increase at T3 – i.e. the effect was not sustained. Importantly, the strong downward trend exhibited by the trial schools at T2 was not apparent at the control school.
- With respect to alcohol-related harm, a large proportion of students had never had a hangover, witnessed fighting, injured themselves or been involved in a fight as a result of drinking alcohol. Setting limits on the amount of alcohol consumed reduces the risk of experiencing and witnessing injury and aggression.
- There is a strong relationship between perceptions of frequency of drinking among peers and self-reported frequency of drinking. Every unit increase in the perceived rate of friends' drinking is accompanied by a half-unit increase in the self-reported drinking rate. A similar relationship is apparent with respect to drunkenness.
- There was a significant decline in self-reported drunkenness in one of the trial regions following the first media campaign. The control school exhibited no decline. The proportions reporting not getting drunk on the last drinking occasion remained stable across the period of the intervention.
- The SNAP evaluation results lend weight to the argument that the SN approach is a theoretically informed and effective model for alcohol health promotion, which is compatible with the harm minimisation focus of the Australian drug and alcohol policy framework, and could usefully be applied to a range of other health and social issues.

1 Introduction

This report has been produced in accordance with the requirements of the Alcohol Education and Rehabilitation Foundation (AERF) with respect to the 'Trialling "Social Norms" Strategies for Minimising Alcohol-Related Harm Among Rural Youth' Project, known as SNAP – the Social Norms Analysis Project. The main deliverables for the project are:

- 1) An evaluation report;
- 2) A portfolio of project outputs; and
- 3) A replication model.

These will be discussed in turn. This document is the evaluation report component. It addresses both 'process' and 'impact' evaluation, utilises a Program Logic approach, integrates data from a variety of sources, and focuses particularly on the dissemination of findings and the development of policy. A large proportion of the report is dedicated to presenting data generated in the course of the project as well as documenting the major findings.

Accompanying this report is a portfolio of project outputs, including refereed and non-refereed publications, conference presentations and various project related documentation. A major focus of SNAP since its inception has been communicating with various audiences about the Social Norms (SN) model of health promotion, SNAP itself, and the potential of this type of intervention for addressing a range of health and social issues in this country.

One project output of some significance is the replication model. This is in the form of a comprehensive 'how-to' guide, entitled "4Real: An Australian Guide to Alcohol-Focussed Social Norms Interventions in High Schools". 4Real has been developed by SNAP personnel in consultation with a wide range of individuals with expertise in alcohol education, health promotion and the SN approach. It is designed to assist those who wish to undertake a SN intervention in the high school setting in Australia.

1.1 Structure of the Report

This report is divided into three main sections:

Section 1 discusses alcohol health promotion and literature on reducing alcohol-related harm among young people. It introduces the SN approach, and provides an overview of how SNAP was conducted and evaluated.

Section 2 presents the major findings of the project. It contains both school-based descriptive analyses and more sophisticated regression models of peer and other

influences of drinking behaviours among young people. Material from this section will form the basis for future peer-reviewed articles.

Section 3 presents a discussion of the findings and considers some of the broader implications of the first Australian SN trial, with respect to theoretical, practical and policy-focused agendas. It also presents a number of recommendations and suggestions concerning future directions for SN work in this country.

2 Young People and Alcohol: How to Minimise the Harm?

The issue of young people and alcohol has recently risen to prominence. To a certain extent, it is not 'new'. However, a number of trends (including earlier age of onset, increased alcohol-related hospitalisations in some areas, and changes in gender-related consumption patterns) bring a sense of urgency to the need for effective, evidence-based strategies for minimising alcohol-related harm among young people in this country.

Harm minimisation, upon which Australia's current alcohol and drug policy is based, involves a range of approaches including prevention, early intervention, specialist treatment, supply control, safer drug use and abstinence (Munro & Midford, 2001, p.106). Harm minimisation explicitly recognises that 'despite the best efforts of policy makers, law enforcers, educators and therapists' (Munro & Midford, 2001, p.106) and regardless of the effectiveness of health promotion strategies, a) young people will continue to use alcohol, b) some proportion of them will misuse it, and c) the appropriate aim is to lessen both the frequency and the severity of the harm suffered by individuals and communities.

2.1 Alcohol Education in Schools

School-based alcohol health promotion has been a key pillar in efforts to prevent alcohol use and/or the harm associated with its use. However, it is important to note that it has changed in both style and substance in recent decades. What follows is a brief overview of these changes. It makes use of simplified 'Program Logic' diagrams, which help to highlight the underlying assumptions of different alcohol health promotion approaches. A logic model of a project is basically a diagrammatic representation of a theory of change, which models the ways in which project resources, processes and activities are intended to transform inputs into the desired outcomes. Some diagrammatic representations of logic models are very complex. For the purposes of this discussion, however, the following diagram captures the required elements.

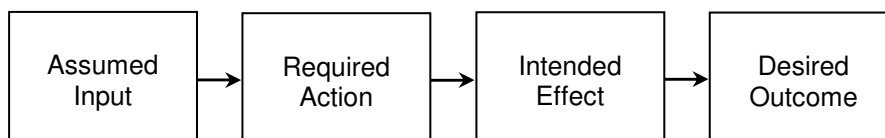


Figure 1: Simplified 'Program Logic' Model

2.1.1 Information approaches - Risk education

Early prevention work within schools tended to focus on the provision of information to students, particularly concerning the pharmacological dangers of substance use and the possible risky consequences of drinking. Put simply, it was believed that ‘if young people just knew how horrible drugs were and what they did to their brains and bodies, then they would not use them’ (Hogan, 2002). These programs often incorporated deliberate scare-tactics and have been labelled ‘health terrorist’ approaches due to the assumption that it is possible to ‘scare the health into people’ (Perkins, 2003, p.106).

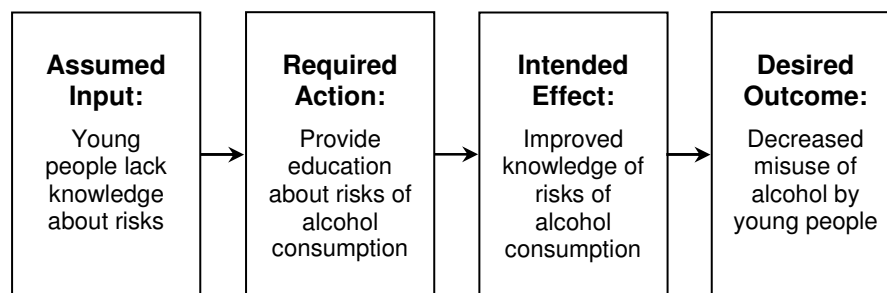


Figure 2: Logic Model for Information Approaches

Despite some residual elements of health terrorism within contemporary programs, the information approach as a stand-alone method of tackling high-risk drinking among youth was ‘an acknowledged failure by the late 1970s’ (Midford, Munro, McBride, & Ladzinski, 2002).

2.1.2 Affective approaches - Self-esteem and ‘refusal skills’

The ensuing phase of school-based prevention took a more holistic approach – seeking to build the self-esteem of young people so that they were less vulnerable to the vagaries of substance abuse. The so-called affective model of drug education ‘assumes that those who use substances have personal problems such as low self-esteem, inadequate social skills, and poor/unclear values’ (Paglia & Room, 1999, p.16). Sometimes these programs included resistance training components that sought to ‘innoculate’ youth against overt peer-pressure to engage in risky behaviours.

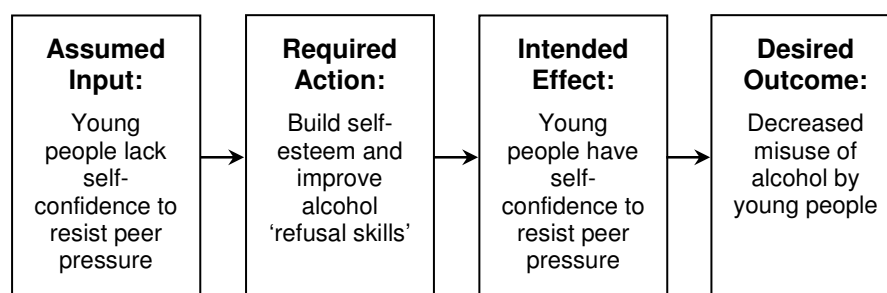


Figure 3: Logic Model for Affective Approaches

Evaluations of such programs have generally been disappointing, with few effects (and sometimes counterproductive effects) on students' substance use (Paglia & Room, 1999, p.16). Over time such 'affective' programs suffered the same fate as their predecessors the 'information' programs – they were gradually recognised as having only limited efficacy (Cook, 2005, p.2).

2.1.3 Social influence approaches – Beyond the individual

Since the second wave of affective programs, there has been an increase in the complexity, and sophistication of programs aiming to reduce alcohol-related harm among young people. Importantly, many of these have a psychosocial component which recognises that the individual is located within a wider community and subject to a range of forces and influences. Comprehensive community programs involving schools, parents, government, industry and the mass media aim to provide 'simultaneous and consistent messages from various social sectors', and sometimes include policy/legislative aspects as well as educational components (Paglia & Room, 1999, p.17).

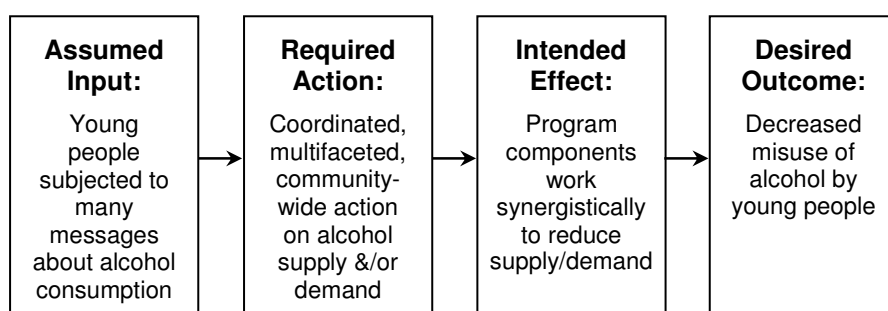


Figure 4: Logic Model for Social Influence Approaches

Examples of such programs may be found in Australia, Canada, the United States and other developed nations. Despite some evidence that they can achieve positive outcomes (such as a delay in onset of use, or reduced levels of harm), social influence programs tend not to be very common, perhaps because they are relatively time- and resource-intensive and require high levels of coordination.

2.2 Alcohol Health Promotion: The Bigger Picture

With the exception of some more recent multifaceted 'social influence' programs, school-based alcohol programs for young people have not achieved great success in Australia or elsewhere (Midford et al., 2002). We will now consider some possible reasons for this apparent lack of effect.

Unfortunately, attempting to reduce alcohol consumption and/or alcohol-related harm among young people is something of an 'uphill battle'. There are many countervailing

forces. Alcohol is a readily available commodity which is sold in a range of outlets, including supermarkets. Recent years have seen an enormous increase in liquor outlet density in many regions (Roche, 2008, p.15). Even when retailers do not sell directly to minors, research on 'secondary supply' indicates that young people obtain alcohol from their parents, relatives or friends. Alcohol is also relatively affordable. Many warehouse-style outlets sell bulk quantities of alcohol at a greatly discounted price. It remains to be seen whether recently announced increases to the taxation on RTD (ready-to-drink or premixed) beverages will translate into lower rates of consumption and/or harm among youthful populations in this country.

Another factor which works against efforts to minimise consumption is the advertising and promotion of alcohol. The nature of alcohol advertising and the self-regulatory system in Australia is a frequent source of complaint and consternation (see Templeman, 2008, p.2). Alcohol is also often consumed in a highly visible manner and its over-consumption is met with varying levels of social acceptance. Major sporting events, many of which are televised nationally or internationally, may be reliant on alcohol-industry sponsorship. Even in small community-based sporting clubs and associations, alcohol consumption may be an unquestioned 'part of life', even for young members. Furthermore, media coverage of the issue often gives the impression that 'bingeing' and 'drinking to get drunk' are 'the norm'.

2.2.1 Importance of social factors

An anomaly exists 'between the highly social nature of drinking on the one hand, and the predominantly individual focus of efforts to prevent alcohol misuse on the other' (Hughes et al., 2008). More often than not, programs seek to remedy the individual's deficit in knowledge (of risks, for example) in an effort to change the individual's behaviour. There is a need to 'acknowledge the extent to which, and the many ways in which, drinking is a social as well as an individual act' (d'Abbs, 2002) and to shift away from prevention efforts that posit the individual as both the 'unit of analysis' and the 'locus of concern' (Hughes et al., 2008). That is not to say that the individual psychological factors should be ignored, but that an improved understanding of the social 'place' of alcohol in young peoples' lives will enhance prevention efforts.

2.2.2 Resistance to messages

Another set of factors relates to young peoples' receptiveness to alcohol education. Like adults, they are not unquestioningly accepting of health promotion messages. They may be annoyed by the perceived hypocrisy of adults who 'preach' to them about the dangers of alcohol. They may regard drinking as a rite of passage to adulthood (Midford, 2000, p.442), given that they observe adults consuming alcohol both in everyday life and in the popular media. They may regard prevention programs (particularly those which emphasise abstinence) as 'boring' and 'unrealistic' (Farrington, 2000). Warnings about catastrophic and long-term harm may be viewed with scepticism, or dismissed as irrelevant – since young people often have an air of invincibility which supports them in thinking that drinking is 'a big game' and that

nothing bad will happen to them (see for example Graham, Ward, Munro, Snow, & Ellis, 2006, p.8).

2.2.3 Underlying assumptions

All types of school-based health promotion are based on a set of assumptions, which are usually not explicitly articulated. Arguably, the lack of effectiveness of both the 'information' and 'affective' approaches to alcohol education is at least partially explained by the inaccuracy or inappropriateness of the assumptions that underpin them. For instance, the assumption that improved knowledge of the risk of negative outcomes will translate into behavioural change is not supported by the literature. Equally, the idea that 'drug use by young people is driven by individual deficiency and that the problem can be remediated by enhancing self-esteem or improving decision-making skills' (Midford, 2000, p.442) is a questionable assumption.

Furthermore, approaches which seek to strengthen 'refusal skills' assume that young people actively 'pressure' one another to consume alcohol and/or marginalise non-drinkers (see for example Graham et al., 2006). Such approaches (incorrectly) assume that overt coercion by peers leads to substance use (Paglia & Room, 1999, p.17). Furthermore, as May points out, such approaches miss the point that peer influence can 'act as a restraint on alcohol-related behaviours' as much as it serves to 'contaminate' individuals (May, 1993).

2.3 Introducing the Social Norms Approach

There is a growing body of national and international evidence about what forms of alcohol education for young people actually 'work' to reduce alcohol use and/or alcohol-related harm. Perhaps more importantly, meta-analyses of effective programs can highlight the features which appear consistently in the more effective programs. This allows the development of new approaches which incorporate a 'distillation' of the best practice features of past interventions (Midford, 2000, p.442). The SN model, which was developed in the United States of America on the basis of social-psychological research, is one such approach.

2.3.1 What is different about social norms?

The SN approach is more closely aligned to the Social Influence approach outlined above, than it is to the Information or Affective approaches. It does not seek to increase knowledge of risk, nor does it attempt to increase young peoples' capacity to resist peer group pressure. Instead, the focus of SN interventions is the extent to which young peoples' perceptions of their peers' behaviour and attitudes influences their own drinking behaviours.

SN interventions are underpinned by work in the social sciences that demonstrates the powerful nature of the perceptions of what others think and do (which might or might not accord with what others actually think and do). Social environments in which large proportions of people assume that everyone is drinking heavily tend to be more supportive of heavy drinking (Perkins, Haines, & Rice, 2005). Therefore SN interventions seek to identify and correct any misperceptions that exist among the target group, so that the social environment can become more supportive of safe (and non-) consumption of alcohol (Cook, 2005). A logic model for the SN approach appears below.

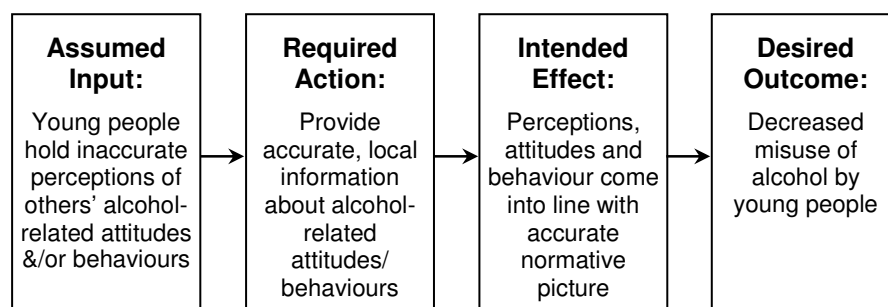


Figure 5: Logic Model for Social Norms Approach

Essentially, SN interventions encourage us to view youth drinking through a different lens. In contrast to some other approaches, they recognise the positive impact of peer groups, and the fact that healthy and protective behaviours are already present in most youthful populations. SN interventions are based on the research evidence that many young people a) have an inaccurate idea of how frequently and heavily their peers consume alcohol, b) base their decisions/actions on what they believe most of their peers are doing, and c) will be less likely to conform to a 'false norm' if repeatedly exposed to the 'true norm'.

2.3.2 Social norms: The evidence base

Alcohol-focused SN interventions are rapidly gaining in popularity worldwide. In a survey of U.S 4-year colleges in 1999, 20% of the colleges surveyed reported having conducted SN marketing campaigns, and by 2001 this figure had risen to nearly 50% (Weschler, 2004). Despite the fact that several SN interventions have 'failed' (Clapp, Lange, Russe, Shillington, & Voas, 2003; Werch et al., 2000) and some critics regard the approach as ineffective at best and harmful at worst (Weschler, 2003), the evidence base in support of the approach is both sizeable and robust.

There is a growing body of evidence of SN interventions resulting in significant reductions in high-risk drinking among target populations, in various educational and other settings and within both metropolitan and non-metropolitan contexts. For instance, the University of Arizona reported a 29% reduction in 'heavy episodic drinking' over a three-year period (Glider, Midyett, Mills-Novoa, Johannessen, & Collins, 2001). Equivalent figures for other institutions include a 21% reduction over two years at the University of Missouri-Columbia, and a 44% reduction over 10 years

at Northern Illinois University (Haines, 1996). Although the majority of SN interventions have been conducted at colleges and universities, the approach has also yielded promising results at high-schools (Johannessen, Collins, Mills-Novoa, & Glider, 1999; Linkenbach, 1999).

2.3.3 Conducting and evaluating social norms interventions

The SN approach is a data-based and data-driven approach. Conducting a SN intervention involves completing the following four key phases in turn:

- 1) collection of data about alcohol use and attitudes using an anonymous questionnaire;
- 2) analysis of the collected data on a per-school basis to yield positive, data-based 'key messages';
- 3) dissemination of the 'key messages' to the target groups using a media campaign; and
- 4) evaluating the impact of the campaign, in terms of recognition and understanding of the message, changes to norm perceptions and/or behaviour.

As indicated by the phases listed above, evaluation is an integral part of conducting a SN intervention rather than an additional or optional project component. Both 'process' and 'impact' types of evaluation are involved, and both are included in this report. Process evaluation involves ongoing assessment of the extent to which project implementation is proceeding according to plan. Because it occurs during the project, rather than following project completion, process evaluation offers 'quality improvement' opportunities in the form of adjustments to activities and or processes. Process evaluations address the intermediate steps that will, collectively, contribute to the achievement of longer term outcomes. Impact evaluation, on the other hand, tends to be conducted in the latter part of the project. It relates to the achievement (or otherwise) of significant and/or longer-term changes. In the case of SN, an impact evaluation assesses the extent to which the intervention has altered the attitudes, perceptions, and/or behaviour of the target population.

3 SNAP: Project Background and Methods

3.1 Project Governance

Given the significant complexities attached to multi-site research, a comprehensive project management methodology was applied to SNAP. The project governance structure enabled project partners to have input into the project, despite their being geographically dispersed and often employed on a fractional basis. The SNAP governance model included a Project Management Committee and an Expert Advisory Panel (EAP) (which provided strategic and theoretical advice and included an International Social Norms Consultant).

3.1.1 Project management committee

The SNAP Management Committee regularly met for the duration of the project. The Committee had overall responsibility for the management of SNAP, including strategic direction, performance, achievement of deliverables, staffing, and administration and finance. The members were:

- Dr Clarissa Hughes, University Department of Rural Health, University of Tasmania;
- Associate Professor Roberta Julian, Tasmanian Institute of Law Enforcement Studies (TILES);
- Detective Inspector Matthew Richman, Tasmania Police (now the Director of Strategic Services at the Australia and New Zealand Policing Advisory Agency); and
- a Department of Health and Human Services (DHHS) representative – firstly Mr John Mercer, then Mr Tua Agaiava.

The Committee was supported by a number of other staff members of the University and/or the Department of Police and Emergency Management (DPEM), including:

- Ms Karen Herne, who provided assistance with academic and research-related tasks including the management of a database of written resources;
- Ms Rose-Marie Vasiljuk, SNAP Executive Assistant, who was responsible for meeting documentation, website maintenance and updates;
- Ms Caroline Burridge, TILES Business Development Officer, who assisted with applications, publications and project extension work; and

- Ms Claire Haberle and Ms Jane Collidge who provided additional assistance with administration and events organising, and had specific responsibility for marketing and legal matters, respectively.

Staff appointments were funded directly by the AERF grant. There were two Local Project Officers (Ms Gillian Long in the South-Eastern Region and Ms Louise Hart in the Western Region) and a Research Coordinator (Mr Ronald Mason).

The Local Project Officers were responsible for facilitating and coordinating the project in their respective areas, including liaising with schools, police, councils and other community-based organisations. The Research Coordinator assisted the Local Project Officers with data collection processes and was primarily responsible for data analysis (for presentations and publications) and reporting.

Both of the Project Officers and the Research Coordinator worked on a fractional basis (0.6 FTE) on SNAP and reported to the Management Committee via Dr Clarissa Hughes. They also attended (via telephone or video-link) every second Management Committee meeting.

3.1.2 Expert Advisory Panel

One innovative aspect of the governance of SNAP was the creation of an Expert Advisory Panel (EAP), the main role of which was to review outputs and provide feedback on draft reports, publications and other documentation. The composition of the Panel changed over time, but efforts were made to maintain a Panel with diverse membership including representatives of the following key areas: rural health, education, law enforcement, community engagement alcohol and drug services, youth services, indigenous communities, and SN.

The EAP was most active during the early to middle phases of the project. Panel members provided detailed comment and assistance with the development and piloting of the surveys as well as providing feedback on various aspects of the draft merchandise used in the school-based media campaigns.

All members of the EAP (with the exception of international Social Norms consultant, Dr Alan Berkowitz) undertook SNAP work in an unpaid capacity and the Management Committee members greatly appreciated the time and effort that EAP members devoted to the project.

3.2 Community Involvement in SNAP

The main SNAP target groups were students in grades 7-10 at four Tasmanian rural public high schools: Huonville High School (HH) and Geeveston District High School (GDH) in the Huon Valley Municipality (South-Eastern Region), and Mountain Heights School (MH) and Rosebery District High School (RDH) in the West Coast

Municipality (Western Region). The two rural municipalities participating in the trial were selected for having a 'sense of community' and a focus on youth and/or problematic alcohol consumption, an active local council, no more than two public high-schools servicing the community, and a history of successful partnerships with the University of Tasmania, law enforcement agencies and all three tiers of government (see also Hughes, 2006).

3.2.1 Huon Valley municipality

The Huon Valley municipality covers 5,497 sq kms and is the southern most local government area in Australia. It is approximately 40 minutes' drive south of Hobart. The population of the entire municipality is around 14,000, with approximately 1,600 people residing in Huonville (the largest town in the region) and around half that many residing in Geeveston (Australian Bureau of Statistics, 2004). Geeveston is 22.76 kms from Huonville by road. With respect to health services, there is no hospital in the municipality – the community is serviced by the Royal Hobart Hospital and Hobart Private Hospital in Hobart. The Huon Valley Council is pivotal in the provision of health services to the community including aged care units and a multi-purpose health centre as well as various health-related programs and activities. The Huon Valley community has a strong focus on youth health and wellbeing. The community also has a continuing tradition of collaborative approaches to improving the health of the community. It recently worked with the University of Tasmania and various other partners to establish a Rural Health Teaching Site in Dover. In 2002, it also established the Huon Stronger Communities Partnership (HSCP) involving the Huon Valley Council, community representatives and members from a range of government agencies.

3.2.2 West Coast municipality

The West Coast municipality covers an area of 9,574.5 sq kms and is an extremely sparsely populated area of the State. The population of the entire municipality is around 5,200, with approximately 3,400 residing in Queenstown (the largest town in the region) and around 1,600 in Rosebery and around 1,200 in Zeehan (Australian Bureau of Statistics, 2004). Rosebery is 51.56 kms from Queenstown by road. Despite significant downturns in the mining industry in recent years, the major west coast towns of Queenstown, Rosebery and Zeehan remain heavily dependent on mining. The majority of health services through the region are provided through Health West - a section of the Tasmanian DHHS operating under the Aged and Rural Health (ARCH) division. Health West has about 100 employees and about half that number of volunteers. Health West operates two small hospitals in the region (Rosebery Hospital and West Coast District Hospital in Queenstown), as well as several other nursing and community health services.

The West Coast also has a strong emphasis on forming partnerships with key organisations to achieve shared goals. Like the Huon Valley, it worked collaboratively

with government and the University to establish a local Rural Health Teaching Site - in this case, adjacent to the District Hospital in Queenstown.

3.2.3 Glamorgan/Spring Bay municipality

One other Tasmanian municipality was also involved in the project – the Glamorgan/Spring Bay municipality. It must be emphasised that its involvement was as a ‘control’ site rather than as a ‘trial’ site – meaning that the latter received interventions that the former did not. This is consistent with a quasi-experimental design which enables any observed changes in the trial sites to be more confidently attributed to the intervention, rather than some other non-project factor or process. Triabunna is located 88 kms north-east of Hobart. It is commonly known as a working port and is located on the Tasman Highway. The population is around 900 people, many of whom are involved in the fishing industry or employed by the nearby woodchip mill at Point Home. The Triabunna Community Health Centre provides general health care, clinics, support groups and other services such as drug and alcohol services, physical therapy, occupational therapy, community nursing and diabetes education.

3.3 The Trial Communities

Much of the early work of the Project Officers involved building relationships with the participating schools and their surrounding communities, and building rapport with staff, students and parents and other individuals. Both Ms Hart and Ms Long had offices in the local areas and as part of the early community engagement work, information sessions at each of the four ‘trial’ schools were held in the weeks leading up to the first phase of data collection. These sessions were attended by teachers and principals, as well as local government representatives, health and community service workers, and police officers. During these sessions participants were informed of the project’s aims, structure and processes, and also had the opportunity to ask questions and informally network with one another and with SNAP staff.

An effort was also made to continue community engagement work throughout the project. Both Ms Long and Ms Hart maintained excellent relationships with the schools and wider communities. Their frequent presence in the school environment and their approachable manner undoubtedly contributed to the ongoing preparedness of the schools to permit the interruptions to their teaching program. At the end of the project, both Project Officers handed out Certificates of Appreciation and held morning teas to thank the schools for their involvement in the project.

3.4 Other Community Engagement

Community engagement has been a central element of SNAP since the outset. However, it has not just been focused on the communities in which the trial schools are located. SNAP staff made many presentations on the project to a range of different audiences. Some of these presentations were at national and international conferences relating to alcohol and other drugs, community safety, law enforcement, youth health and public health. Other presentations have been made to specific groups, such as DHHS employees or primary health care professionals, and many of them have been conducted via videoconference to address the issue of accessibility to rural and remote areas within the State. Good use has also been made of email and the internet to communicate with audiences locally, nationally and internationally.

3.5 School-based Interventions

The school-based interventions at the trial schools were based on repeated administration of the approved survey tool. The student survey contained 51 items relating to students' own alcohol-related behaviours and attitudes, experience of alcohol-related harm, parental 'rules', perception of others'; (friends', classmates' etc) alcohol-related behaviours and attitudes, and a range of questions relating to the last occasion on which the respondent consumed alcohol. Student data was collected at the four trial schools using a self-administered anonymous survey in mid-2006 (baseline, T1) and twice in 2007 (T2 in first term and T3 in third term). Survey items were constructed to allow a number of potential analytic approaches including both descriptive and inferential. For the most part, survey items employed metric measures (e.g. semantic differential and Likert scales) to enable multivariate analysis of the data (See Results Section).

Application of the SN model involved generating school-specific data following the T1 and T2 rounds of student data collection, and using these as the basis for 'key messages' which were positive and affirming (with no 'scare tactics' or negativity). The key messages were then disseminated intensively to each of the target groups via multiple media channels and promotional items.

3.5.1 First media campaign

The key messages for the first campaign promoted norms of non-consumption, and the media campaign involved posters, badges and flyers and also incorporated student activities such as 'free dress' days and flyers for parents.

South-Eastern Region - Key Messages

- 70% (7 out of 10) of HH students rarely or never drink alcohol.
- Most (83%) GDH students choose non-alcoholic drinks when hanging out with friends.

Western Region - Key Messages

- Most (83%) MH students choose non-alcoholic drinks when hanging out with friends.
- 75% of RDH students rarely or never drink alcohol.

3.5.2 Second media campaign

The key messages for the second campaign focused on harm-minimisation and attitudinal norms. Two sets of key messages were disseminated at each school, due to the later-than-planned timing of the campaign.

South-Eastern Region - Key Messages

- Of those HHS students who drink, 67% did not get drunk the last time they drank.
- 73.3% of HHS students think it's not OK for high school students to get drunk.
- 65.8% of GDH students think it's not OK for high school students to get drunk.
- Most GDH students who drink try to stay safe – Most (60%) set limits on how much they drink and most (65%) eat while drinking.

Western Region - Key Messages

- 64.3% of MH students think it's not OK for high school students to get drunk.
- Of those MH students who drink, 67% did not get drunk the last time they drank.
- 63.8% of RDH students rarely or never go to parties where students are drinking.
- 76.7% of RDH students think it's not OK for high school students to get drunk.

4 Evaluation of SNAP

As mentioned previously, evaluation has been an integral part of SNAP. This section of the report outlines the ways in which SNAP has been evaluated and 'sets the scene' for the presentation of the evaluation results.

4.1 Overview of SNAP Outputs and Outcomes

SNAP has successfully produced a large number and variety of outputs (i.e. deliverables, products) and outcomes (some of which are measurable and others which are not). The Management Committee ensured that AERF was regularly updated about what was being achieved, above and beyond the required reporting. The provision of additional informal updates, and inclusion of the AERF in the contacts database ensured regular and comprehensive contact between AERF and the SNAP team.

4.1.1 Summary of outputs

Key SNAP outputs include the following:

- Surveys and project documentation - including questionnaires, information brochures and flyers.
- SNAP merchandise - including posters, wristbands, water bottles, rulers and pens.
- Publications - including articles and presentations at conferences and other forums.
- The SNAP 4Real Guide (Resource Kit).

These are either included in the accompanying portfolio or have already been provided to AERF. In addition to producing these outputs, some important outcomes have arisen from SNAP. The perceptual, attitudinal and behavioural outcomes at trial sites are outlined in the results section of this report. However, several equally important (though perhaps less tangible and measurable) outcomes, should also be acknowledged. These relate to the policy impact of the work (most notably with the Tasmanian Departments of Education, and Health and Human Services) and the significant role that SNAP has played in increasing public awareness of the SN model, and the work of AERF. Both the policy development and awareness-raising aspects will continue as members of the SNAP team maximise the impact of the work through further dissemination and collaboration.

4.2 Process Evaluation

The two tables (below and overleaf) summarise the major questions and answers associated with the process evaluation.

Table 1: Evaluation Questions – Process Aspects

Aspect	Evaluation questions		Comments
Project Set Up	Were the Local Project Officers and Research Coordinator positions filled?	✓	Despite some unavoidable delays, suitable applicants were appointed to all three positions.
	Was suitable local office space made available for Local Project Officer appointments?	✓	The Department of Health and Human Services, Tasmania, very generously provided office space in both the South-Eastern and Western Regions.
	Was ethics approval for the project sought and obtained?	✓	Approval was obtained by the Human Research Ethics Committee (HREC) Tasmania and the Department of Education Ethics Committee.
Student Survey design and administration	Did the Expert Advisory Panel members provide feedback on draft versions of the student survey?	✓	Draft versions of the student survey were emailed to members of the EAP, several of whom provided feedback
	Was the draft survey ready for testing by the required date?	✗	Insufficient time was allocated for survey development; however this did not have an impact on project completion.
	Did schools accommodate the survey administration in their timetables?	✓	All four trial schools were immensely cooperative and supportive of SNAP being undertaken.
	Were most students able to complete the survey without undue difficulty?	✓	Testing of the survey tool with high school aged students helped to ensure that most students were able to complete the survey within the anticipated time-frames.
Data entry and analysis	Were suitable systems for data entry, storage and management set up?	✓	SNAP prompted the institution of a survey handling protocol for TILES. Entry, storage and management tasks were shared by SNAP personnel.
	Were the data entered from all schools within anticipated time-frames?	✗	Data entry took longer than anticipated, partly because the task was undertaken jointly by several different people.

Table 2: Evaluation Questions – Process Aspects (continued)

Aspect	Evaluation questions		Comments
Production and dissemination of 'key messages'	Were posters and other merchandise featuring the key messages designed and printed?	✓	SNAP staff designed a range of different posters and other merchandise. These adhered to Social Norms guidelines and were popular among the students.
	Were posters displaying the actual norm messages displayed around the schools?	✓	Posters were printed by Uniprint at the University of Tasmania. All four trial schools allowed posters to be displayed at various locations on school grounds.
	Did business operators in the surrounding communities allow SNAP posters to be displayed?	✓	Business operators in both the South-Eastern and Western regions allowed SNAP posters to be displayed. However their preference was for A4 rather than A3 versions.
Student participation and receptiveness to key messages	Were students involved in the production and/or dissemination of the messages?	✓	Students were involved in putting up the posters for the first campaign at several schools. Only one school allowed students to have a competition for the design of posters.
	Was a tool developed to measure students' recall and retention of the message?	✓	A short, 'tick and flick' style tool was developed, and was administered by local project officers. Wrist bands displaying a positive message were offered to students as a 'thank you'.
	Was the retention tool delivered at the trial schools?	✓	Although it was originally intended that focus groups would be used, a decision was made to undertake 'opportunistic surveys' of students during class breaks.
Subsequent administration of student survey	Was the survey administered at all schools on three separate occasions	✓	All four trial schools and the control school allowed the survey to be administered at all three time points. Some teachers functioned as 'champions' of the project.
	Was the response rate acceptable at all three time-periods?	✓	It was intended that a 'census' would be undertaken at all schools. Response rates for the student survey remained at acceptable levels for the duration of the intervention.

4.2.1 Departures from the original plan

One useful element of process evaluation is an acknowledgement of any departures from the original model or plan. Every effort was made to ensure that SNAP remained as true to the SN model as possible. However, there are several respects in which SNAP, as implemented, was different from what was proposed in the original funding submission to AERF:

- Online survey - The original project proposal provided for an on-line student survey. However, discussions with school principals revealed both limited computer facilities for students, and some complications with system requirements. On that basis (and the preference for paper-based administration expressed by most school principals) it was decided that the student survey would be paper based¹.
- Hospital statistics – The funding submission proposed the collection of hospital statistics related to alcohol-related harm. However, this proposal was made without a full appreciation of the complexity of the task. Also, a public hospital serves the Western region, but for the South-East the nearest public hospital is in the capital city. Difficulties in generating and accessing comparable data rendered the original plan impractical.
- Police statistics – It was also proposed that information from police statistics would be utilised. This did occur at T1. However, resourcing issues meant that subsequent datasets were not available. Alternative ways of obtaining this data from the DPEM were explored. However, staffing changes and departmental policy meant that the T2 and T3 police statistics could not be included.
- Focus groups – It was originally intended that focus groups would be used to gauge student reaction to the key messages and merchandise. However, following discussion, it was decided to conduct opportunistic surveys of the students as an alternative. In the words of one of the Project Officers, ‘I have a feeling that the type of students who volunteer for the focus groups are not going to represent the range of views across the school - they are more likely to be the “good” and “helpful” students rather than those who have more negative thoughts about the project. (Email, April 19, 2007).

¹ The SNAP team remains interested in developing on-line data collection systems for future Social Norms style projects.

4.3 Impact Evaluation

The preceding discussion has related to the process evaluation of SNAP – that is, the extent to which the project proceeded according to the original plan. The following sections deal with the impact evaluation components, and are concerned with the extent to which SNAP did, or did not, achieve what it set out to. We now specify the various evaluation questions, to which the ‘results’ section will provide answers.

4.3.1 Evaluation questions

The evaluation of SNAP has been guided by the following questions:

1. Do students misperceive the frequency and/or intensity of others’ drinking?
2. Is there a relationship between self-reported frequency of drinking and the perceived frequency of drinking and/or drunkenness of peers?
3. Is there a relationship between self-reported frequency of drunkenness and the perceived frequency of drinking and/or drunkenness of peers?
4. Did the trial schools exhibit changes during the course of the intervention, with respect to the following:
 - a. Perceptions of the frequency of others’ drinking?
 - b. Perceptions of the frequency of others’ drunkenness?
 - c. Self-reported frequency of drinking and drunkenness?
 - d. Use of harm-minimisation strategies?
5. Did the control school exhibit the same changes as the trial schools?

5 SNAP Results

The following section presents key results of the SNAP project. It commences with a brief statement of the research methodology before moving on to an overview of the baseline results. This provides the reader with information about the ‘starting point’ for the intervention. It then discusses the experience and avoidance of alcohol-related harm, before embarking on a more detailed analysis of changes that occurred over the course of the intervention. The section concludes with a consideration of the apparent relationship between perceptions, attitudes, and alcohol-consumption.

5.1 Research Methodology

As explained earlier, SNAP adopted a pre- and post-testing design, with the same survey instrument being administered to students at three time points – once prior to the ‘intervention’, once during the intervention, and finally, at the end of the project. The research design was quasi-experimental, and involved trial groups (which were involved in the data collection and received the intervention) and a control group (which was involved in the data collection but did not receive the intervention).

5.1.1 Data analysis

A descriptive analysis of the data was undertaken to provide a ‘snapshot’ of students’ alcohol-related attitudes, perceptions and behaviours. Additionally, data was analysed to explore potential relationships/hypotheses surrounding student perceptions of, and attitude toward, alcohol use and their own use. Results for each time period were compared to provide evidence of any change in attitudes and behaviours over the life of the project and between each intervention (e.g. changes in attitudes toward drinking alcohol). The analyses reported here are those undertaken to answer the evaluation questions. Other analyses and results (such as the identification of factors which affect drinking behaviours and the extent to which they do) will be reported in the academic literature.

While descriptive analyses provide interesting insights into students drinking patterns, they do not provide a model of students’ drinking behaviour (by identifying those factors which might explain or account for drinking behaviours). To measure the strength of the relationship between perceptions and attitudes and behaviour, Pearson correlation coefficients were generated to provide an indication of the effect of perceptions on attitudes and/or behaviour. Regression was also undertaken to identify those variables which had a significant impact on attitudes and behaviour controlling for the effect of other attitudinal and behavioural variables.

5.1.2 Statistical testing

Whenever the term 'significant difference' is used in this report it refers to a statistically significant difference between observations or groups. Statistical testing of data is undertaken to determine if any observed differences between observations or groups are genuine – that is, they are not random or spurious, or due to sampling error. The type of test employed is dependent on the type of variable(s) being analysed. In those cases where descriptive analyses are undertaken, Chi square testing was employed to ascertain differences between variables and 'z' scores used to ascertain differences between groupings (e.g. low frequency drinkers and high frequency drinkers).

Where means-based analysis has been used, T-Testing was employed. T-Testing is a means based method of analysis which measures the distance between two sample means and indicates when there is a statistically significant difference between the two (normally three standard deviations from each mean). Testing was undertaken at the 95% confidence level, meaning we can be 95% confident that results fall within +/- 5% of the true value. Additionally, testing was undertaken at the .05 level of significance, meaning that there is a less than 1 in 20 chance of any observed difference being spurious or random. Due to the small size of several of the trial schools, in some cases the 'n' is low. For this reason, trial schools have been clustered into regions for analytical purposes.

5.2 Overview of Baseline Results

A total of 509 surveys from the four intervention schools² were completed at T1. These were collected and entered into SPSS (Statistical Package for the Social Sciences). Males represented slightly over 50% of all respondents. The age at 'first drink' (i.e. more than a few sips) ranged from 6 to 16 years, with a mean of 11.66 years (S.D. 1.98 years) and a median of 12 years. Fourteen percent of students (across grades 7 to 10) reported that they had never had an alcoholic drink. There is a steady decline in the proportion of non-drinkers as one moves up through the grades - with around 21% of Grade 7 students reporting 'never' drinking alcohol, as compared to less than 5% of Grade 10 students. Although non-drinkers are the minority overall, as Figure 6 shows, the students at the trial schools are relatively 'infrequent' consumers of alcohol.

² One of the four schools comprises around 50% of the total sample.

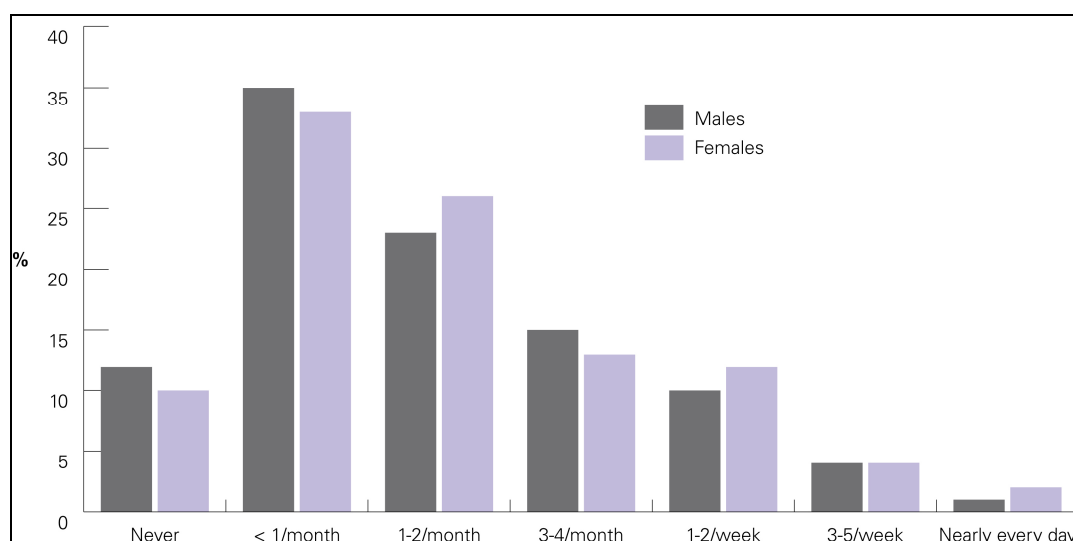


Figure 6: Frequency of alcohol consumption (males and females)

Around one-third of the students (35% males, 33% females) report consuming alcohol less than once a month, with a further 25% consuming alcohol once or twice a month (23% males, 26% females). A small proportion (around 5%) reported drinking several times a week or more. There were no statistically significant differences between male and female patterns of drinking. Students who reported that they had consumed alcohol were also asked a range of questions about the last occasion on which they did so. Sixty three percent of students reported that they did not get drunk the last time they consumed alcohol. There was considerable range in the number of people present on the last drinking occasion; ranging from zero to 200. In 10% of cases, students were by themselves, while 85% stated they were with up to 20 others. Parties appear to be a strong focus for student drinking, with 41% of students who drank reporting being at a party the last time they drank alcohol. Additionally, 66% of those who got drunk the last time they consumed alcohol were at a party.

5.2.1 Perceived and self-reported drinking

A key area of interest is the extent to which students correctly or incorrectly perceive the frequency and intensity of others' (friends, same-grade students and same-school students) drinking. The student survey results demonstrate the existence of considerable misperception (i.e. both overestimation and underestimation) among the target group across a range of areas. For instance, as Figure 7 indicates, while perceptions of what might be called moderate drinking (1-2 times a month and 3-4 times a month) were relatively accurate (i.e. there was only a small 'gap' between perceived consumption and actual consumption), there is less accuracy at either end of the continuum. Thus students underestimated the proportion of those who drink once a month or less, while they overestimated the proportion drinking once or twice a week or more.

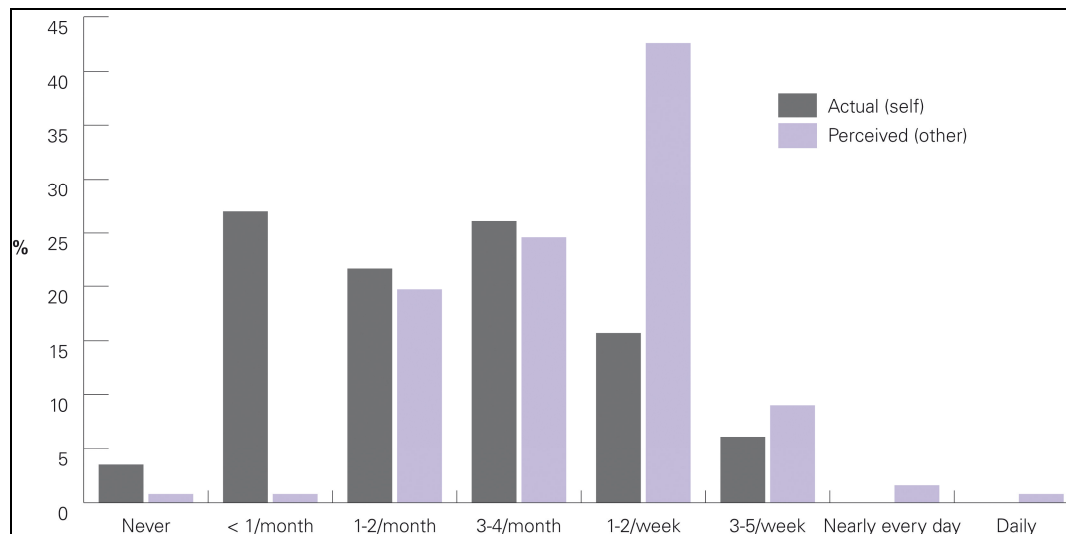


Figure 7: Frequency of drinking (self vs other)

5.2.2 Perceived and self-reported drunkenness

Similar misperceptions were observed in relation to drunkenness (see Figure 8). There is a relationship between perceptions of friends' frequency of drunkenness and one's own frequency of drunkenness.

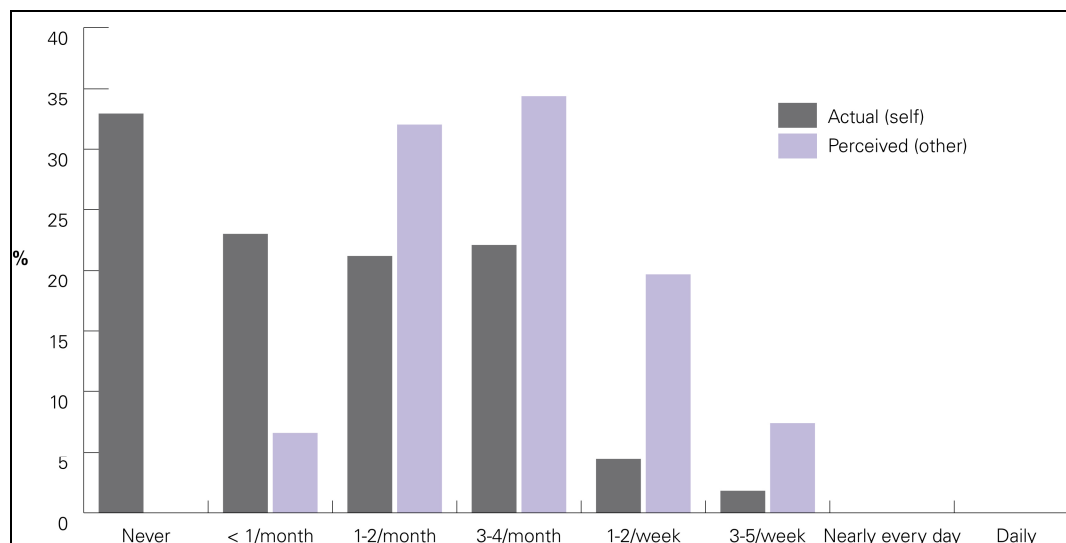


Figure 8: Frequency of drunkenness (self vs other)

As the perceived frequency of others getting drunk increases, so too does the frequency of self-getting drunk. Once again, the misperceptions were most pronounced at each end of the continuum (i.e. never getting drunk, at one end of the scale, versus getting drunk 3-5 times a week or more, at the other end). There was a substantial disparity between 'the perception' and 'the reality' - with infrequent

drunkenness among others being significantly underestimated, and frequent drunkenness being substantially overestimated.

5.3 Evaluation Results - Trial Schools versus Control School

5.3.1 Changes in perceived rates of drinking

South-East

Figure 9 shows the results for Times 1 through 3 for perceptions of others' drinking, for students in the South-East Region. It is apparent that same-grade peers are perceived to drink more frequently than friends, and that same-school peers are perceived to drink more frequently than same grade peers. This general trend was apparent for this region across the course of the intervention.

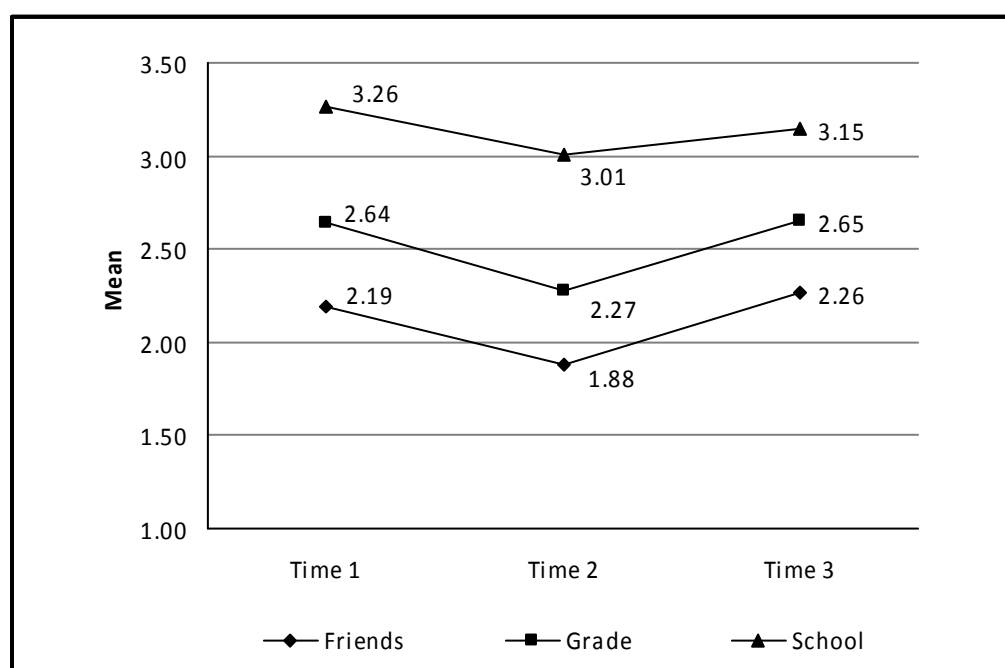


Figure 9: Perceptions of others' drinking (T1-T3) – South-Eastern Region

With respect to changes over the course of the intervention, the mean perceived drinking rates for friends, same-grade peers and same-school peers' was lower at T2 than it was at T1, but had in most cases returned to T1 rates by T3. The exception to this trend was for same-school peers, although the difference between the baseline and post-intervention rates was non-significant. Closer examination of the results relating to friends, reveals that the mean perceived rate of friends' consumption was 2.19 (s.d 1.56) at T1, 1.88 (s.d 1.46) at T2 and 2.26 (1.68) at T3, with the T2 rate being significantly lower than both the T1 and T3 rates. A similar pattern is apparent

with respect to same-grade peers, with a drop at T2 relative to T1 and T3. However, the trend does not hold for same-school peers – with no significant differences emerging over the period of review.

Western Region

As Figure 10 indicates, similar trends are evident in the Western Region. As was the case for the South-Eastern Region, students in the Western Region perceive that their grade-mates drink more frequently than their friends, and that their school-mates drink more frequently than their grade-mates.

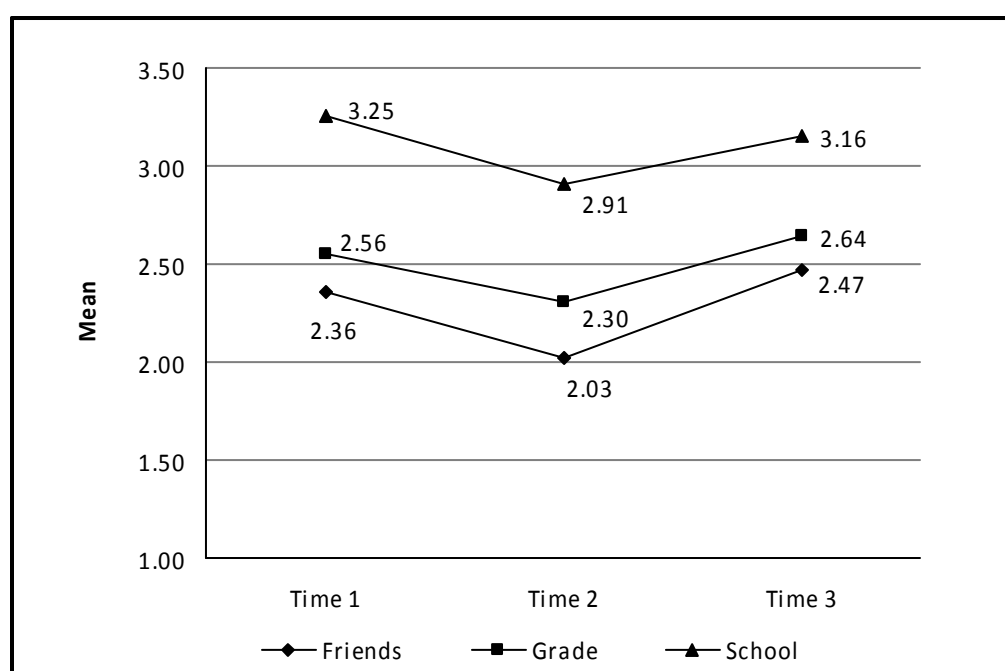


Figure 10: Perceptions of others' drinking (T1-T3) – Western Region

As was the case in the South-Eastern Region, there was a definite downward trend at T2 for perceptions relating to all peers. The mean perceived rate of drinking for friends was 2.36 at T1 (sd 1.45), 2.03 at T2 (sd 1.46) and 2.47 at T3 (sd 1.48). Equivalent results for same-grade peers are 2.56 at T1 (sd 1.24), 2.30 at T2 (sd 1.32) and 2.64 at T3 (sd 1.34), and for same-school peers are 3.25 at T1 (sd 1.26), 2.91 at T2 (sd 1.43) and 3.16 at T3 (sd 1.42). The T2 result was significantly lower than the T1 for all three peer categories.

Control

The control school results differ from the trial results in several interesting ways. Although the control school exhibited the same pattern of students perceiving grade-mates to drink more frequently than friends, and school-mates to drink more

frequently than grade-mates, the changes over time did not approximate those apparent in the trial schools (see Figure 11).

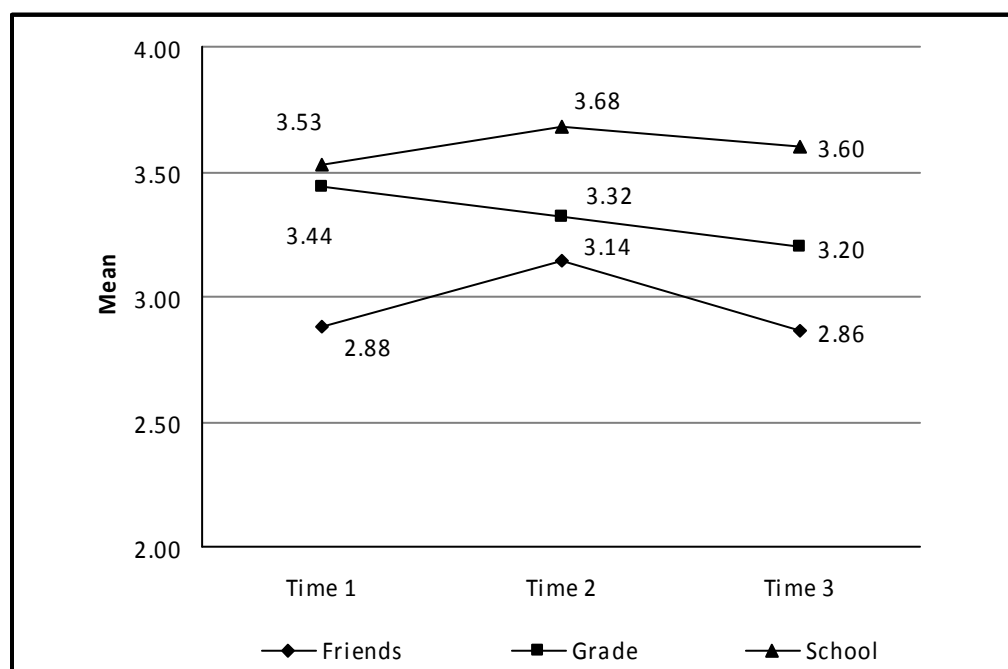


Figure 11: Perceptions of others' drinking (T1-T3) – Control

The mean perceived rate of drinking rates for friends was similar to the control school at baseline (2.88, compared to 2.36 in the West and 2.19 in the South-East). However, in the control school, the T2 rate was higher than the T1 rate - unlike the trial schools in which the T2 rates were lower than the T1 rates. Overall, no significant differences in friends' perceived drinking rates emerged across the period of the intervention. There was an apparent (though non-significant) downward trend over time with respect to same-grade peers. The results for same-school peers stayed relatively constant across time.

Regional overview – Changes in perceived drinking rates

We can now make some general observations about ways in which students' perceptions of their peers' drinking might have changed over time, and note any differences between the trial schools and the control school.

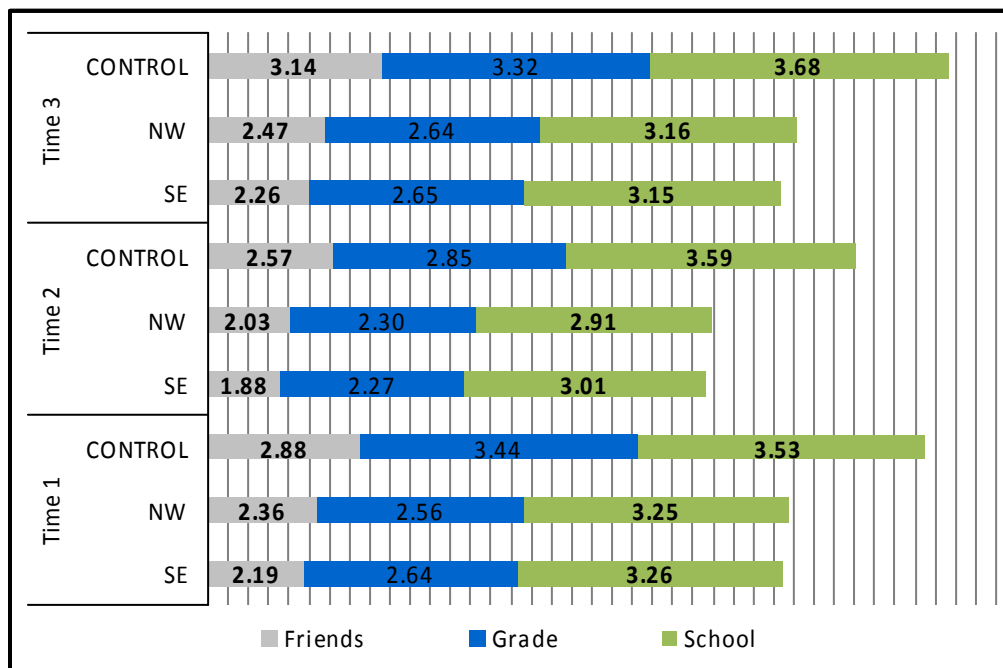


Figure 12: Perceptions of others' drinking (T1-T3) – Trial and Control

As the preceding discussion suggests and Figure 12 indicates, the trial schools in both regions exhibited significant decreases in perceived drinking rates at T2. This trend was not apparent at the control school. However, this is not necessarily indicative of the intervention having had an impact. It should be noted that the control school scored higher than the trial schools at both baseline and throughout the period of the intervention. The fact that T3 levels at the trial schools revert to T1 levels may be suggestive of seasonal variation, a 'temporary' impact of the intervention, or the influence of some other unidentified factor. Nevertheless, the decreases in the mean perceived drinking by peers by the trial schools at T2 were significant, and although T3 rates were higher than T2 rates, they were still lower than the baseline T1 rates.

5.3.2 Changes in perceived rates of drunkenness

South-East

As is the situation with perceptions of drinking, perceptions of drunkenness in the South-Eastern Region follow a pattern whereby students perceived their same-grade peers to be drunk more frequently than their friends, and they perceive their same-school peers to be drunk more frequently than their same-grade peers.

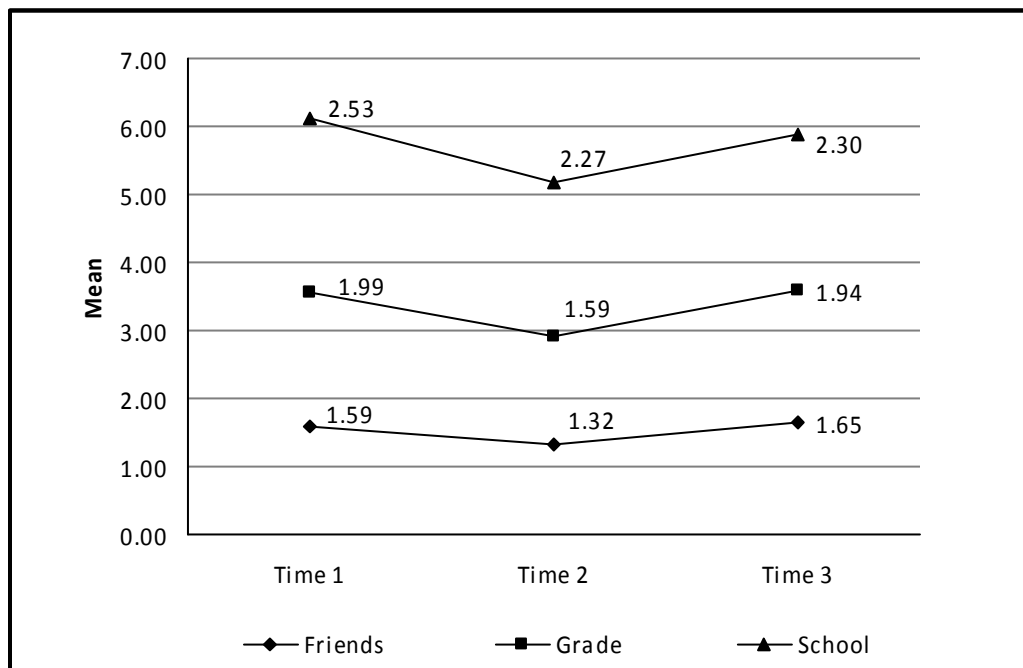


Figure 13: Perceptions of others' drunkenness (T1-T3) – South-Eastern Region

As indicated by Figure 13, there was some variation over time in students' perceptions of drunkenness among their peers. The perceived rate of drunkenness among friends was 1.59 (sd 1.45) at T1. It fell to 1.32 (sd 1.39) T2 and then increased to 1.65 at T3 (sd 1.59). Perceptions of drunkenness among same-grade peers followed a similar pattern, with the T2 rate being significantly lower than both the T1 and T3 rates. The drop at T2 was most pronounced in relation to same-school peers, with a decrease from 2.53 (sd 1.33) at T1 to 2.27 at T2, followed by a small increase to 2.30 at T3 (sd 1.30). The T3 rate was significantly higher than the T2 rate, but not as high as the baseline T1 rate.

Western Region

Once again, the situation in the Western Region is similar to the South-Eastern region, with respect to perceptions of drunkenness. The rates for friends remained relatively constant over time, whilst the rates for both same-grade peers and same-school peers dropped at T2 but then returned to baseline levels at T3.

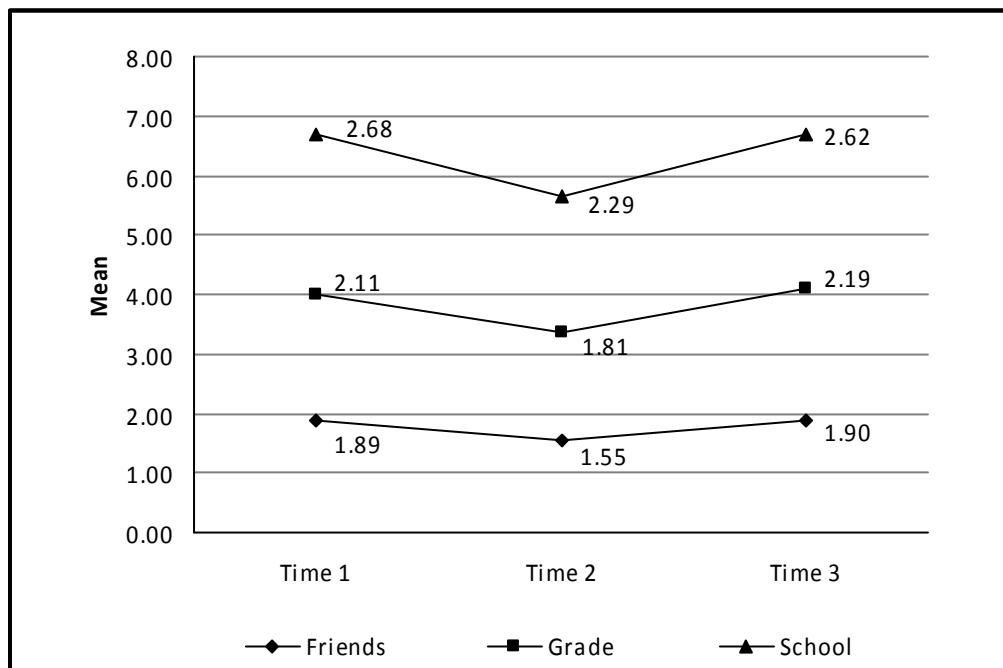


Figure 14: Perceptions of others' drunkenness (T1-T3) – Western Region

The mean perceived rate of friends' drunkenness was 1.89 at T1 (sd 1.42), decreasing to 1.55 at T2 (sd 1.36) and increasing to 1.90 at T3 (sd 1.41), with the T2 rate being significantly lower than the rates for T1 and T3. Equivalent figures for grade-mates are 2.11 at T1 (sd 1.16), 1.81 at T2 (sd 1.21), and 2.19 at T3 (sd 1.24), with the T2 rate being significantly lower than the T1 and T3 rates of perceived drunkenness. Perceptions of drunkenness among school-mates follow a similar pattern, although the T3 rate is lower than the baseline rate.

Control

In contrast to the situation for perceptions of drinking, the control school results follow similar patterns to the trial school results with respect to perceptions of drunkenness among peers. However, the changes over time were not statistically significant.

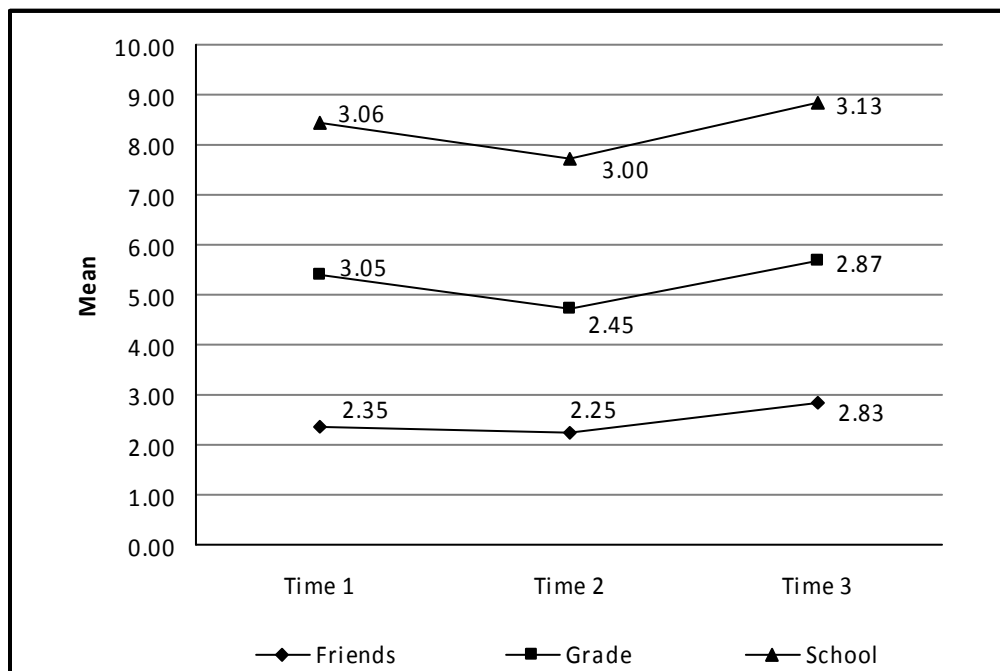


Figure 15: Perceptions of others' drunkenness (T1-T3) – Control

The mean perceived rate of drunkenness among friends at the control school was 2.35 at T1 (sd 1.41), 2.25 at T2 (sd 1.51) and 2.83 at T3 (sd 1.77). There was no significant difference in perceptions of friends' drunkenness between each of the three time periods. Equivalent figures for same-grade peers are 2.45 (sd 1.24) at T1, decreasing to 2.45 at T2 (sd 1.51), then increasing at T3 to 2.87 (sd 1.57), with no significant difference being observed between time periods. Finally, the mean perceived rate of drunkenness among same-school peers at the control school was 3.06 at T1 (sd 1.30), 3.0 at T2 (sd 1.34) and to 3.13 at T3 (sd 1.37). As was the case for same-grade peers, the changes across time in the same-school peers were not significant.

Regional overview – Perceived drunkenness rates

Figure 16 summarises comparable data from the trial schools and the control school, with respect to perceived rates of drunkenness among students' friends, same-grade peers and same-school peers.

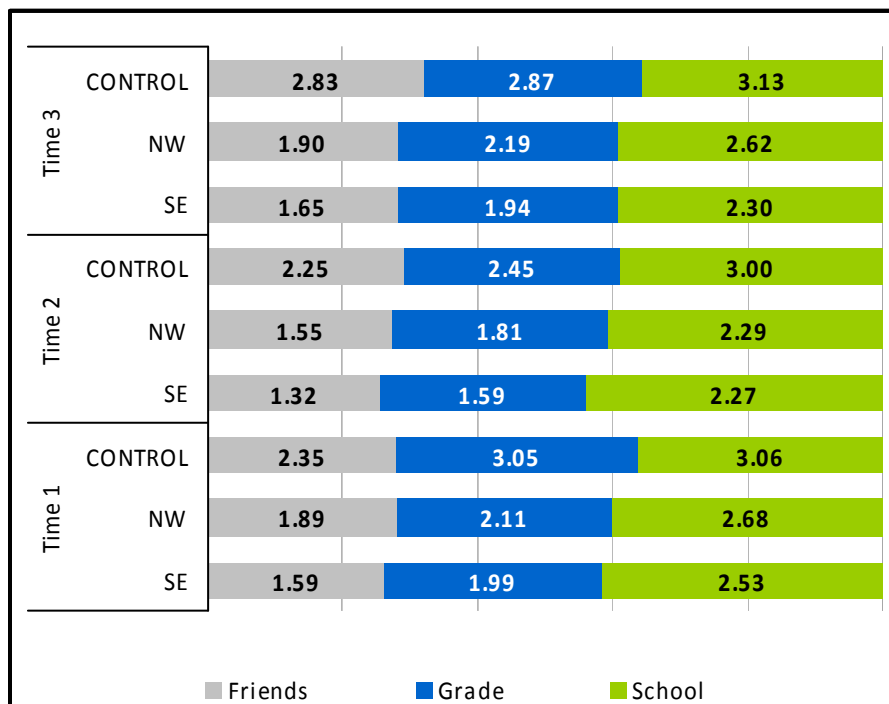


Figure 16: Perceptions of others' drunkenness (T1-T3) – Trial and Control

As was the case with perceived rates of drinking, the trial schools in both regions exhibited significant decreases in perceived rates of peer drunkenness between baseline and T2. Similar decreases were not experienced at the control school. At T2, the rates for both the South-East and Western regions were significantly lower than the rate for the control school. This was also the case at T3. The control school exhibited higher rates of perceived peer drunkenness than did the trial schools at all three time-periods, which may be indicative of a more entrenched heavy drinking culture at this school.

5.4 Alcohol-Related Behaviours

Misuse of alcohol is responsible for much of the acute and chronic disease burden, and is associated with mental health problems, suicides, and motor vehicle and other accidents (Hughes, 2006). Young people suffer particular types of harm as a consequence of others', and their own, alcohol consumption (see for example McBride, Farrington, & Midford, 2000). This section of the report explores results relating to the students' experience of harm and their use of harm-minimising 'protective behaviours', and examines changes in alcohol-related behaviours over the course of the intervention.

5.4.1 Experience of alcohol-related harm

The student survey contained 19 separate potential harms associated with consuming alcohol, which included physical consequences (such as vomiting and memory loss) as well as other negative consequences (such as being involved in fighting and being charged by the police). Students were asked how often, if at all, they had experienced each of the harms as a result of their alcohol consumption. Response categories included never (0), not in the last 12 months (1), once in the last 12 months (2) and more than once in the last 12 months (3).

The five most commonly experienced harms suffered as a result of drinking are:

- Having a hangover - 47% of students had experienced a hangover at least once in the last 12 months.
- Witnessed fighting - 42% of students had witnessed a fight at least once in the last 12 months.
- Vomiting - 41% of students had vomited at least once in the last 12 months.
- Injuring oneself - 30% of students had injured themselves at least once in the last 12 months.
- Fighting – 19% of students had had at least one fight in the last 12 months.

However, in the spirit of the positive emphasis of SN, it should also be pointed out that 40% of students had never had a hangover, 40% had never witnessed fighting, 43% had never vomited, 30% had never injured themselves and 66% had never been involved in a fight as a result of their alcohol consumption. Our focus will return to the last two of these – aggression and injury – following a discussion of behaviours that can reduce the risk of harm.

5.4.2 Harm minimisation strategies

The survey also contained items relating to students' 'protective norms' – i.e. those behaviours which can minimise the risk of harm associated with alcohol consumption (see for example Haines, Barker, & Rice, 2006, p.71). Although students were asked about their use of a range of harm minimisation strategies, this section of the report focuses on three specific behaviours:

- Alternating alcoholic and non-alcoholic beverages;
- Making a decision, in advance, not to exceed a set number of drinks; and
- Eating while drinking.

We will now examine results relating to harm minimisation by students in the trial schools and the control school, over the period of the intervention.

South-Eastern Region

Students in the South-Eastern region reported using these practices relatively infrequently. The least common practice was alternating non-alcoholic with alcoholic drinks. Students were more likely to eat whilst drinking or set a limit on the number of drinks they consumed. The frequency of use of the behaviours in this region stayed relatively constant over the time of the intervention.

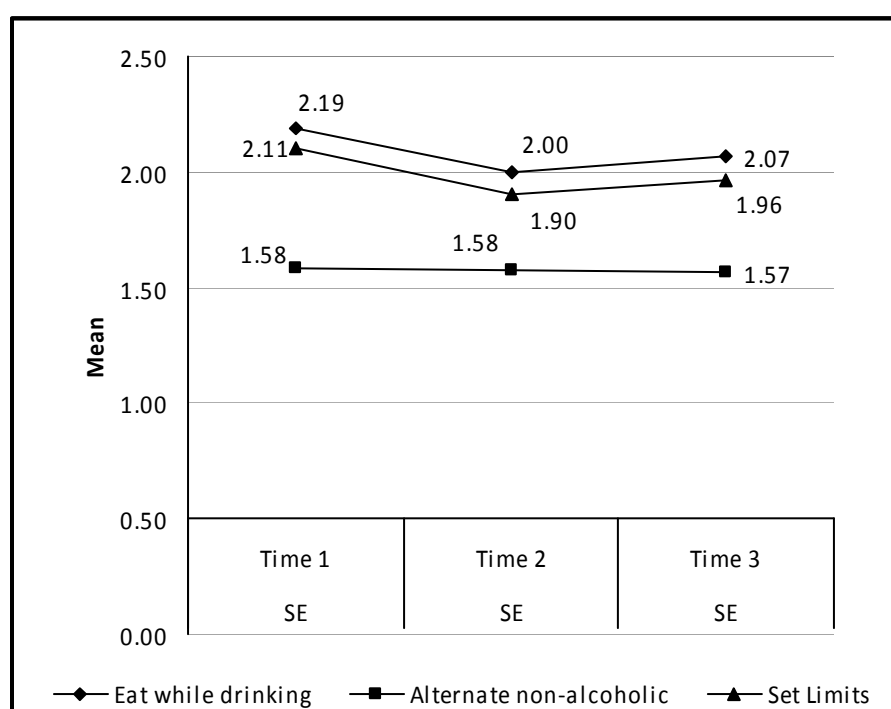


Figure 17: Students' harm minimisation (T1-T3) – South-Eastern Region

Western Region

Data relating to the Western Region paints a similar picture of student use of harm minimisation strategies (see Figure 18).

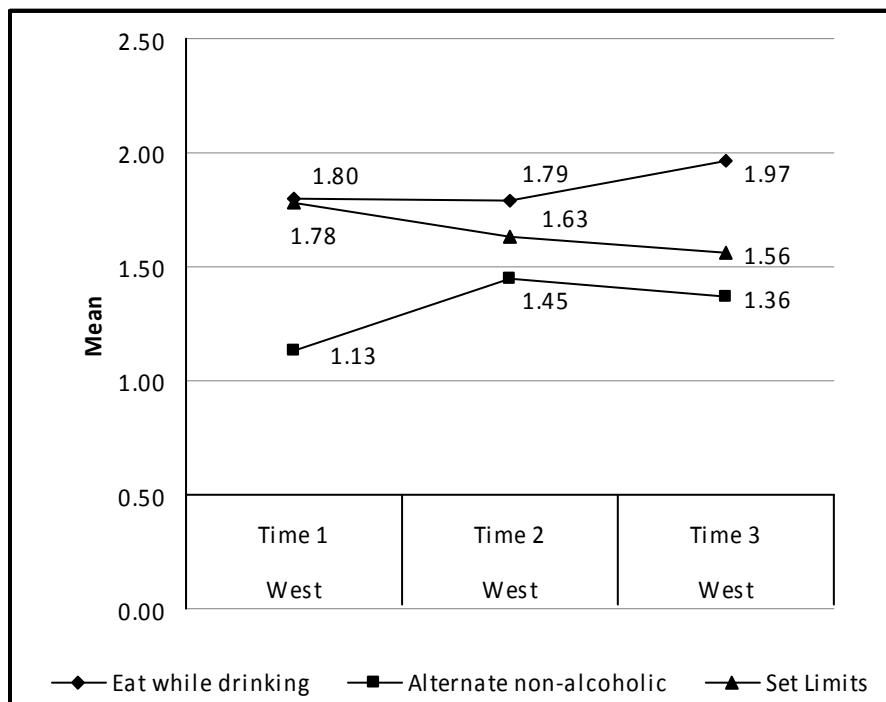


Figure 18: Students' harm minimisation (T1-T3) – Western Region

The most common of the three behaviours was eating whilst drinking, closely followed by setting limits on the number of drinks. As was the case for the South-Eastern region, students' alternation of alcoholic and non-alcoholic drinks was the least commonly employed harm minimisation behaviour. Across the period of the intervention, there was a slight increase in the frequency of eating whilst drinking and alternating alcoholic and non-alcoholic drinks, and a slight decrease in the frequency of students setting limits on the number of alcoholic drinks consumed. However, none of these changes were significant.

Control

The control school results differ from both the South-Eastern Region and the Western Region. Unlike both of the trial schools (in which eating while drinking was the most commonly employed strategy), in the control school the most common strategy of the three was setting limits. However, like the trial schools, the least commonly employed strategy was alternating alcoholic and non-alcoholic drinks (see Figure 19).

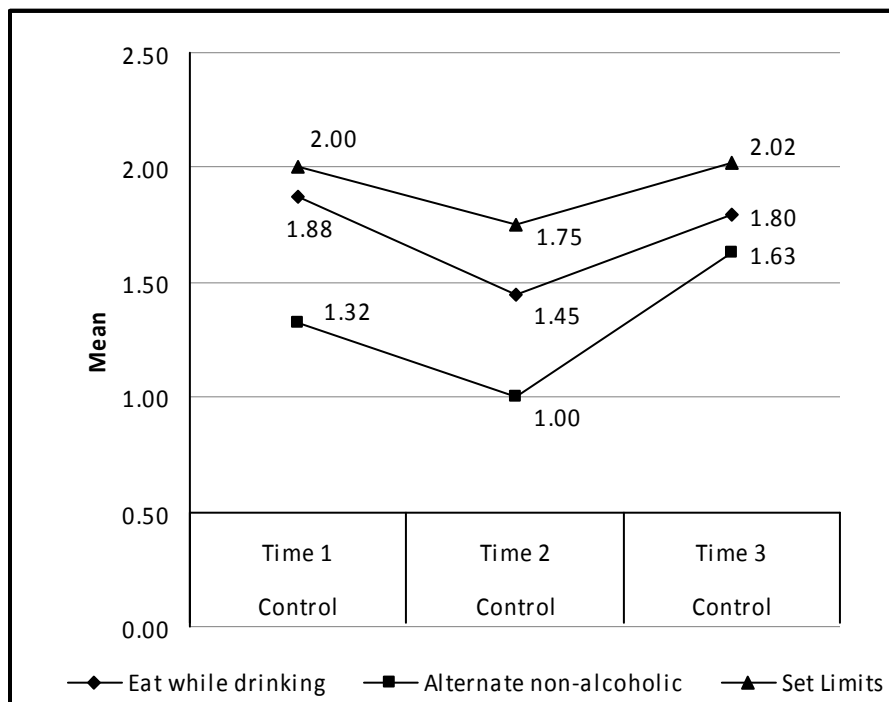


Figure 19: Students' harm minimisation (T1-T3) – Control

There was a decline in the reported frequency of all three behaviours at T2, but this drop was not statistically significant, and T3 results were similar to T1 results.

Regional overview – changes in harm minimisation behaviours

At this point we can make some general observations about whether students' reported use of harm minimisation behaviours (namely eating while drinking, alternating alcohol and non-alcoholic drinks, and setting limits on the number of drinks) changed over the course of the intervention, and note any differences between the trial schools and the control school.

As shown by Figure 20, there was little variation in students' reported use of the three harm minimisation practices over the period of the intervention. This was the case for both the trial schools and the control school. 'Alternating non-alcoholic and alcoholic drinks' appears to be an underutilised harm minimisation strategy among the target groups, and it may therefore represent a useful focus for further prevention work.

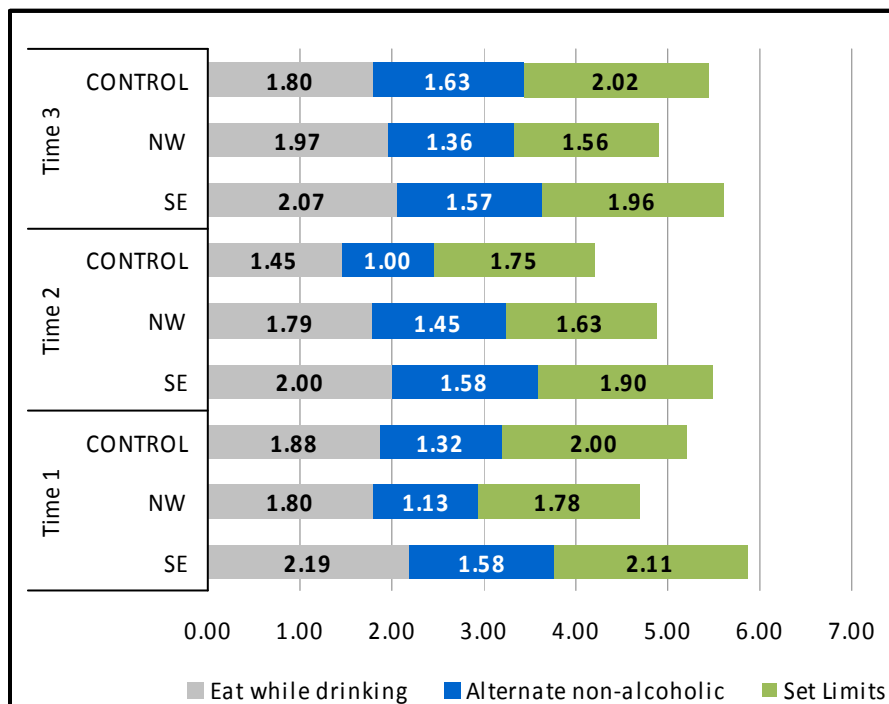


Figure 20: Students' Use of harm minimisation (T1-T3) – Trial and Control

Factors affecting the risk of aggression and injury

It is relatively common for young people to witness acts of aggression (White & Mason, 2006), and alcohol consumption increases the likelihood of this occurring. Table 3 includes those behavioural and situational variables which impact significantly on aggression. The frequency of drinking, frequency of drunkenness, duration of the last drinking session and the number of people present all contribute to an increased risk of witnessing or participating in aggressive behaviours. Conversely, setting limits on the amount of alcohol consumed decreases the risk.

Table 3: Factors affecting the risk of aggression

Predictors of aggression	B	Std Error	t	Sig
Drinking duration	0.042	0.022	1.907	0.057
Number of people present	0.011	0.003	3.286	0.001
Frequency of drunkenness	0.522	0.091	5.718	0.000
Frequency of drinking	0.232	0.078	2.970	0.003
Setting limits	-0.138	0.067	-2.073	0.039

Factors implicated in the risk of accidental injury (to self and others) are similar to those for aggression. Table 4 displays those variables which contributed to an increased likelihood of injury. Once again, the more frequently students drink and get drunk, and the longer they drink for, the more likely they are to accidentally inflict

injury upon others or accidentally injure themselves. Deciding in advance to set a limit on the number of drinks reduces this risk.

Table 4: Factors affecting the risk of injury

Predictors of Injury	B	Std. Error	t	Sig.
Frequency of drunkenness	0.394	0.092	4.280	0.000
Drinking duration	0.041	0.016	2.576	0.010
Frequency of drinking	0.223	0.101	2.209	0.028
Setting limits	-0.164	0.074	-2.199	0.029

The following section of the report discusses changes in alcohol-related behaviours, including the frequency of drinking and drunkenness, across the time of the intervention.

5.4.3 Changes in alcohol-related behaviours

According to the logic model for SN interventions, one of the anticipated effects of the intervention is for alcohol-related behaviours to shift across time, to come into alignment with the ‘true norms’. The following discussion compares T1, T2 and T3 data for the trial and control schools with respect to frequency of drinking and drunkenness.

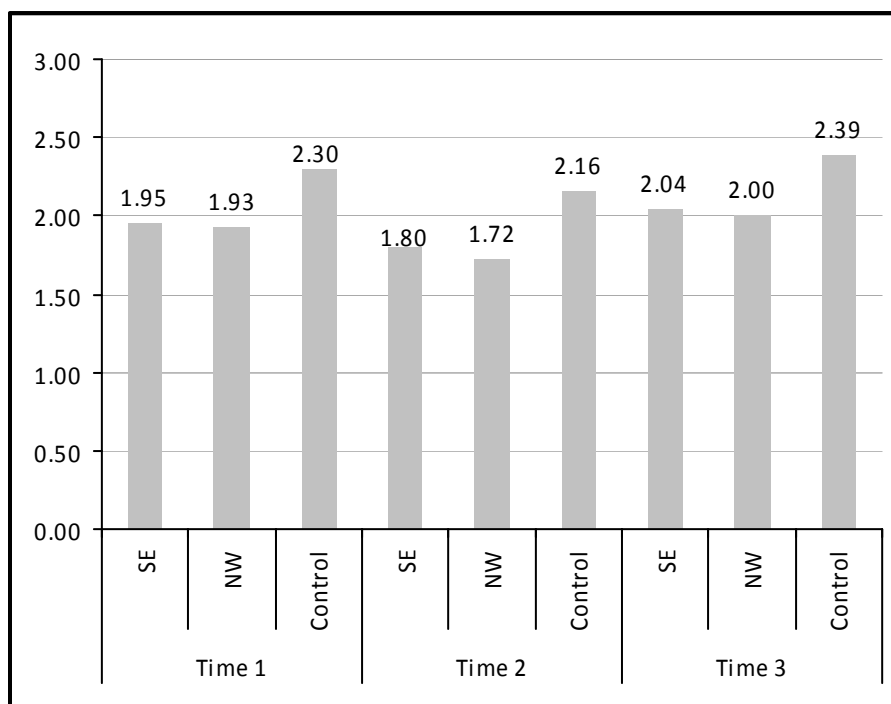


Figure 21: Students' self-reported drinking rates (T1-T3) – Trial and Control

As Figure 21 demonstrates, there was very little change in the frequency of drinking at the trial schools over the period of the intervention. The control school recorded a consistently higher rate of drinking than either of the trial regions at all time periods, although the difference was not significant.

A related issue is the intensity of consumption i.e. changes in the frequency of drunkenness over time (see Figure 22).

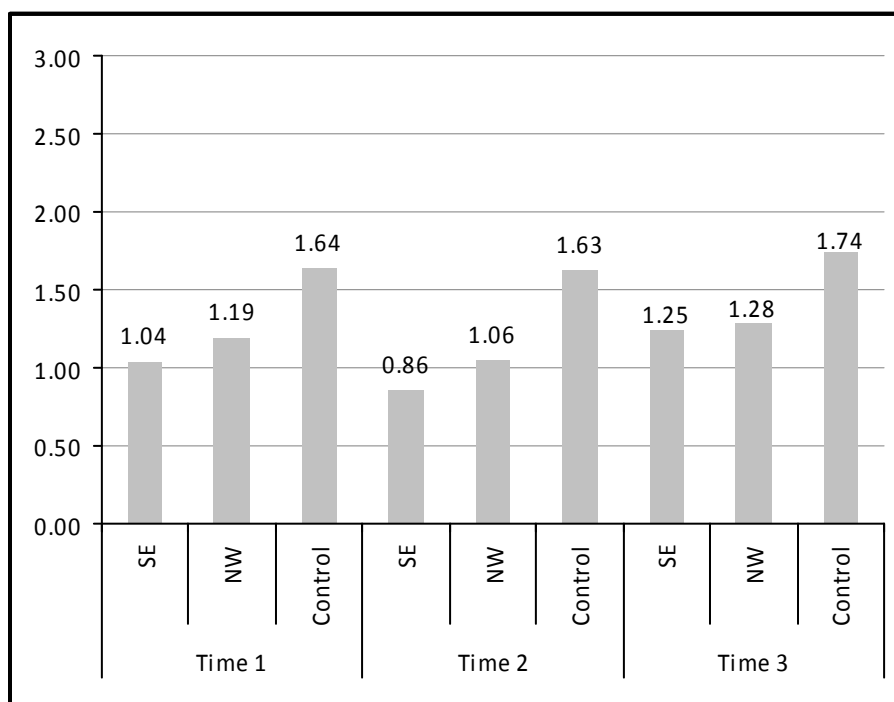


Figure 22: Students' self-reported drunkenness rates (T1-T3) – Trial and Control

There was a notable decrease in the self-reported frequency of drunkenness in the trial regions (but not the control) following the first media campaign. The decline was significant in the South-Eastern region. However, in both regions, the rates returned to pre-intervention levels at T3. Both the South-Eastern Region and the Western Region reported lower rates of drunkenness than the control school, with this trend being evident at all three time points.

The final issue to be addressed before moving on to the perceptual and attitudinal issues, is the extent to which there was any change over the course of the intervention in the proportions of students reporting getting drunk on the last drinking occasion. Figure 23, displays the relevant data.

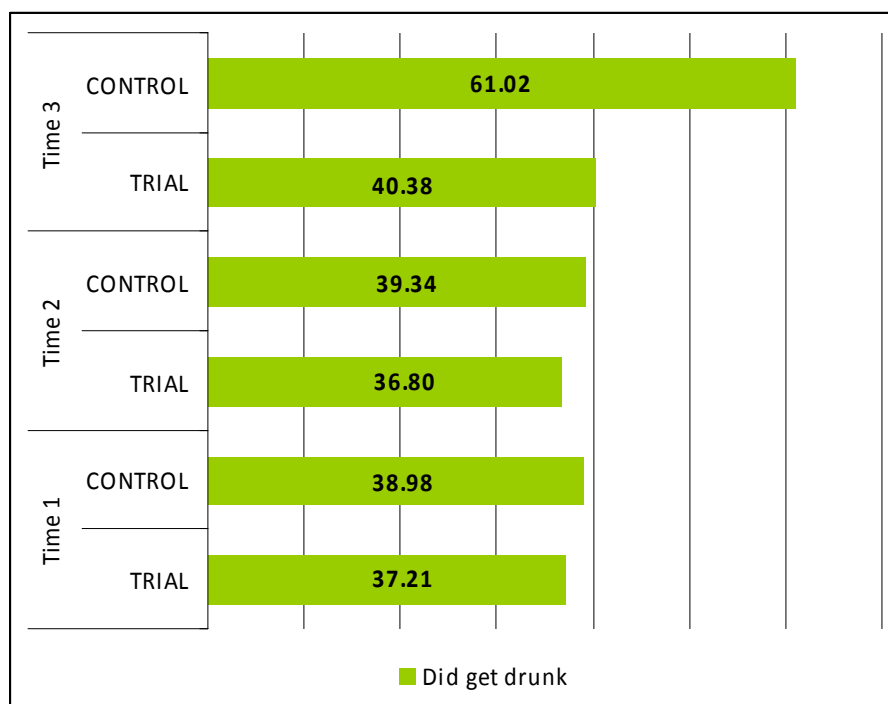


Figure 23: Drunkenness on last drinking occasion (T1-T3) – Trial and Control

In this instance, the control school displayed comparable rates to the trial schools at baseline, followed by a slight (though not significant) increase at T2 and an increase of greater magnitude at T3 - meaning that across the course of the intervention, the proportion of students at the control school who did not get drunk on the last drinking occasion decreased. The trial schools, on the other hand, displayed relatively stable rates across the course of the intervention. Although this equilibrium is disappointing (since the desired effect was a decrease in the proportions who got drunk on the last drinking occasion), stability across time is a better result than an increase. Additionally, caution must be exercised when interpreting these results. The existence of an increase in the proportions of those getting drunk at the control school, but not at trial schools, at T3, is not necessarily confirmation of the effect of the intervention, for reasons that have been outlined earlier in this report.

5.5 Alcohol Consumption, Attitudes and Perceptions

This is the final section of the results component of this report. It investigates whether the perceptions of friends' behaviours and attitudes are more or less important than those of same-grade and same-school peers.

5.5.1 Perceptions of ‘the norm’: The importance of friends

The literature on adolescent alcohol use and misuse is replete with research evidence that friends are extraordinarily powerful influences in young peoples’ lives (Bahr, Marcos, & Maughan, 1995; Biddle, Bank, & Marlin, 1980; Pavis, Cunningham-Burley, & Amos, 1997). Often studies focus on the way in which individuals within peer groups ‘model’ each others’ behaviour. Like other SN researchers, we are interested in the more subtle influences of peer groups such as students’ perceptions of their friends’ alcohol-related attitudes and behaviours.

Perceptions of friends’ drinking and own drinking

Bi-variate correlations were undertaken to ascertain if any relationship exists between perceptions of friends’ rates of drinking and self-reported rates of drinking, as well as the ‘strength’ of any such relationship³. The correlation coefficient was .589 at the .001 significance level, suggesting a strong relationship between perceived rates and self-reported rates of drinking. Thus, every unit increase in the perceived rate of friends’ drinking is accompanied by a half-unit increase in the self-reported drinking rate (See Table 5).

Table 5: Own vs friends’ (perceived) frequency of drinking

Frequency of drinking (Self-reported)	Friends’ frequency of drinking (perceived)				
	Never	Low	Medium	High	Total
Never	49.1	9.0	3.3	0.0	10.7
Low	49.1	77.6	48.9	31.4	60.3
Medium	1.9	11.9	42.8	40.0	24.5
High	0.0	1.4	5.0	28.6	4.6
Total	100	100	100	100	100

Chi square testing reveals a significant relationship between perceived rates of drinking and self-reported rates, suggesting that students tend to drink at around the same rate as they perceive their friends to drink (Chi square; 210, p.000). For example, nearly half (49.1%) of those who perceive that their friends are non-drinkers report being non-drinkers. By contrast, 9% of those who perceive their friends to drink at a low rate report being non-drinkers, and only 3.3% of those who perceive their friends to drink at a medium rate report being non-drinkers. At the other end of the scale, 28.6% of those who perceive their friends as drinking at a high rate self-report drinking at a high rate. None of those who perceive their friends to be non-drinkers report drinking at a high rate.

³ Based on baseline data only. There were no significant differences between T1, T2 and T3 data across relevant variables.

Perceptions of friends' drunkenness and own drunkenness

A similar picture emerges with respect to perceptions of friends' drunkenness and self-reported rates of drunkenness, with the correlation coefficient being .547 at the 0.01 level of significance. Thus for every unit increase in friends' perceived drunkenness, there is around a half unit increase in self-reported rates of drunkenness. Table 6 below shows the relationship between students' perceptions of their friends' rates of drunkenness and their self-reported rates.

Table 6: Own vs friends' (perceived) frequency of drunkenness

Frequency of drinking (Self-reported)	Friends' frequency of drinking (perceived)				
	Never	Low	Medium	High	Total
Never	89.2	41.3	19.8	16.7	44.2
Low	10.8	53.3	42.9	33.3	41.1
Medium	0.0	5.3	34.9	33.3	13.4
High	0.0	0.0	2.4	16.7	1.3
Total	100	100	100	100	100

Chi square testing also indicates a relationship between friends' perceived rates of drunkenness and self-reported rates (Chi square 204; p.000). Most (89%.2%) of those who perceive their friends as never having being drunk, report never having been drunk themselves. Of those who perceive medium rates of drunkenness among their friends, over one-third (34.9%) self-report medium rates of drunkenness, compared to only 2.4% self-reporting high rates of drunkenness. Furthermore, none of those who perceive their friends as never having been drunk self-report medium or high rates of drunkenness.

5.5.2 Alcohol-related perceptions and attitudes

Table 7 displays bi-variate correlations for alcohol-related perceptions and attitudes, and demonstrates a strong link between the two. The greater the perceived rate of friends drinking, the lower the agreement level with the statement 'It is OK for adults to drink but not high school students'. Further, the more students perceived their friends to drink, the more they agreed with the statement that 'It is OK for students to get drunk'. This trend holds for grade and school as well, suggesting an inter-relationship of perceptions and attitudes. The results for ego (self) and friends suggest that the perceptions of friends' behaviour and attitudes closely resemble ones' own, although the direction of the relationship is unclear.

Table 7: Perceptions and attitudes - Self and peer (perceived)

Perceptions and attitudes	Corr Coeff	drinking OK for adults	drunk OK for students	drinking OK for adults-friends	drunk OK for students-friends	drinking OK for adults-grade	drunk OK for students-grade	drinking OK for adults-school	drunk OK for students-school
friends drink	r2	-.380(**)	.458(**)	-.397(**)	.543(**)	-.191(**)	.275(**)	-.144(**)	.241(**)
grade drinks	r2	-.219(**)	.221(**)	-.308(**)	.345(**)	-.336(**)	.436(**)	-.237(**)	.279(**)
school drinks	r2	-.180(**)	.121(**)	-.197(**)	.174(**)	-.250(**)	.220(**)	-.281(**)	.299(**)
friends drunk	r2	-.378(**)	.526(**)	-.395(**)	.588(**)	-.163(**)	.253(**)	-.155(**)	.267(**)
grade drunk	r2	-.274(**)	.309(**)	-.316(**)	.403(**)	-.299(**)	.408(**)	-.182(**)	.295(**)
school drunk	r2	-.252(**)	.257(**)	-.237(**)	.308(**)	-.226(**)	.269(**)	-.219(**)	.335(**)

Perceptions, drinking and drunkenness

Examining this relationship in greater detail requires us to examine the relationship between perceptions of friends' drinking and drunkenness rates and self-reported drinking and drunkenness rates. Table 8 includes variables relating to perceptions of others' drinking and drunkenness rates as well as self-reported alcohol consumption and frequency of drinking.

Table 8: Perceptions and behaviour - Self and peer (perceived)

Perceived rates of drinking		friends drink	grade drinks	school drinks	friends drunk	grade drunk	school drunk	totalalc
friends drink	R 2	1						
grade drinks	R 2	.541(**)	1					
school drinks	R 2	.357(**)	.628(**)	1				
friends drunk	R 2	.821(**)	.458(**)	.276(**)	1			
grade drunk	R 2	.482(**)	.762(**)	.461(**)	.583(**)	1		
school drunk	R 2	.426(**)	.551(**)	.683(**)	.505(**)	.650(*)	1	
totalalc	R 2	.261(**)	.100(*)	-0.017	.321(**)	.191(*)	.111(*)	1
frequency of drinking	R 2	.577(**)	.260(**)	.163(**)	.566(**)	.272(*)	.224(**)	.367(**)

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The variables in Table 8 are significantly related to each other, making it difficult to identify any clear relationships between variables. There appears to be a strong relationship between perceived rates of drinking among friends and self-reported rates of both drinking and drunkenness. There also appears to be a strong relationship between perceptions of friends' drinking rate and friends' drunkenness rate – that is, more students perceive their friends to drink, the more they perceive them to be drunk ($r=.821$). This is an important result, since there is an apparent conflation of drinking and drunkenness among the target groups. In other words, there is a perception among young people (which may or may not be accurate) that their peers do not drink without getting drunk.

Closer examination of each of the perception variables and frequency of drinking and total alcohol consumption, reveals some clearer relationships. In relation to frequency of drinking, perceptions of friends drinking correlates strongly with self-reported rates of drinking ($r=.577$), as does the perception of friends rate of drunkenness ($r=.566$). Thus, at a bi-variate level (i.e. not controlling for the influence of other variables) there appears to be a strong connection between friends' (perceived) rate of drinking and drunkenness, and one's own rate of drinking and drunkenness.

With respect to total alcohol consumption, a similar picture emerges. The greater the perceived rate of drinking among friends, the greater the amount of alcohol consumed ($r=.261$). Similarly, the greater the rate of perceived drunkenness among friends, the greater the amount of alcohol consumed ($r=.321$). While the effect of these variables on total alcohol consumption is not as strong as frequency of drinking, perceptions of friend's rates of drinking and drunkenness impact significantly on both. Of particular note is the greater impact of perceptions of friends rates of drunkenness on total alcohol consumed. This suggests that while the perceived rate of friends' drinking does impact on self-reported alcohol consumption, it is the perceived rate of friends' drunkenness that has the stronger influence on self-reported consumption at a bi-variate level.

Attitudes, drinking and drunkenness

We now consider the relationship between attitudes (rather than perceptions) and self-reported alcohol-related behaviours. Table 9 includes the bi-variate coefficients for each of the attitude variables discussed above, measured against total alcohol consumption and self-reported frequency of drinking.

Table 9: Attitudes and behaviours - Self and peer (perceived)

Attitudes		totalalc	frequency of drinking	drinking OK for adults	drunk OK for students	drinking OK for adults-friends	drunk OK for students-friends	drinking OK for adults-grade	drunk OK for students-grade	drinking OK for adults-school
totalalc	R2	1								
Parents attitude	R2	.271(**)	.367(**)							
drinking OK for adults	R2	-.242(**)	-.436(**)	1						
drunk OK for students	R2	.341(**)	.503(**)	-.583(**)	1					
drinking OK for adults-friends	R2	-.163(**)	-.300(**)	.625(**)	-.409(**)	1				
drunk OK for students-friends	R2	.220(**)	.313(**)	-.366(**)	.612(**)	-.483(**)	1			
drinking OK for adults-grade	R2	0.018	-.159(**)	.471(**)	-.209(**)	.645(**)	-.288(**)	1		
drunk OK for students-grade	R2	.107(*)	.140(**)	-.258(**)	.393(**)	-.341(**)	.613(**)	-.451(**)	1	
drinking OK for adults-school	R2	-0.045	-.109(*)	.395(**)	-.187(**)	.587(**)	-.246(**)	.681(**)	-.357(**)	1
drunk OK for students-school	R2	0.078	.117(**)	-.217(**)	.381(**)	-.304(**)	.600(**)	-.352(**)	.662(**)	-.441(**)
**. Correlation is significant at the 0.01 level (2-tailed).										
*. Correlation is significant at the 0.05 level (2-tailed).										

Parental attitude is moderately correlated to the total amount of alcohol consumed ($r=.271$) as well as frequency of drinking ($r=.367$). This might suggest that the more 'lenient' students regard their parents to be with respect to under-age alcohol consumption, the more often they are likely to drink, and the more heavily they are likely to drink on each drinking occasion. Parental influences are worthy of separate, detailed consideration and are beyond the scope of this report.

Attitudes to drunkenness also correlate strongly with both frequency of drinking and the amount of alcohol students consumed on the last drinking occasion. Thus, the higher the level of agreement with the statement 'It is OK for students to get drunk', the more heavily ($r=.341$) and the more frequently ($r=.583$) students drank.

5.5.3 Perceptions, attitudes and alcohol consumption

We conclude the results section of this report with a brief discussion of the relationship between perceptions, attitudes and self-reported alcohol consumption.

Table 10: Attitudinal and perceptual antecedents to alcohol consumption

Predictors of total alcohol consumption	B	Std. Error	t	p.	Lower Bound	Upper Bound
(Constant)	5.098	1.364	3.738	0.000	2.417	7.779
drunk OK for students	0.490	0.144	3.397	0.001	0.207	0.774
friends drunk	1.420	0.273	5.199	0.000	0.883	1.957
school drinks	-0.727	0.264	-2.754	0.006	-1.245	-0.208
drinking OK for adults	-0.314	0.139	-2.269	0.024	-0.587	-0.042
parents attitude to drinking	1.508	0.329	4.587	0.000	0.862	2.154

Table 10 presents the results of regression modelling of those attitudinal and perception variables that are significantly correlated to the amount of alcohol students consume. The overall r^2 for the model is .469, indicating that the model explains 47% of the total variation in alcohol consumption.

The more students agreed with the statement that 'It is OK for students to get drunk' the more they drank. Thus for every unit increase in agreement with that statement, the amount of alcohol consumed increases by half a standard drink ($r=.490$). Conversely, the more a student agrees that it is 'OK for adults to drink but not high school students' the less they drink. Thus for every unit increase in agreement with the statement, alcohol consumption decreases a third of a standard drink ($r= -.314$). Perceived parental attitude toward drinking has the strongest impact on the amount of alcohol consumed. For every unit increase in perceived 'leniency' towards underage alcohol consumption, there is an increase of one and a half standard drinks ($r=1.508$) being consumed on the last drinking occasion.

With regard to perceptions, the higher the perceived rate of friends' drunkenness, the greater the amount of alcohol consumed on the last drinking occasion. Thus, for every unit increase in the perceived drunkenness rate among friends, there is a one and a half standard drink ($r=1.4$) increase in the amount of alcohol consumed on the last drinking occasion.

6 Discussion and Conclusions

The Social Norms Analysis Project is the first major Australian trial of the SN approach to health promotion. This report has provided an overview of the SN approach and the way in which it has been implemented in two rural municipalities in Tasmania. The majority of the report is dedicated to the presentation of findings from the project, focussing on those which answer the key evaluation questions.

The first section of the report presented simple Logic Models for a number of different approaches to school-based alcohol health promotion. The evaluation of SNAP has involved collecting and analysing data relating to the first three boxes in the diagram below. It should be noted that the impact evaluation of SNAP pertains to the perceptual, attitudinal and behavioural effects of the intervention, but is not able to assess long-term impacts such as decreased misuse of alcohol.

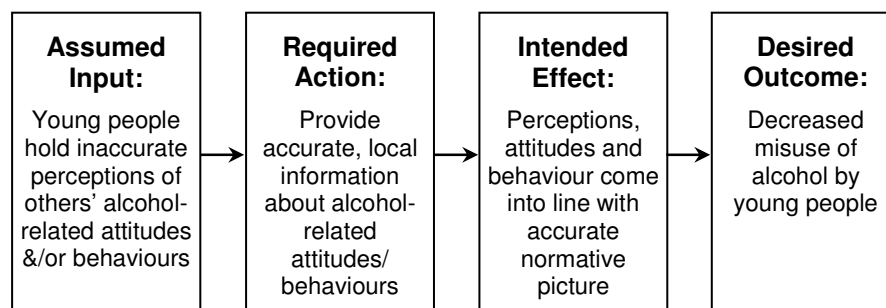


Figure 24: Logic model for social norms approach

6.1 Summary of Evaluation Results

It is appropriate at this point to re-focus attention on the evaluation questions posed at the outset, and briefly re-cap the answers to those questions.

1. Do students misperceive the frequency and/or intensity of others' drinking?

Yes. Students overestimate frequent drinking and drunkenness, and they underestimate infrequent drinking and drunkenness as well as abstention from alcohol. In both the trial and control schools, students' self-reported rates were closer to friends' perceived rates than either same-grade or same-school peers.

2. Is there a relationship between self-reported frequency of drinking and the perceived frequency of drinking and/or drunkenness of peers?

Yes. Friends appear to be more potent influences on students than either same-grade or same-school peers with respect to perceptions of frequency

of drinking. Every unit increase in the perceived rate of friends' drinking is accompanied by a half-unit increase in the self-reported drinking rate.

3. Is there a relationship between self-reported frequency of drunkenness and the perceived frequency of drinking and/or drunkenness of peers?

Yes. As is the case for perceptions of drinking, friends appear to be more potent influences on students than either same-grade or same-school peers with respect to perceptions of frequency of drunkenness. Every unit increase in friends' perceived drunkenness is accompanied by a half unit increase in self-reported rates of drunkenness.

4. Did the trial schools exhibit changes during the course of the intervention, with respect to the following:

- 4.1 Perceptions of the frequency of others' drinking?

Yes. The trial schools in both the South-Eastern and Western regions exhibited significant decreases in perceived peer drinking rates at T2. However in both regions, this was followed by an increase at T3.

- 4.2 Perceptions of the frequency of others' drunkenness?

Yes. The trial schools in both the South-Eastern and Western regions exhibited significant decreases in perceived peer drunkenness rates at T2. However, as was the case for perceptions of drinking, there was a subsequent increase in perceptions of the frequency of others' drunkenness.

- 4.3 Self-reported frequency of drinking and drunkenness.

Yes and no. There was a significant decline in self-reported drunkenness at the South-East region between T1 and T2. However, the effect was short-lived, and T3 rates were similar to baseline. The proportions reporting that they did not get drunk on the last drinking occasion remained stable over time.

- 4.4 Use of harm-minimisation strategies?

No. Over the period of the intervention, there were no significant changes in the trial schools in the use of three key harm minimisation strategies i.e. eating while drinking, alternating alcoholic and non-alcoholic drinks, and setting a limit on the number of drinks.

5. Did the control school exhibit the same changes as the trial schools?

Yes and no. As was the case for the trial schools, the self-reported frequency of drinking and the use of harm-minimisation strategies at the

control school remained relatively constant across the period of the intervention. However, the control school did not exhibit the declines in perceived drinking rates, perceived drunkenness rates, and self-reported drunkenness rates that were exhibited by the trial schools at T2.

6.2 Discussion

The preceding section has presented results that are indicative of SNAP having a positive effect. The trial regions exhibited a number of important and significant changes during the course of the intervention (particularly between T1 and T2, i.e. after the first media campaigns). The fact that these changes did not occur at the control school adds weight to the apparent effect of the intervention.

The biggest shifts related to perceptual, rather than attitudinal or behavioural variables. However, changes in perception are still indicators of 'success', because perceptual changes are precursors to behavioural change (see Perkins, 1997). In a general sense, if students realise that risky drinking is not as prevalent as they thought, there will be less 'pressure' for them to conform to the image of a 'bingeing teen' (Hughes, in press). Those SN interventions deemed to be 'ineffective' (see for example Granfield, 2002; Werch et al., 2000) are generally those that have not reduced misperceptions among the target groups and therefore (according to social norms theory) would not be expected to yield any changes in drinking behaviours.

Several behavioural changes did occur between T1 and T2, but the effect was short-lived, with many rates returning to baseline levels at T3. In some respects this is not a surprising result, since short-term impact is often associated with media campaigns. However, there is reason to believe that the first campaign was more effective than the second campaign for the following reasons:

- The first campaign was 'truer to the model' than the second campaign. Due to time constraints and the impending end of the school year, a decision was made to disseminate two key messages per school in the second campaign.
- The key messages emphasising non-use in the first campaign might have had more impact than the harm minimisation key messages in the second campaign. The harm minimisation messages might have been less suitable for the age group, or they might have been simply 'less powerful than the T1 messages and more open to misinterpretation' (Interview with Local Project Officer).
- There were wider contextual factors that intensified around the time of the second campaign. Changes in the education system, increased demands on teachers, and staffing changes all presented challenges. According to a Local Project Officer, "staff changes resulted in inconsistent levels of awareness of, and support for, SNAP. The instability at the schools made it

difficult to maintain enthusiasm and at some schools there was a high level of support from some teachers, but none from others”.

Admittedly, the last point is beyond the control of the project. However, some of the apparent ‘deficiencies’ of the second campaign could readily be addressed on the basis of insights gained from conducting SNAP. In particular, we would recommend using more interactive/engaging modes of data collection and a shorter questionnaire (to help avoid the ‘fatigue’ experienced by students later in the project), as well as focusing on a single message, planning ahead to achieve greater student involvement, and providing more support and training for teachers.

It may also be the case that some ‘invisible’ changes occurred. In other words, some shifts might not have been apparent, either because they are not readily measurable or because data enabling those shifts to be documented, could not be collected. For instance, SNAP data collection methods did not permit ‘tracking’ of individual student responses over time, so it was not possible to examine whether individual participants’ perceptions of peer drinking and their own drinking increased, decreased, or stayed the same across the period of the intervention (see for example Mattern & Neighbors, 2004, p.489). Similarly, it was not possible to map friendship networks (Like Abel & Plumridge, 2004) which would have shed further light on the accuracy (or otherwise) of particular perceptions, as well as other processes of peer influence.

Certainly, the Project Officers were aware of a range of less tangible effects of the project, such as providing ‘windows of opportunity’ for teachers and parents to have open, non-threatening conversations about alcohol with students. For instance, one parent wrote the following note ‘This project has given us discussion about alcohol - our son's opinions, peer opinion and perceptions outside these areas. Thank you for this opportunity to talk about alcohol the legal drug ... Thanks to UTAS, TILES & AER’. According to the Huon Project Officer, one notable aspect of being involved in SNAP was ‘knowing that students were thinking more critically about their perceptions and increasing their understanding of how misperceptions occur’. This view was also expressed by several teachers in the trial schools.

6.3 Wider Contributions of the Project

The contributions of SNAP extend beyond the results pertaining to the evaluation questions. Importantly, the project has reinforced, on the basis of sound data, the fact that many students either don’t drink alcohol at all, or do so in ways that are not harmful to themselves or others (Hughes, 2008). The ‘positivity’ of the project is important and is the basis for much of its appeal to the target groups. Contrary to the dominant image of ‘bingeing teens’, SNAP has acknowledged that young people can, and do, make healthy choices.

It is worth reiterating several points made at the start of this report. Firstly, unlike some other models of alcohol health promotion, SN interventions take account of

social factors and embrace the notion of cultural (rather than just individual) change. The SNAP results provide further support for the argument that 'peer influence' can operate via perceptions, and should not be understood simply in terms of overt peer pressure to drink and/or 'modelling' of peer behaviours. Secondly, the problem of resistance to health promotion messages by the target group is less likely to be encountered in SN interventions, since the information being presented is relevant to, generated by, and is essentially about the target group itself. Lastly, SN interventions are not based on a 'deficit model' of young people. Instead, the focus is on assets, strengths and positive contributions.

SNAP has also contributed to theoretical and scholarly development and will continue to do so. There are many opportunities for fruitful analyses of data collected during SNAP, upon which future presentations and publications will be based. Possible topics include:

- The social setting of drinking (especially parties) and the role of adult supervision and parental provision of alcohol (Neighbors, Oster-Aaland, Bergstrom, & Lewis, 2006).
- Gender and age-related patterns of drinking, including the reducing 'gap' between male and female adolescents' patterns of consumption (Taylor & Carroll, 2001) and increasing involvement of females in antisocial behaviours (Alberts, Elkind, & Ginsberg, 2007).
- Identification of 'constellations of risk' by examining relationships between such variables as age of onset of alcohol use, involvement in heavy episodic drinking and/or illicit drug use, self-harm and scoring low on the happiness scale.

SNAP has also provided great impetus for the future uptake of SN work. Considerable interest in the project has been shown by many individuals and organisations around Australia. The SNAP team intends to provide consultancy services to assist others to undertake SNs work, and hopes to investigate alternative data collection technologies such as electronic/on-line surveys and 'clickers', as well as alternative dissemination technologies via podcasting, mobile telephones and/or the internet. Lastly, SNAP has highlighted the potential of the SN approach for alcohol misuse prevention work with other target groups such as parents of teenagers (see Linkenbach, Perkins, & DeJong, 2003), different cultural groups (see Carey, Borsari, Carey, & Maisto, 2006), and other age groups such as University students (see Walker, 2000). The approach can also be applied to a range of other health and social issues including smoking (Linkenbach & Perkins, 2003), sexual assault (Berkowitz, 2002), bullying (Perkins & Craig, 2006), and eating behaviours (Perkins, 2003).

Many people working in policy development have expressed a keen interest in SNAP. The approach fits within Australian policy frameworks (particularly with respect to the focus on harm minimisation). Last but certainly not least, SNAP has stimulated great interest from teachers, health professionals and others who are

attracted to the innovative yet evidence-based nature of the approach, and are keen to undertake their own SN projects.

The challenge ahead is to learn more about the potential of the SN approach, further embed SN principles and the 'learnings' from SNAP into relevant policies at the local and national level, and put the infrastructure in place to support integration into practice in a range of relevant fields. SN interventions support and encourage young people, by emphasising and affirming their healthy choices, rather than judging or criticising them for their unhealthy ones. The approach cannot 'solve' the problems associated with adolescent alcohol consumption, but it is a worthy addition to a multi-strategy toolkit for addressing the issue in this country.

6.4 Recommendations

1. That the Alcohol Education and Rehabilitation Foundation (AERF):
 - a) further promote Social Norms (SN) and other positive approaches to alcohol education for young people.
2. That Australian funding bodies (including AERF) consider funding projects that:
 - a) aim to stimulate critical thinking and questioning of assumptions and perceptions, rather than seeking to induce change using 'scare tactics'.
 - b) take account of the social nature of drinking, rather than focusing on individualised notions of risk/predisposition to problematic consumption.
 - c) explore young peoples' experience of drunkenness and the meanings they attach to it, and gain a better understanding of the role of alcohol in young peoples' lives.
3. That policy developers in the health, education, law enforcement and other sectors:
 - a) consider the value of positive approaches to alcohol health promotion such as the SN approach.
4. That Australian schools, colleges and universities:
 - a) review their alcohol-related curricula to ascertain whether they include 'scare tactics' and content/approaches which imply the 'normality' of heavy episodic drinking among young people.

- b) consider SN as a potential strategy for reinforcing healthy choices and protective behaviours and affirming positive peer influence within their student populations.
- 5. That the media, parents, families and those who work with young people:
 - a) take care to avoid reinforcing negative stereotypes which imply the 'normality' of heavy episodic drinking among young people.

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