Social norms approach in secondary schools
Literature review
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Social norms approach in secondary schools: Literature review
EXECUTIVE SUMMARY

Life Education Australia commissioned the Australian Council for Educational Research to provide a summary of research related to interventions that used a social norms approach (SNA). The review focused on interventions aimed at reducing risky behaviours in secondary school students, particularly related to use of alcohol, tobacco and other drugs.

Research questions

There were two key questions guiding this literature review:

Question 1: If we make more realistic the perceptions of young people about the levels of risky behaviour, and attitudes towards these risky behaviours, amongst their peers, is that likely to reduce the likelihood of them engaging in such risky behaviour?

Question 2: If so, what are the critical design features of interventions targeting young people that have been successful in correcting perceptions about peer attitudes and behaviours?

This report provides an overview of the concepts, theory and history of the social norms approach, and briefly describes the secondary school SNA programs identified. The middle section collates success factors in designing SNA interventions, and limitations of the implementations and research methodology of SNA studies. The review concludes with discussion of the evidence of effectiveness of SNA programs in secondary schools, and recommendations for undertaking a pilot SNA project.

Social norms approach

Social norms theory predicts that “interventions to correct misperceptions, by revealing the actual, healthier norm, will have a useful effect on most individuals, who will either reduce their participation in possibly problematic behaviour or be encouraged to engage in protective, healthy behaviours” (Berkowitz, 2005).

The classic social norms approach involves:

1. collection of baseline data of students’ own behaviour and their perceptions of how others behave
2. development of short messages based on the norms identified in the baseline survey
3. implementation of marketing campaigns to disseminate these messages (and in some cases lessons to explain misperceptions and reinforce norms)
4. evaluation of the program’s effectiveness via a re-test of student behaviours and perceptions

Secondary school SNA programs

This literature review identified and reviewed reports on 13 secondary school programs which employed the social norms approach. Two Australian programs were located, the Social Norms Analysis Project (SNAP) implemented in Tasmania in 2006-7, and the Kiama Stop Underage Drinking Project 2012-16. The literature identified a mixture of program descriptions, small scale studies and evaluations.
The conclusion reached from analysing these sources was that implementation of the social norms approach showed mixed results. As there was a lack of longitudinal data that assessed long-term program impact, there was very little evidence that SNA programs changed the behaviour of secondary-aged students. However, there was definitely evidence that misperceptions exist, and that misperceptions can be corrected through a social norms intervention, and that this may change students’ thinking or attitudes towards risky behaviours. Almost every data collection reviewed supported the theory that the target population overestimated the incidence of risky behaviour in their peer population.

**Design of SNA interventions**

The reviewers paid attention also to the second research question and identified design features of interventions successful in correcting perceptions about peer attitudes and behaviours. The following were identified as success factors:

- preparing an infrastructure that can deliver a quality intervention, including careful and rigorous program design, data collection, implementation and evaluation
- sharing a credible message in an appealing manner where norms data is explained
- tailoring messages that are appropriate and relevant to the audience
- planning for ongoing and long-term programmes
- planning for curriculum infusion

Limitations of the social norms approach research were also identified, and included:

- poor implementation in terms of design or dosage
- poor adherence to program methods or lack of a quality process
- poor teacher attitudes or teachers’ lack of understanding of social norms concepts
- reliance on self-reported measures

Finally the review considered questions about the effectiveness of the social norms approach in schools, and the relative cost effectiveness of the approach when compared to other health education programs for this age group.

**Recommendations**

For those considering the use of an intervention aimed at correcting perceptions about peer attitudes in Australian secondary schools, this review provides examples of programs, and a discussion of design factors and potential issues. In particular it recommends careful attention to the following points:

1. Studies indicate that a social norms approach can correct misperceptions, but it is difficult to find evidence of programs that were able to reliably measure behaviour change. This prompts a discussion as to the relative importance of measuring social norms in secondary students in order to educate about the actual level of risky behaviour amongst their peers.

2. There have been only two reported implementations of the social norms approach in Australian secondary schools. There is an argument for developing and trialling a contemporary program for the Australian context.

3. Social norms programs have suffered from inconsistently or poorly defined data collection, implementation and analysis of results. It is important to design or adopt a rigorous methodology
that overcomes limitations identified in past programs. The GOOD life study protocol published by Stock, Vallentin-Holbech and Rasmussen (2016) could provide a sound basis for a replication study.

4. Social norms interventions have been used to target a range of risky behaviours. Some programs have focussed on a single substance; others have considered norms across multiple areas. Those planning a program will need to weigh up the benefit of collecting data about a broad range of behaviours in a single survey, versus the possibility that a multi-focal campaign may have less impact, or cause confusion or fatigue in students.
INTRODUCTION

The beginning of this report briefly describes the background to the literature review and defines key terms and concepts related to the social norms approach (SNA). This is followed by an outline of the theory underlying SNA, and the logic model used in classic SNA programs. The middle of this report describes SNA interventions in secondary schools in Australia and other countries, and summarises the findings from each intervention. Success factors in designing SNA interventions are then outlined, as well as some limitations of these implementations. The review concludes with discussion of the evidence of effectiveness of SNA programs in secondary schools, and recommendations for undertaking a pilot SNA project.

Background

Life Education Australia commissioned the Australian Council for Educational Research to provide a summary of research related to interventions that used a social norms approach (SNA). The review focused on interventions aimed at reducing risky behaviours in secondary school students, particularly related to use of alcohol, tobacco and other drugs (ATOD).

The social norms approach has been used as a prevention approach within education since the late 1980s. Early programs were established in the United States, with evidence of the approach being adopted in subsequent decades in the United Kingdom, Canada, Australia and Europe.

Unlike some traditional health interventions that are designed to scare target groups into avoiding certain behaviours, social norms projects place the focus on influencing people’s perceptions (McAlaney, Bewick & Hughes, 2011). The logic of the approach is that, if we make more realistic the perceptions of group members about the levels of risky behaviour within their group, and attitudes within the group towards those risky behaviours, that will reduce the likelihood of them engaging in such risky behaviour.

Research questions

There were two key questions guiding this literature review:

- **Question 1:** If we make more realistic the perceptions of young people about the levels of risky behaviour, and attitudes towards these risky behaviours, amongst their peers, is that likely to reduce the likelihood of them engaging in such risky behaviour?

- **Question 2:** If so, what are the critical design features of interventions targeting young people that have been successful in correcting perceptions about peer attitudes and behaviours?

The studies identified and reviewed included interventions and programs that applied a social norms approach in order to educate secondary-school-aged students about risky behaviours. Types of risky behaviours in scope were drinking, smoking and other drug taking, while a broader range of behaviours of secondary interest included cyberbullying, self-harm, violence and gaming addiction. The date range of the search was for publications from 2003 to 2017. The starting date was based on the publication date of Wesley Perkins’ 2003 edited book entitled, *The social norms approach to preventing school and college age substance abuse: A handbook for educators, counselors, and clinicians*. This seminal publication provided extensive reference to programs up to 2003.
Detail of the search and review methodology is outlined in Appendix A: Review methodology.

Reviewers paid particular attention to the second research question and identified design features of interventions targeting young people that have been successful in correcting perceptions about peer attitudes and behaviours that should inform the design of an intervention.

Core concepts

This section outlines key concepts related to SNA, followed by an overview of social norms theory. Subsequent sections discuss specific features of SNA interventions.

Norms

Norms are explicit or implicit rules that guide, control, exclude and suggest social behaviour in particular contexts (Hechter & Opp, 2001; Horne, 2001). It is a pattern of group behaviour or a common understanding of what should be done or should not be done in order to remain a member of a group. Perkins (2002) describes the impact of norms on behaviour.

Group norms reflected in the dominant or most typical attitudes, expectations and behaviors not only characterize the group but also regulate group members’ action to perpetuate the collective norm (p. 164).

Norms are considered to have a behavioural dimension as well as an attitudinal dimension. Norms are both how the majority of people in a group behave, and how this majority believes they and others should behave. Expanding on this, Cialdini and Goldstein (2004) distinguish between types of norms as either injunctive or descriptive.

Norms that inform us about what is typically approved/disapproved (injunctive norms) and those that inform us about what is typically done (descriptive norms) (p. 597).

When an individual uses their perception of other people’s behaviour (how other people act) to guide their own behaviour it is referred to as perceived descriptive norms, while perceived injunctive norms refer to beliefs regarding the level of approval for a specific behaviour (i.e., what other people think) (Napper, Kenney, Hummer, Fiorot & LaBrie, 2016).

Peer effect on behaviour

Individuals are strongly influenced by what they perceive to be the norms of their peers. This is particularly the case amongst young people.

Youths’ peer crowd identification affects their behaviour through both intrinsic (identity-based) and extrinsic (norms-based) processes (Moran, Walker, Alexander, Jordan, & Wagner, 2017). The social identity approach suggests that

Individuals develop a sense of identity from the social crowds and classes to which they belong and it provides them with a sense of esteem and belonging, and helps them structure and make sense of their social environment (Abrams & Hogg, 2006).

Boyer (2006) confirms increased risk-taking behaviour in adolescence is related to substance abuse, risky driving and or gambling. Others note that risky behaviour is more likely to occur in the presence of peers (Albert, Chein, & Steinberg, 2013; Dishion & Tipsord, 2011). Young people who identify with
peer crowds for whom risky behaviour is normative will be more likely to engage in those risky behaviours because they are acting in harmony with their social identity (Moran et al., 2017).

Social acceptance is important during adolescence (Sebastian, Viding, Williams, & Blakemore, 2010) and if peer effect can influence risky behaviour there is a theory that it can also help encourage risk-averse behaviours. If adolescents are especially susceptible to social norms, particularly in situations of uncertainty, there is a suggestion that this benefits a social norms approach by informing the design of a peer-intervention in which peer advice can be used to promote more cautious behaviour that may in turn lead to reduced health-risk behaviours (Van Hooorn, Crone, & Van Leijenhorst, 2017).

Misperceptions
In his early social norms work Perkins (2007) observed that when thinking about high-risk and harmful behaviours, such as alcohol or drug use, violence, bullying, and sexual risk-taking, young people incline to a mistaken perception that the practice is the norm among their peers. Although the activity may be only practised by a minority group, the attention this activity gets makes them see themselves as representation for the majority.

*The majority is silent because it thinks it is a minority (pluralistic ignorance), and the minority is vocal because it believes that it represents the majority (false consensus)* (Berkowitz, 2005, p. 196).

In the case of alcohol use, students hold exaggerated perceptions of both the level of alcohol consumption of their peers (Boot et al., 2012) and the extent to which their peers view excessive alcohol consumption as socially acceptable (Burchell, Rettie & Patel, 2013). Such misperceptions are often maintained by all members of campus from students through to staff.

A third type of misunderstanding occurs when an individual thinks that her or his behaviour is more unique than it really is (false uniqueness) and this occurs for example, when some people withdraw from participation in the larger community because they see it as more alcohol-oriented or drug use-oriented than it really is (Berkowitz, 2004). Individuals who misperceive contribute to the climate that allows risky behaviour to occur, whether or not they engage in the behaviour themselves. These people have been referred to as ‘carriers of the misperception’ (Berkowitz, 2005; Perkins, 1997).
SOCIAL NORMS APPROACH

SNA has its roots in social psychological theories of conformity, which suggest that often our behaviour is shaped by what we understand other people do (Burchell et al., 2013). SNA refers to the process of reducing the gap between perceptions and reality regarding social norms rather than attempting to change norms when the majority of a population already behaves in a healthy manner and has healthy attitudes (Berkowitz, 2005). The aim is to uncover and boost already existing healthy norms, which have been underestimated and weakened, by telling people about what other people do, usually in the form of what the majority of people do (Burchell et al., 2013).

Social norms theory predicts that interventions to correct misperceptions by revealing the actual, healthier norm will have a useful effect on most individuals, who will either reduce their participation in possibly problematic behaviour or be encouraged to engage in protective, healthy behaviours (Berkowitz, 2005).

Social norms interventions can also be understood in terms of cognitive dissonance theory, another long-established framework within the social science literature (Berkowitz, 2005). Sharing correct information about norms causes cognitive dissonance by enlightening those who are ‘in the misperception’ that what they believe is incorrect. SNA focuses on the positive behaviour and offers the chance “to address a potentially conflict-prone theme, such as use of alcohol and other drugs use in a way that does not conflict with consensus-building communication practices” (Stock et al., 2014, p. 54).

How do social norms approach campaigns work?

There are three basic assumptions of the social norms approach (Linkenbach et al., 2002).

(i) misperceptions reinforce negative behaviour;
(ii) accurate perceptions reduce negative behaviour (and promote healthy behaviour), and
(iii) multi-dimensional interventions are likely to reduce these misperceptions as people become aware of precise information about a particular behaviour.

Multi-dimensional interventions present people with accurate messages in various formats, using different channels in order to reinforce the message of the SNA. Rather than focusing on the negative behaviour, social norms campaigns focus on the positive majority behaviour, and educate about actual norms. (Minnesota Department of Human Services, 2016).

Social norms interventions try to correct the confusions of all community members whether they actually engage in a problem behaviour or not (Berkowitz, 2005). As evidence for the key question of whether misperceptions predict behaviour, Berkowitz (2004) cites over twenty published studies in which “misperceptions are positively correlated with drinking behavior or predict how individuals drink” (p. 14). In some of these studies, perceptions of drinking norms were “positively associated with drinking behaviour” (p. 14).
Berkowitz (2003, p. 261) proposes that researchers ask the following questions when considering the use of SNA campaigns for a health promoting behaviour.

- What misperceptions exist with respect to the behaviour in question?
- What is the meaning and function of misperceptions for individuals and groups?
- Do the majority of individuals in a group or community hold these misperceptions?
- Does the target group function as a group with respect to the behaviour in question? (i.e., do the individuals in the group exert an influence on each other’s’ behaviour?)
- What is the hypothesized effect of these misperceptions?
- What changes are predicted if the misperceptions are corrected?
- What healthy behaviours already exist in the population that should be strengthened or increased?

How is the social norms approach implemented?

SNA has been implemented in a number of contexts and using varying methods. Several of these will be outlined later in reviews of particular interventions. Table 1 contains a comparison of steps for conducting social norms interventions taken from three sources. The Montana Model developed in 1999, as outlined by Linkenbach (2003) sets out an extensive seven step process. The four step SNAP model was described in *Trialling Social Norms strategies for minimising alcohol-related harm among rural youth*, the report of the first major Australian trial of SNA (Hughes, Julian, Richman, Mason & Long, 2008a). The Snowball Survey is a classroom activity developed by Crozier and adapted by Hancock (Seitz, Wyrick, Caldwell, Fearnow-Kenney, & Orsini, 2011).

The mapping provides an illustration of the variation between SNA programs, and the different scale of implementation, while still retaining the inherent SNA program logic outlined above.
### Table 1. Three models of the Social Norms Approach in action

<table>
<thead>
<tr>
<th></th>
<th>Montana Model</th>
<th>SNAP Project</th>
<th>Snowball Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planning and environmental advocacy</strong>&lt;br&gt;Ensuring that the process aligns with the program’s goals, and creating a rigorous research design to measure the campaign’s effectiveness.</td>
<td></td>
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<tr>
<td><strong>Baseline data</strong>&lt;br&gt;Conduct a baseline survey, and triangulate with other sources if possible. Gather additional qualitative data through focus groups or interviews. Data must demonstrate a disparity between perceived and actual norms.</td>
<td>Collection of data about behaviours and attitudes using an anonymous questionnaire.</td>
<td>Short ten question anonymous, paper-based survey, completed by students in class.</td>
<td></td>
</tr>
<tr>
<td><strong>Message development</strong>&lt;br&gt;Analyse baseline data rigorously and develop coherent and easy-to-understand messages. Messages must be clear, and provide a credible statement of ‘what is’ not what ‘should be’.</td>
<td>Analysis of the collected data to yield positive, data-based ‘key messages’.</td>
<td>Survey responses collated by the class with teacher or facilitator-led scripted discussion of findings and what these findings mean.</td>
<td></td>
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<tr>
<td><strong>Market plan</strong>&lt;br&gt;Seeing things through the eyes of the target population, and designing strategies for placing the message – within the limitations of the project budget.</td>
<td></td>
<td>Poster campaign and construction&lt;br&gt;Students switch to role as health educators, and use knowledge of social norms to influence the health of their peers by educating them about the misperceptions of substance use</td>
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<tr>
<td><strong>Pilot test and refine materials</strong>&lt;br&gt;Formal and informal feedback measures, especially focus groups. Include minority groups</td>
<td></td>
<td>Facilitator or teacher assesses student posters as ‘Complete and Correct’ or ‘Revise and Resubmit’</td>
<td></td>
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<tr>
<td><strong>Implement campaign</strong>&lt;br&gt;Train facilitators to maintain fidelity. Encourage feedback.</td>
<td>Dissemination of the ‘key messages’ to the target groups using a media campaign</td>
<td>Students place their posters around the school</td>
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<tr>
<td><strong>Evaluation</strong>&lt;br&gt;Continuous evaluation of campaign effectiveness</td>
<td>Evaluation of the impact of the campaign, in terms of recognition and understanding of the message, changes to norm perceptions and/or behaviour.</td>
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SOCIAL NORMS APPROACH INTERVENTIONS

While the majority of social norms studies took place initially in the United States and particularly within the American college system, the approach has been adopted internationally. This review identified research undertaken in Canada (Perkins, 2007; Schmidt, Kiss & Lokanc-Diluzio, 2009), Scotland (McAlaney & McMahon, 2007), England (Bewick, Trusler, Mulhern, Barkham & Hill, 2008), and in Hungary, Slovakia, Romania and the Czech Republic (Page, Ihasz, Hantiu, Simonek, & Klarova, 2008). Hughes et al., (2008a) and Jones, Andrews & Francis (2017) have documented evidence of misperceptions in Australian school children that were similar to those of Finnish adolescents (Lintonen & Konu, 2004). SNA has been used in Denmark in projects such as the Ringsted Experiment (Demant & Ravn, 2012), and the approach has also captured attention outside the academic field, including from policymakers.

SNA has been used most often within the context of alcohol and cigarette consumption among university students (Burchell et al., 2013). The traditional SNA has also been applied within a wider context, including sustainability issues (Cialdini, 2003) and hotel towel re-use (Goldstein, Cialdini & Griskevicius, 2008), as well as violence prevention (Berkowitz, 2010), road safety, bullying (Perkins, Craig & Perkins, 2011), and risky sexual behaviour (Donovan & Vlais, 2005).

The social norms approach in Australia

As noted, most of the evidence for SNA is U.S.-based. Given important cultural and social differences between Australia and the U.S. SNA interventions described below may be more or less effective. The American legal drinking age is 21 as opposed to 18, which may have implications for programs related to alcohol consumption (Cook, 2005). Drug policies also vary between countries.

Social Norms Analysis Project (SNAP)

2006 – 2007 trial in Tasmania, Australia focussed on alcohol in Years 7 – 10

Hughes, Julian, Richman, Mason & Long (2008b)

This was the first major Australian trial of SNA. It targeted Years 7 – 10 students in four rural Tasmanian government high schools. The regions were selected for their ‘sense of community’ and focus on youth and problematic alcohol use. The intervention was a partnership of the University of Tasmania’s Institute of Law Enforcement, Tasmania Police, local and state government representatives, health care professionals, schools and the rural community, with funding from the Alcohol Education and Rehabilitation Foundation.

The SNAP project adopted a pre- and post-testing design, with the data coming from a student survey. The research design was quasi-experimental, involving 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 (Hughes et al., 2008a). Students completed a 51-question self-administered anonymous survey in mid-2006 to provide the baseline data. The survey asked about the students’ own, and perceptions of others’ alcohol consumption. It used an eight-point scale of responses ranging from ‘never’ to ‘every day’, which in turn were collapsed for reporting into three categories: low, moderate or high.
### Social Norms Analysis Project (SNAP)

The SNAP baseline survey analysis of 509 surveys from the four intervention schools showed that students significantly underestimated the proportion of peers who rarely or never drink alcohol, while overestimating the proportion who frequently drank to excess (Hughes et al., 2008b). Researchers acknowledged that the different size of the cohorts in the four schools was a limitation of this study.

School-specific data was then used to create positive, affirming social norms messages, for example ‘7 out of 10 Greenvale High students rarely or never drink alcohol’ (Hughes et al., 2008b, p. 29). Messages were disseminated intensively via multiple channels and promotions including posters, mouse-mats, rulers and drink bottles.

The student survey was administered twice in 2007, once 6 months from the baseline survey, and again in Term 3, 2007. Initial results from this round of data collection indicated a reduction in perceived peer drinking rates and in the self-reported frequency of drunkenness, but no reduction in the frequency of drinking in the intervention group compared to the control. The researchers did not feel able to make any claim about the overall effectiveness of the intervention due to gaps in data analysis (Hughes et al., 2008b).

A key output of the SNAP initiative was the development of the guideline “4Real: An Australian guide to alcohol-focussed social norms interventions in high schools” as a resource aimed at supporting future uptake of the social norms approach in Australia (Hughes, 2008). Unfortunately, far from being universally adopted by Australian schools, this document has basically disappeared without trace.

### Kiama Stop Underage Drinking Project: Social marketing approach

2013 – 2016 community-wide project in Kiama, Australia on alcohol use in 12-17 year olds


Researchers at the Australian Catholic University (ACU)’s Centre for Health and Social Research conducted this school and community-based social marketing intervention, funded by the Australian Research Council (ARC). The project was designed to correct misperceptions of alcohol-related social norms in a New South Wales regional community, combining social norms and social marketing. It concurrently targeted adolescents, parents of adolescents and the broader community.

The first stage involved formative research designed to explore currently held beliefs and attitudes in the community. The researchers interviewed stakeholder groups, conducted surveys, phone interviews and focus groups, including with teenagers. In the school survey 39 per cent of Year 11 students thought it was definitely ok to get drunk occasionally, but on average they believed that 77 per cent of their peers thought it was definitely OK. Amongst the adults surveyed most thought that between 50-80 per cent of the town’s 16-17 year-olds were drinkers compared to the 33 per cent reported by ASSAD in 2011.

*Respondents perceived the community to be more accepting of underage alcohol supply behaviours than themselves; the average difference in 'unacceptable' rating for the 6 items was 16.8% (range 11.3% to 29.5%) (Jones et al., p. 7).*

The results of the formative research were used to develop a design brief for development of message concepts for testing with the target audiences.
Kiama Stop Underage Drinking Project: Social marketing approach

The intervention delivered a 10-week social norms curriculum ‘It’s OK not to drink’ to all Year 7 – 10 students in the local high school, as well as information sessions, a section on the intervention website with downloadable information and resources, a poster competition, and giveaways (such as hacky sacks, wristbands, and compact mirrors).

A tagline ‘Kiama Community Doesn’t Support Underage Drinking’ was used on posters, a website and a Facebook page. The campaign used news and editorials, local newspaper advertising and stickers placed on bins. The project team attended major community events and distributed information and project merchandise (e.g., pens, carry bags, and magnets with campaign messages).

In terms of results of the school-based intervention, out of a total 266 responses, 52 per cent of students agreed or strongly agreed that the lesson helped them realise most Australian teenagers don’t drink. The proportion of students (from 145 surveys) who answered “Definitely OK” in response to the following statements: “I think it is ok to drink alcohol regularly (1 or more times per month), decreased from 5.5 per cent (pre) to 0.9 per cent (post); “I believe other teens my age think it is ok to drink alcohol regularly” decreased from 23.6 per cent (pre) to 7.4 per cent (post) (Andrews et al., 2015, p. 100).

There was a significant drop in the perceived percentage of young people who drink alcohol, for all three age points. These changes were between six and seven percentage points; for example, the average perceived proportion of 16-year-olds who are drinkers decreased from 53.1 per cent to 45.7 per cent (Jones et al., 2017, p. 11).

This was foremost a social marketing project. A control group in another town was used. The authors acknowledge that change observed could be influenced by concurrent broader social changes, and may not be directly generalisable beyond this single regional Australian community. However, they conclude that the study provides preliminary evidence that

\[
\text{a social marketing approach to social norms interventions may allow us to extend the effectiveness of SNA beyond correcting misperceptions of social norms in the immediate peer group (as has been demonstrated to be effective in previous studies) to correcting misperceptions of broader societal norms (Jones et al., 2017, p. 12)}
\]

No other Australian applications of SNA programs were identified in the formal research literature, although Queensland researchers, Hamilton and White (2008) studied attitudinal, normative, control, and self and social influences in physical activity intentions and behaviour among Australian adolescents.

Social norms approach in secondary schools

Although a vast majority of SNA interventions have targeted youth problem behaviours particularly in colleges and universities, there are some that have been trialled with younger target groups, such as secondary school children. The SNAP project in Tasmania, Australia and Kiama Stop Underage Drinking Project (discussed above) are two such initiatives. Other studies with adolescents in a school setting have been identified and are described below.
Center for Research and Prevention Development

1999 – 2001 Alcohol and tobacco campaign in Illinois, United States

Haines, Barker & Rice (2003)

Following a SNA campaign conducted at Northern Illinois University, the methodology was trialled in two un-named mid-western secondary schools in 1999. This project included parents, teachers and students. The rationale for collecting social norms perceptions from a broader community was the fact that, unlike university college students who left home, school students were more likely to be influenced by parents and community. The Communities CAN! School Youth Survey was used to collect student data, supplemented by a 49-question survey assessing student perceptions of peer alcohol use, behaviours and sources of information related to ATOD. Parent perceptions were gathered via a mail survey to a random sample of parents of tenth grade students. A 36 question survey was administered to teachers during faculty meetings. This provided quantitative baseline data regarding ATOD information sources and their credibility for each of the population segments: students, parents and teachers.

The slogan ‘8 out of 10 don’t smoke’ was developed from the data, and the campaign included protective behaviours messages such as ‘leave places where people are smoking’ and ‘say no thanks if someone offers you tobacco’. Parents were targeted with display ads in community newspapers and in school newsletters. Teachers received information during staff meetings and professional development days. Students were exposed to posters, flyers and advertisements on local radio and direct mail to their home. The social norms messages were directed to all students, although only tenth grade students were selected for evaluation.

In 2001 the same surveys were administered as a post-test. Haines et al., (2003) report a decrease in misperceptions of both parents and teachers compared to their responses in 1999. There was a similar decline in student misperception that the majority of their peers were getting drunk (38 per cent in 1999 to 31 per cent in 2001), and that the majority were smoking (39 per cent in 1999 and 24 per cent in 2001). In terms of self-reported actual use of alcohol and cigarettes, the study also found a significant decrease in use across the board over the 2 years, for instance the students reporting they ‘got drunk in the last 30 days’ declined from 32 per cent in 1999 to 26 per cent in 2001, and those smoking in the last 30 days declined from 27 per cent to 19 per cent.

MOST of Us

2001-2002 smoking intervention in Montana, United States


In the case of smoking the earlier the intervention the less opportunity for addiction to develop. Linkenbach and Perkins (2003) discuss an eight-month prevention program with 12-17 year olds that took place in 2000-2001. Their aim was to test and evaluate the effectiveness of SNA in reducing the number of youths who begin to smoke cigarettes. The message was that ‘MOST of Us, 70 per cent of Montana teens are tobacco free’ (p. 225). This data was compiled from two Montana health surveys, the Youth Risk Behavior Survey and the Prevention Needs Assessment, as well as an initial phone survey conducted by the project. The campaign involved extensive media exposure including television, radio, newspaper, and billboard, as well as at schools, on posters and frisbees.

Using post-test and pre-test and control groups, their data demonstrated a positive impact of the media advertisements on perceived norms, as well as a marked difference between the groups in the rate of teens
MOST of Us

starting smoking during the year between surveys. In their control group, 17 per cent of adolescents who had never used tobacco previously at least tried smoking during the year while only 10 per cent of those in the intervention group did so (p. 233).

RECOGNIZE: campaign to reduce rumour spreading

2004 – 2006 campaign to reduce rumour spreading and bullying in the United States

Cross & Peisner (2009)

This study investigated whether a social norms multimedia campaign could reduce rumour spreading, which was being used as a form of bullying among Grade 7 – 9 students at one U.S. public school. One of their research questions was: What are the greatest predictors of self-reported rumour spreading? The campaign was developed following the Montana Model of social norms marketing (Linkenbach, 2003), and was funded by a local educational grant which supported prevention projects.

Baseline data was collected from a sample of approximately half the study body, 122 students, in May 2004, using the local Student Perception Survey, a web-based self-report questionnaire. The general message used was ‘RECOGNIZE—Most [School Name] Junior High School students do not spread rumors.’ This message was delivered in a variety of media including stickers, T-shirts, screensavers, flyers and banners, with media and messages refreshed each semester. A ‘street team’ of students carried the social norms message to their peers and provided feedback on the student perceptions of the campaign materials.

The pre-intervention, baseline data indicated that 60 per cent of students reported they typically never spread rumours, and 13 per cent reported spreading rumours once a week. However, only 3 per cent of students estimated that never spreading rumours was the norm. The post-test results showed that perceptions of peer rumour spreading fell following the campaign.

After the first year of the campaign, students were half as likely to overestimate the frequency of rumor spreading, and by the end of the second year of the campaign, students were only 40 per cent as likely to overestimate the actual norm as they had been prior to the campaign (p. 371).

However self-reports of rumour spreading did not decrease, in fact self-reports of rumour spreading actually increased. The authors acknowledge that the study is limited by the lack of a control group and the limitation to a single school in terms of the sample.

Small Group Norms Challenging Model in urban high schools

2005 Alcohol, tobacco and marijuana program in urban high schools, USA

Ott & Doyle (2005)

This study sought to replicate the model used by Far and Miller (2003) in the secondary school setting, to determine whether high school students’ misperceptions about cigarettes, alcohol, and marijuana use could be changed through participation in a program based on the Small Group Norms-Challenging Model. The sample consisted of 414 adolescents in health classes in five urban American high schools. Baseline data were retrieved from the school district’s Youth Risk Behavioral Survey (YRBS). University nursing students presented between three and five classes to the students using scripted presentation materials.
Small Group Norms Challenging Model in urban high schools

The total program length was between 50 and 70 minutes, and included an icebreaker exercise, information on how misperceptions develop, examples of societal norms, media bias and used examples from current events. Students participated in an interactive game using questions based on the statistics obtained from the baseline survey. Prizes were awarded, and all participants received a keychain.

Results related to perception change indicated a significant decrease in misperceptions from pre-test to post-test across all questions. Those who accurately estimated how many students had never smoked improved from 33.9 per cent in the pre-test to 76.6 per cent in the post-test. The equivalent estimation related to alcohol use improved from 74.2 per cent to 96.6 per cent, and use of marijuana went from 51.4 per cent rate of accurate estimation to 82.5 per cent. There was no control group as part of this intervention. The study used existing state-wide data to establish the norms of ATOD use, and did not collect data on actual substance use following the social norms campaign. There were qualitative open-ended questions in the post-survey about planned future behaviour, and student responses indicated that the program had increased their awareness of ATOD issues and prompted plans for behavioural change. They also rated the program delivery very positively. There was no longer term follow up to test whether the measured change in perceptions was retained.

New Jersey social norms projects

2005 – 2010 project to reduce bullying in middle schools

Connell, Negro, & Pearce (2011)

This large-scale project funded by the New Jersey Department of Education and administered by the Center for Addiction Studies and Awareness at Rowan University, involved students from 26 high schools (7440 students) and 29 middle schools (8098 students). At the beginning of the project students’ behaviors and beliefs were assessed using a self-report survey. A marketing campaign, based on the survey data, was conducted over two years to promote the students’ positive behaviors and beliefs, after which students were re-assessed. Activities included posters around the school, prizes given out in lunchtime games and quiz contests, and at school assemblies for knowing accurate campaign information. Students were encouraged to incorporate statistics into a school play, and into a school-wide timed writing prompt.

The middle school bullying campaign surveyed four cohorts of students on two areas of perceptions: 1) victimisation of peers, and 2) peers’ bullying behaviour. Within each of these areas there were specific questions related to physical, property, emotional and cyber victimisation and bullying. There were variations in results between cohorts and across aspects of bullying, however the authors report that the data from many schools following the campaign indicate

significant reductions in self-reported victimization and bullying, as well as corresponding decreases in perceptions (p. 29).

Issues identified in this study was a lack of control group, and the complexity of large numbers, multiple cohorts and changes to the survey tool mid-stream to accommodate additional questions, such as cyberbullying. In general, at the end of the campaign students reported that they believed that their peers had more pro-social attitudes towards behaviour. Students also reported decreased victimisation and bullying by their peers.
### New Jersey social norms projects

2005 – 2010 project to reduce alcohol, tobacco and marijuana in high schools

Connell, Negro, & Pearce (2011)

This high school (Grades 9-12) survey asked students to report the number of times they had used tobacco, alcohol or marijuana in the previous 30 days. They were also asked about perceptions of others’ tobacco, alcohol and marijuana use.

The results showed that for one cohort, self-reported substance use increased for all substances between the pre-test and post-test: tobacco (1.6 days a week pre-test to 2.17 days a week post-test); alcohol (1.6 to 1.86), and marijuana (1.07 to 1.47). However, there was no clear trend across all four cohorts in the study for self-reported substance use or perceptions of peers’ substance use.

Changes in survey wording between the pre-test and post-test created some difficulties in comparing results in this study, and without a control group from schools that did not implement a social norms campaign it was impossible to test the theory that the increases would have been higher in the absence of a campaign.

A toolkit was produced by the New Jersey social norms project to support schools who did not have access to technical assistance to implement a social norms campaign. This toolkit includes electronic versions of the surveys and templates as were made available online.

### Minnesota Positive Community Norms Framework

2004 – 2016 program in middle and high schools in Minnesota, United States to reduce alcohol use

Minnesota Department of Human Services (2016)

A positive norms approach was applied in 25 Minnesota school districts over ten years, funded through a prevention planning and implementation grant program. Building on Linkenbach’s Montana model, the Minnesota Positive Community Norms framework worked on multiple community levels and factors. It went beyond a marketing campaign, and addressed positive norms through: leadership development, communication strategies, integration of prevention resources, and structured reflection. Parental surveys were included, highlighting findings such as the fact that 84 per cent of Minnesota parents thought most parents allow their children to drink alcohol, whereas in fact 8 per cent of Minnesota parents allowed their child to drink.

Two school cohorts were involved. The first cohort of schools (2004 – 2010)

- 2004: 35.5 per cent of 9th graders used alcohol in the previous 30 days
- 2010: 22 per cent of 9th graders used alcohol in the previous 30 days

Alcohol use continued to drop after the grants were over leading to a total drop of 23.8 per cent between 2004 and 2013.

Results from the second cohort showed that from 2012 to 2016 the percentage of both middle school and high school students who had ever used alcohol went down significantly.

- 2010: 25.9 per cent of 9th graders used alcohol in the previous 30 days
- 2016: 17.2 per cent of 9th graders used alcohol in the previous 30 days
Social norms approach in secondary schools: Literature review

**Minnesota Positive Community Norms Framework**

The authors conclude that

Positive Community Norms framework, combined with the larger prevention planning and implementation grant programs and community engagement, is making a real, positive impact in the rates of youth alcohol use.

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**Scottish secondary schools**

2009 – 2011 Alcohol study in Scotland

Martinus, McLaughlin, Melson, & Davies (2012)

A Scottish study collected baseline data from 686 secondary school students aged 12-18 using self-reported questionnaires, administered during class in April 2009. American questions were adapted for the Scottish context and piloted before use with the full cohort to measure actual and perceived alcohol-related behaviours and attitudes.

While noting a trend for increasing use of alcohol and drunkenness with age, the researchers found evidence of substantial misperceptions among secondary school students regarding the drinking behaviour of their peers when with friends, frequency of drinking and frequency of drunkenness. The proportion of pupils who reported consuming non-alcoholic drinks themselves was significantly greater than those who reported that peers consumed non-alcoholic drinks (p. 114). Researchers also identified a range of attitudinal misperceptions, finding that students tended to attribute more permissive attitudes to peers rather than self (p. 116). A normative intervention was designed around correcting three misconceptions using the key messages: most (58 per cent) pupils prefer to go out with a non-drinker; most (88 per cent) pupils do not need to drink to have a good time; and most (94 per cent) pupils do not need to be drunk to have a good time.

At the time of reporting on this study they were not able to tell whether the SNA produced behaviour change, and planned to measure evidence of impact at a one-year follow up. The reviewers were unable to locate evidence of this follow up in published literature by these authors.

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**Yorkshire Year 8 feasibility study**

2011 smoking study with 12 – 13 years olds in Yorkshire, UK

Elsey et al., (2015)

This study examined the extent to which Year 8 pupils overestimate smoking among their peers and explored the appropriateness of using SNA in secondary schools to prevent uptake of smoking. An online SNA questionnaire was used in five schools (n = 595) and students developed SNA campaigns based on questionnaire results from their school. Researchers also conducted focus groups and interviews to find out from students and teachers the appropriateness and feasibility of the SNA to prevent smoking uptake.

Results showed a quarter of pupils, believed that most of their peers smoked, however, only 3 per cent reported that they actually did; a difference of 22.9 per cent. Self-reported smoking was not significantly different between schools; however, perceptions of year group smoking was significantly different across
Yorkshire Year 8 feasibility study

Schools. Qualitative analysis identified full school engagement, minimal teacher time requirements, pupils' belief in questionnaire results and understanding wider context, as key in optimising implementation (p. 603).

MobileCoach & SMS-Coach

2011-ongoing Alcohol and smoking interventions in Switzerland

Haug (2013); Haug et al., (2017)

In Switzerland, a combined web and text messaging-based intervention known as MobileCoach Alcohol program was designed to reduce problem drinking in upper secondary and vocational school students. After participating in a baseline survey, participants received individually tailored web-based feedback on their drinking behaviour compared to a reference group representing age and gender norms. This intervention was found be particularly effective for high-risk alcohol users (Haug, et. al., 2017).

A similar program focused on smoking, ‘SMS-COACH’ was also trialled in vocational schools, amongst 755 daily or occasional smokers with a mean age of 18.2 years. Results from this 3-month randomised controlled trial illustrated that a text messaging-based social norms intervention to reach young smokers could result in statistically significant lower cigarette consumption (Haug, 2013).

The MobileCoach website contains a list of papers describing a number of randomised controlled trials related to this tool, including a two-arm cluster trial simultaneously studying smoking and alcohol.

Irish pre-development study

2012 ATOD study of Grade 10 students in South East schools, Ireland

Culleton, Van Hout & Foley (2013)

A pre-development study was undertaken by researchers from Waterford Institute of Technology, to investigate levels of youth perceptions toward cigarette, alcohol, cannabis and other illicit drugs, as well as self-reported substance-using rates. A small convenience sample of 80 students from three schools completed a standards social norms questionnaire adapted from Far and Miller (2003), during class time. Seven questions related to their own beliefs, and seven related to their peers’ beliefs on smoking, alcohol and use of illicit drugs. Students also indicated their consumption of cigarettes, alcohol and illicit drugs in the previous 30 days, and what they thought their peers were consuming.

The study found that substance-related misperceptions existed among these students, and that misperception scores were constant between males and females. In terms of results between the three schools, a statistically significant difference was observed in a single-sex male school where 16 per cent of students were using cannabis, compared to 8 per cent in a co-educational school, and 0 per cent in a girls’ school. The authors reported a possible concern that participants answered peer-related questions with one or two students in mind and not in relation to the total peer population in general terms.

Findings were used to contribute to the design of a phased social norms’ intervention which incorporated a novel mix of individual, group and internet based normative educational sessions for students from Grade
Irish pre-development study

6 through to Grade 10. The authors report that these findings were to be used to guide the development of a culturally appropriate targeted social norms intervention for a larger roll-out in Irish schools.

Strength in Numbers

2001 ATOD and schoolwork program in Evanston, Illinois, United States

Christensen (2005)

Evanston Township High School (ETHS), Illinois had a classic SNA program running from 2001, and experienced primary and secondary misperceptions ('most students use alcohol and other drugs' and 'the survey data in the campaign aren't accurate'). A variation of Hancock's Snowball Survey was introduced. This lesson commenced with a ten-question survey completed anonymously, asking questions including:

1. How serious do you think MOST ETHS students are about their studies and schoolwork?
   a. Not at all serious   b. A little serious   c. Moderately serious   d. Very serious
2. How serious are YOU about your studies and schoolwork?
   a. Not at all serious   b. A little serious   c. Moderately serious   d. Very serious
3. What percentage of ETHS students do you think smoked at least one tobacco cigarette in the past month (30 days)?
   a. Less than 25%   b. 25-50%   c. 51-75%   d. More than 75%
4. Did you smoke any tobacco cigarettes in the past month (30 days)?
   a. yes   b. no
5. Questions 5 and 6 asked about alcohol drinking, questions 7 and 8 asked about marijuana use
6. What percentage of students in this class do you think answered this survey truthfully?
7. Did you answer this survey truthfully? (p. 5)

Once all students completed the survey, they crumpled up their survey and engaged in a ‘snowball fight’ to disperse the surveys around the room. After the snowball fight they had someone else’s survey, and the facilitator guided students through a series of specific steps to come to an understanding of their level of misconception. Parents were surveyed as part of the school’s optional parent/teacher conferences. School staff were surveyed anonymously to gauge their perceptions about student ATOD use, frequency of ATOD-related conversations with students and exposure to social norms marketing information. Focus groups were used to obtain feedback about the snowball survey, and found that 57 per cent of students either maintained or increased their accurate perceptions, and 67 per cent of students responded that the snowball survey activity increased believability of the campaign message. Christensen (2005) provides extensive practical details related to using this strategy, and concludes that,

*It seems clear that high school students benefit from guidance and structured discussion opportunities in order to help them process information that challenges their long-held beliefs about peer substance use* (p. 8).

The following short summaries indicate case study literature and lesson plans that reference a social norms approach.
Klar bleiben

Alcohol intervention in Germany (Tomczyk, Hanewinkel, & Isensee, 2015; Hanewinkel, Tomczyk, Goeke, & Isensee, 2017)

In Germany, where the legal drinking age is 16, a SNA intervention known as ‘Klar bleiben’ (‘Stay clearheaded’) encouraged commitment to drink responsibly and refrain from hazardous consumption patterns for 9 weeks. The intervention targeted adolescents (Grade 10 students) by involving classes, individuals, teachers and parents. The program involved a financial incentive of €100 for participating in baseline and follow-up assessments. Classes that refrained from hazardous drinking for whole 9 weeks were rewarded with attractive prizes in a lottery while classes that submitted creative projects dealing with alcohol use in adolescence and its consequences were rewarded with a special prize, independent of their compliance to the initial commitment. Data collected through this intervention suggest that it was effective in the large subgroup of adolescents who had previously consumed alcohol.

Ringsted experiment

2002 smoking study with Grade 5–7 students in Denmark (Balvig & Holmberg, 2011)

Known as Ringstedforsøget, this project targeted attitudes and expectations with regard to smoking among grade five, six and seven students in the provincial city of Ringsted, Denmark. The project documented a decrease in the students’ expectations regarding the smoking behaviour of peers of the same age in the same town, peers of the same age in the capital, Copenhagen and older peers in the same town as well as in Copenhagen. Further, a decrease was registered with regard to alcohol consumption, smoking cannabis and drug experience even though these behaviours were not in focus of the project.

Crossroads

ATOD lesson plan delivered by University of North Carolina, United States (Seitz et al., 2011)

This variation of the snowball survey included production of peer education posters as a method of teaching social norms. Following completion of the social norms survey, and debriefing, students created posters focussed on particular substance use behaviour. Students were specifically instructed to guide their audiences’ eyes through the poster’s contents by assembling information into a Z-shape, with eye-catching material such as an interesting question or surprising facts located at the top and diagonal slant of the Z as a transition statement with local statistics at the bottom. They were discouraged from using material that attempted to scare or shock their peers into not using ATOD. Completed posters were assessed by their teacher and then displayed around the school. Presented as a lesson plan, rather than a research study there is no reference to evaluation or results from this program.
The following study protocol for a cluster-randomised controlled trial was identified and noted as a potential candidate design to inform a SNA intervention, or for replication in the Australian context.

**GOOD Life Study Protocol**

**Use of alcohol and other drugs by Grade 8 – 9 students in Denmark**

Stock et al., (2016); Vallentin-Holbech, Rasmussen, & Stock (2017)

This social norms intervention designed as a project with grade 8 and 9 students uses three different communication channels: face-to-face communication (normative feedback session), print communication (posters) and interactive media (web application) to gather insights on descriptive and injunctive norms regarding ATOD use among Danish adolescents. Posters displayed in classrooms, containing a web-address and QR code for direct access to the web site. These encourage students to open an application on their computers or smart phones, where they test their social misperceptions and get information on the actual behavioural norms at their school. The web-based application functions on an individual basis and social norms messages differ in content from the messages presented previously in other places, such as those conveyed through posters.

In the baseline study for this design pupils’ perceptions of peer approval were significantly higher than pupils’ personal approval of ATOD use among adolescents for all outcomes, and were also related to personal ATOD experience.
SUCCESS FACTORS OF SOCIAL NORMS INTERVENTIONS

Some of the key features of SNA programs are discussed below. These have been compiled from descriptions and discussion of the school-based programs identified through this literature review. The discussion is supplemented by findings from the more extensive literature related to programs with post-school students.

Preparing an infrastructure that can deliver a quality intervention

It is important to recognise the cyclical nature of the SNA, and to consider the phases of planning (including segmentation and targeting), implementation and evaluation (McAlaney, Bewick, & Bauerle, 2010).

Program design

While the logic of the SNA is quite straightforward it is dependent on accurate and comparable data collection of perceptions and behaviour. Poor quality in the survey design, sampling or presentation of key messages can make it impossible to measure the impact of an intervention, or worse, meaning that students are exposed to incorrect messages. Rigorous program design may pose a challenge for schools which lack dedicated personnel with research and program evaluation skills. Most of the school programs discussed in the previous section involved a partnership with a university or research institute where the intervention was co-designed, and training sessions were provided for school staff.

The literature identifies some difficulties associated with effectiveness research in the area of SNA. One of these is experimental design using a control group. Programs are strongly advised to build in the inclusion of a control group to any implementation (Connell et al., 2011). However this design requires that the control group can be guaranteed not to have access to the messages about norms. While it is relatively straightforward to deliver an in-class intervention that excludes a control class, it is more difficult to conduct a media or poster campaign and ensure some participants do not receive this. Linkenbach and Perkins (2003) achieved this in a pilot study, isolating media channels by using different regions of a state education authority. A related issue is the inability to control for external campaigns or issues that may attract mass media attention during the school-based campaign. Connell et al., (2011) suggest that intense media coverage of cyberbullying which coincided with their social norms campaign on bullying in New Jersey middle schools may have reduced the effectiveness of their campaign on student perceptions of this behaviour, relative to earlier studies.

The Montana model (Linkenbach, 2003) specifies that it is advisable to use qualitative and quantitative research methodology. The quantitative survey data collection that is typical of SNA should be complemented by qualitative methodologies such as in-depth interviews and focus groups (Samdani, 2013). Such approaches provide culturally specific accounts that are much more detailed and nuanced in terms of how and why change takes place, more sensitive to people’s use of language and metaphor, and more alive to the potential for tension, conflict and disagreement in the ways that people feel about the attitudes and behaviours under research, and the SNA interventions themselves (Burchell et al., 2013). The Strength in Numbers program (Christensen, 2005) supplemented the classic survey data by running focus groups with students to gain richer feedback about the campaign.
Data collection

Reliability and validity are key requirements for survey design. Questions that are ambiguous, misleading or impossible to answer render a survey useless and waste the time of participants. Regardless of the format of the survey it needs to be trialled with a sample, and adequately tested for reliability (Ott & Doyle, 2005). There are several SNA manuals and guidebooks available that provide templates, sample questionnaires and explanation about the measures required in data collection (Haines et al., 2003; McAlaney et al., 2010). While the use of an existing social norms survey instrument is a potential strategy, and may enable comparison with existing data, there is debate over fundamental aspects of SNA survey questions. One study for instance, investigated differences between questionnaires that asked respondents about both themselves and their peers’ behaviour in the same survey, as opposed to asking questions about peers alone (Melson, Davies & Martinus, 2011). Their findings indicate that “measuring personal and peer behaviour/attitudes conjointly can encourage drinking norm overestimation among secondary school pupils” (Melson & Davies, 2012, p. 1884).

Given the limited research expertise in many schools, Perkins (2003a) advocates for an online survey that is:

1. affordable to schools
2. efficient in gathering responses from potentially the entire student body
3. fast in terms of permitting a short turnaround time for the return of data
4. include questions on perceived norms about peer attitudes and behaviours as well as personal attitudes and behaviors that could be compared (p. 210)

An online survey can provide anonymity, and accommodate customised questions for particular schools, projects or concerns. The online environment greatly enhances the efficiency of collating results, and facilitates analysis of data in discrete cohorts, across multiple factors. With attention to anonymity and data privacy requirements, an online survey can also allow comparisons of norms across schools and states, and nationally. Connell et al., (2011) provide a thorough guide to implementing online surveys in the school setting, including obtaining parental consent.

Sampling is another consideration. Ideally the data for a social norms program should be collected at the school level (Ott & Doyle, 2005), although campaigns have used state surveys, as this can reduce the data collection load for schools.

Implementation

There are two basic approaches to the implementation phase of the SNA, one being a marketing campaign, the other a targeted intervention (Culleton et al., 2013). While both approaches start with the collection of baseline social norms data, the tendency in schools has been to develop targeted-group social norms interventions rather than pure marketing campaigns. Targeted interventions using group discussions, workshops and classroom-based programs fit well with school timetables and standard operational practice, and schools tend to have ready access to effective adult presenters to lead these types of interventions. If facilitators are well trained and allow participants to discuss their thoughts and beliefs in a non-threatening, neutral environment, then programs led by adults may be more effective than those led by young people (Christensen, 2005; Thomas, McLellan & Perera, 2013). Certainly, targeted interventions require a quite different set of skills and style of implementation from a marketing campaign.
Of course, there are examples of programs that have used strategies from both approaches (Hughes et al., 2008a), and those designing a SNA for secondary schools should consider all possible implementation avenue, especially if they have access to the marketing and communications capacity required to develop a quality intervention. Linkenbach (2003) warns that the implementation timeline must take care not to suffer from confusing messages from other sources or campaigns, and Perkins and Craig (2002) emphasise the use of integrated marketing communications.

It is also recommended that a dedicated member of staff should lead and co-ordinate implementation of the social norms program in the school and the local community (Martinus et al., 2012).

**Evaluation and replication**

Hughes et al., (2008a) highlight the importance of evaluation and replication of research. Along with other programs, they planned to share their resource materials. A list of program outputs designed to assist those wishing to undertake a social norms intervention in a high school setting is provided in Appendix C: Resource list.

**Sharing a credible message in an appealing manner where data is explained**

Perkins (2003b) stresses that students need to receive clear messages about the actual norms that exist among their peers, and these should be grounded in data collection that is current and credible. The initial data collection on which SNA programs are based is of utmost importance. The SNA projects discussed earlier outline a range of instruments used for this purpose. The following questions from Perkins (2003b) are examples of the baseline information required for this purpose.

1. **How many drinks of alcohol do you think the typical student at your school had the last time he/she ‘partied’/socialized?**
2. **Within the last 30 days, what percentage of students at your school used alcohol?**
3. **Within the last 30 days, on how many days did you consume alcohol (beer, wine, liquor)?**
   - 1 (never used), 2 (have used, but not in the last 30 days), 3 (1–2 days), 4 (3–5 days), 5 (6–9 days), 6 (10–19 days), 7 (20–29 days), and 8 (used daily)
4. **The last time you ‘partied’/socialized how many drinks of alcohol did you have?**

Given that the SNA approach centres on people believing the data collected from peers, it is interesting that research into believability of different sources of messages related to ATOD by Haines et al., (2003) found that 72 per cent of students rated ‘doctor or other health professional’ as the most believable source of information, with parents rated as 63 per cent credibility, teachers as 56 per cent, and peers as 56 per cent.

Avoiding ambiguous or distracting messages, particularly in visual media, is a key concern. Unlike traditional shock tactics that use fear to discourage problem behaviours, effective SNA campaigns are typically highly creative. Successful programs often engage with the target audience in the planning stage, so that the credibility of messages in different formats can be informed, tested and enhanced. There is also reference to the value of evaluating a program and informing the target population about any success (McAlaney et al., 2010).
Social norms approach in secondary schools: Literature review

Tailoring messages that are appropriate and relevant to the audience

The impact of SNA campaigns is maximised through the use in communications of the most appropriate reference group for a particular target group and the most appropriate reference group is one with which the target group most identifies or associates with (i.e. people like themselves) (Berkowitz, 2004; Lewis & Neighbors, 2006; McAlaney et al., 2010).

Studies have shown that campaigns with a focus on proximal group norms, or the drinking norms of a student’s closest friends, have a higher impact on alcohol perceptions and behaviors than those focused on distal group norms, or drinking norms of the typical student on campus (Flynn & Carter, 2016, p. 324).

Gender is one factor studied by Lewis and Neighbors (2004) who asked respondents to describe who they envisaged typical student at their college to be. Almost 94 per cent of male students perceived the typical student to be male, whereas only half of the females perceived the typical student to be female.

Australia is a diverse community and tailoring messages to schools will need to take into account data from populations where alcohol is rarely used, through to data showing that youth in Australian rural communities consume alcohol at more harmful levels and tend to be more risky drinkers than metropolitan youths (Williams, 2004). Cook (2005) points out the importance of parental and community involvement in SNA campaigns, particularly those targeted at Indigenous young people, stating that community and parental/guardian influence is strong in this group. Like teenagers, parents’ behaviour can by influenced by misperception of ‘peer’ (i.e. other parents’) behaviours and attitudes, which may be corrected using a social norms approach. Jones et al., (2017) focus on a campaign to support parents in their decision to delay alcohol initiation of their adolescent children. Perkins (2003b) warns that targeting high-risk groups at the expense of the larger student population reduces the overall benefit of a program.

The majority of students who are not problematic in their own behaviour are most often ‘carriers’ of the misperception as well, and they are detrimental in a contextual or sociological sense (p. 283).

Cameron and Campo (2006) suggest that interventions should be targeted at relevant attitudes and normative judgements for them to be effective. ‘Focus’ is also a finding from Cialdini and Goldstein (2004) who conclude that relevant norms direct behaviour only when they are in focus. “Results suggest that one’s actions are relatively unaffected by normative information —even one’s own—unless the information is highlighted prominently in consciousness” (p. 597).

Matching programs to cultural and academic culture is another issue raised. Capitalising on the fact that the majority of adolescents own a mobile phone, programs such as MobileCoach Alcohol and SMS-COACH that use targeted messaging to reduce problem behaviours in young people have been very effective in delivering short and repeated feedback messages as well as allowing the delivery of individualised messages at times when young people typically drink alcohol (Haug, 2013; Haug et al., 2017). Overall, the success of social norms campaigns depend upon accurate collection of data as well as careful implementation of marketing strategies and reflections of the details and differences in individual institutional cultures and academic norms (Demetriou, 2005). Perkins (2003a) raises the question faced by programs targeting school-age students, where “abstinence is the only publically acceptable position to promote for adolescents” (p. 210).
Planning for ongoing and long-term programs

Perkins (2003b) holds that ‘high doses of true norms’ are essential to a successful SNA intervention. Students need to see or hear the norm more than once before it is likely to engage their misperception, as “no one likes to be challenged that his or her view of the world is incorrect” (p. 282). Based on early US studies there was a sense that measurable behaviour change should emerge after 2 years of intervention (Haines et al., 2003). Other researchers highlight the hard-won nature of behaviour change and the corresponding importance of longer term and ongoing SNA programs; for instance, programs of 4 years and more are considered appropriate (Perkins & Craig, 2002; Perkins, 2003a). The Minnesota Positive Community norms project (Minnesota Department of Human Services, 2016) acknowledges that the work is hard and takes time, and reports on the need to celebrate as positive norms grow.

Planning for curriculum infusion

Some have suggested using SNA to reduce misperceptions of student alcohol use at the population level, and applying curriculum infusion through discussions on ATOD issues in the college classroom setting, have had better results in addressing problematic drinking among college students (Mayhew, Caldwell, & Hourigan, 2014; Riley, Durbin, & D’Ariano, 2005; Swanson, Zegers, & Zwaska, 2004). While a whole class approach may seem at odds with earlier findings advocating tailored SNA approaches, curriculum infusion is seen as a way of reaching students who might otherwise not come into contact with a campaign, by engaging them in specific alcohol education built into timetabled courses.

Flynn and Carter (2016) reviewing research on alcohol-based curriculum infusion found mixed results, with some findings showing changes in alcohol knowledge and perceptions, but not alcohol behaviour (White, Park, & Cordero, 2010), while others have shown positive behaviour change (Mayhew et al., 2014). Curriculum infusion can range from a one-time lecture presentation or class discussion to ongoing projects or assignments (Lederman, Stewart, & Russ, 2007) and several of these interventions had positive impact on knowledge, perceptions and protective behaviours (Hittner, 2013; White et al., 2010). For example, Riley et al., (2005) applied a project-based form of curriculum infusion in a health promotion and disease-prevention class, where students were asked to design a program based on harm reduction strategies for fellow students. It was found that 65 per cent of the students in the course assessed their own drinking habits, and 44 per cent agreed that they would modify their own alcohol-consumption patterns. A study by Flynn and Carter (2016) examined two types of curriculum infusion, information only (IO) and service learning (SL). Service learning involved students in taking part in a ‘real world’ activity, designing a campaign for an external client. While curriculum infusion was found to reduce participants’ misperceptions of campus alcohol use, there were no significant differences found between the IO and SL groups in terms of students’ reduced drinking behaviour. This study also assessed variations in type of curriculum infusion in terms of gender and found that men in the service learning group did reduce their drinking behaviour compared to those in the information-only class. Integrating social norms into organisational practices, and ensuring that messages delivered in a campaign are not negated by what students see the organisation doing. Using school newsletters and events to promote campaign messages is an obvious strategy, however Stock et al., (2014) support backing up SNA with organizational practices such as non-alcoholic social events and a limitation of alcohol availability on campus could mutually support each other’s aims when integrated and applied in health promotion practice.
LIMITATIONS OF SOCIAL NORMS APPROACH RESEARCH

Limitations are found in many SNA studies, both those that have demonstrated reductions in alcohol misuse as well as studies that failed to find significant effects of SNA (Carter & Kahnweiler, 2000; Clapp, Lange, Russell, Shillington, & Voas, 2003; Granfield, 2002; Wechsler et al., 2003). Even though the SNA approach has been applied for 30 years, this review of school-based programs confirms McAlaney et al.’s (2011) belief that there are gaps in the evidence base and challenges in evaluating SNA research.

There is a lack of randomized control trial studies, a lack of clarity of the role of referent groups and a need to better understand the processes through which misperceptions are transmitted (p. 81).

Cairns et al., (2011) highlight the difficulties in comparing interventions due to a diversity of outcome measures used across program evaluations. The recommendation that SNA marketing campaigns tailor marketing to specific student cohorts means identifying and delivering programs to a variety of peer groups. This can be time-consuming and expensive (Flynn & Carter, 2016), and may lead to fragmented campaigns and inconclusive findings. Johnson (2012) suggests that social norms programs could fail to show program efficacy for several reasons, including poor implementation, difficulty in isolating the impact of multiple variables, and a reliance on self-reported data in most studies.

Poor implementation

Any program will suffer if poorly implemented and it appears from this review that the evidence base to demonstrate the effectiveness of the SNA has been compromised by the complexity of implementation options in SNA based programs. Dusenbury, Brannigan, Hansen, Walsh, & Falco (2005, p. 308) stress the quality of implementation, which research has shown varies considerably, in ensuring that research-based programs are effective when they are rolled out. They identify several variables likely to be important in achieving a faithful implementation.

(1) Dosage—providing sufficient exposure to the program
(2) Adherence—following program methods and completing its delivery as outlined in a manual or curriculum guide
(3) Quality of process—engaging students through their active participation
(4) Adaptation—modifying the program to meet developmental and cultural needs
(5) Teachers’ attitudes about a program
(6) Teachers’ understanding of the concepts being addressed
(7) Teachers’ prior experience

By 2003 Perkins was noting that growing popularity of SNA, along with the creation of new techniques, raised concerns over maintaining the fidelity of the SNA model, and led to studies ‘that range dramatically in the degree of effect they achieve’ (Perkins, 2003b, p. 280). Noting that to be successful in producing more responsible behaviour, a SNA intervention must reduce misperceptions of the norm Perkins cites 1) confusing messages, 2) lack of dosage, 3) inadequate length of intervention, and/or 4) early evaluation as potential areas of poor implementation.

This view is picked up by other researchers. Insignificant findings could be attributable to restrictions of the social norms theory or to poor implementation of the theory (Thombs, Dotterer, Olds, Sharp, &
Social norms approach in secondary schools: Literature review

Raub, 2004). Simplistic media campaigns which are unclear or lack credibility can undermine the effectiveness of the approach (Granfield, 2002; Thombs et al., 2004). Perkins (2003b) notes in particular that “simultaneous presentation of data on perceptions along with actual norms may be a confusing distraction” (p. 280). Additionally, media and campaign materials that are visually unappealing will not be effective and will be further compromised if key stakeholders share negative comments, disbelief, criticism, or their own misperceptions with the targeted audience (Demetriou, 2005).

Evaluation is an integral part of conducting a SNA intervention and should cover both process and impact (Hughes et al., 2008a). Premature evaluation of an intervention may not allow sufficient time for correction of misperceptions. Longitudinal designs are recommended for evaluating normative influences with findings suggesting the normative misperceptions are relatively stable over a short time period (Neighbors, Dillard, Lewis, Bergstrom, & Neil, 2006). Perkins (2003b) cites one to two years as the minimum for positive benefit to be demonstrated.

Moreover, each intervention must be adapted to the culture and context of the problem in question and interventions developed on one university campus cannot be adopted elsewhere with the expectation of similar results, due to the unique culture and history of each educational institution (Berkowitz, 2003).

Causality

The cross-sectional nature of many SNA studies makes it difficult to derive causal inferences (Samdani, 2013). Reporting on programs where social norms activity has been included as one strategy in a multi-dimensional intervention mean it is not possible to isolate, and specifically evaluate, the impact of the SNA component (Berkowitz, 2004).

Few social norms research studies have collected information on variables that would allow more direct testing of the proposed theory; neither have studies typically collected information on process data that might inform the reliability of the study operations (Johnson, 2012). Moreover studies that attributed significant reductions in alcohol misuse to social norms interventions may suffer from plausible alternative explanations (Johnson, 2012; Samdani, 2013). Stock et al., (2014) pose a key question about association and causation.

The analysis assumes that perceptions are the cause of behaviour rather than behaviour being the cause of perceptions. This assumption is supported by longitudinal studies in the field, although it has been noted that a degree of reciprocal causality is present (Neighbors et al., 2006).

Disjunct between descriptive and injunctive norms

Descriptive norms refer to the perceived prevalence of a risky behaviour while injunctive norms refer to the perceptions of how much others approve of a particular behaviour (Neighbors, Lee, Lewis, Fossos, & Larimer, 2007). In social norms research, reference groups are often selected based on how they have been most often operationalised in the literature (typically students for descriptive norms and friends and parents for injunctive norms) but researchers need to carefully analyse the influences of different groups and their importance in evaluating the impact of both descriptive and injunctive norms (Neighbors et al., 2007).
Some studies have found evidence of the importance of injunctive norms, particularly proximal close-friend and parental norms, on college students’ marijuana approval and prospective marijuana use (Napper et al., 2016). A key recommendation from this study for the design stage of SNA intervention was the need for further research to determine the contexts in which typical-student descriptive and injunctive norms may be most likely to be associated with the behaviour under analysis (Napper et al., 2016).

Other researchers have also pointed out that it is important to study all the different levels at which norms and normative perceptions exist (Park, Klein, Smith, & Martell, 2009). While descriptive and injunctive norms could exist at the proximal, distal, or societal level, subjective norms can work on a more personal level and influence behaviours by tapping into “the perceptions of what important others expect one to do” (Park et al., 2009, p. 750) and yet most norms-based campaigns aim at influencing individuals’ perceptions of institution-level behavioural norms.

Hamilton and White (2008) point out the distinction between intention and behaviour. Their review considered the influence of subjective and group norms on adolescents’ intentions to undertake physical activity, and their subsequent reported behaviour. They found that the significant predictors of intentions were past behaviour, perceived behavioural control, attitude, self-identity, subjective norm, and group norms. A self-report of actual physical activity behaviour at a one week follow-up however, showed past behaviour, intentions, and self-identity were the significant predictors of physical activity behaviour.

Reliance on self-reported measurement

By its nature a SNA approach assumes accurate data from which to develop normative messages. Since a large number of SNA initiatives are dependent on data collection using survey instruments it is very important to reduce the implications of accidental reporting errors, intentional false responses, and logical impossibilities (Perkins, 2005).

While SNA programs in areas such as energy consumption can collect actual usage data collected by meters (Harries, Rettie, Studley, Burchell, & Chambers, 2013), most alcohol-related studies have relied on drinking data derived from self-reported consumption. This is recognised as a major limitation to data collection. There is a possibility that reports may be subject to demand characteristics or a wish to provide socially desirable responses. This is particularly likely given that social norms interventions involve informing heavy drinkers that their behaviour is not normal (Johnson, 2012). While there have been studies that have used breathalysers (Foss, Marchetti & Holladay, 2000) this severely limits the timespan in which data collection can take place, as it must take place when students are actually drinking.

Perkins and Craig (2003) indicate that US-based high school students overestimate their peers’ use of tobacco by 17 per cent; marijuana by 20 per cent, and high risk alcohol by 26 per cent. These figures are now 14 years old. There are no clear benchmarks for Australian secondary school students that schools can use to compare the behaviour their students report, nor their perceptions and misperceptions.

In studies that rely on self-selection into the program, such as Stock et al., (2014), there is further danger that the drinking pattern of those who responded to the study might not represent the whole student body of their institution. This study noted that males were less likely than females to choose to
participate in the study. SNA studies have also been criticised on measurement issues (Campo et al., 2003). Stock et al., (2014) cite lower sample sizes in some countries and institutions as an issue in reporting prevalence data in their research. Perkins (2005) suggests a way to reduce this is by treating an inconsistent response as missing data and filtering it out.
DISCUSSION

The literature related to SNA in secondary schools is a mixture of program descriptions, small scale studies and evaluations. The conclusion one draws from reading across these sources is that implementation of SNA shows varied results. While this is not unexpected in the public health and education fields, where there are so many variables to be controlled in any study, in this case, the diverse nature of SNA programs compounds this. For example, of the SNA programs reviewed some targeted school students only, while others included teachers, parents and the whole community. Interventions ranged from in-class lessons by a class teacher, to whole school strategies, to professional mass media campaigns.

The literature was consistent about one thing. Every data collection supported the theory that the target population overestimated the incidence of risky behaviour in their peer population. Given this data is quite straightforward to measure there seems a high level of reliability about the basic claim on which SNA is based. This is an interesting finding, and is indeed a necessary building block for a SNA campaign. However in itself this data is not the point of a campaign, or measure of its success. Linkenbach (2003) sums up the three criteria by which SNA interventions should be measured.

1. *The target population demonstrates a high level of awareness of the campaign message,*
2. *The perceptions of the target population undergo a measurable change,* and
3. *The behaviours or attitudes of the target population change.*

There are few studies identified that systematically address each of these three outcomes, and it seems that agreement on what success means varies between programs. Most would agree that number three is the ultimate goal: changing the behaviour of participants away from the risky behaviour being targeted. This section considers the extent to which the studies reviewed demonstrate success in achievement of any or all of these outcomes in participants.

Effectiveness

Several social norms intervention studies with middle and high school students were found to be successful in changing misperceptions and decreasing use or preventing initiation of cigarette smoking, alcohol or marijuana use (Haines et al., 2003; Linkenbach & Perkins, 2003). Cairns et al., (2011) found some consensus in the research evidence to suggest that,

*While the most effective combinations could not be identified with certainty, some common themes associated with positive outcomes to emerge from the review include those programs focusing on social norm change (i.e. those initiatives targeting incorrect perceptions about the attitudes and/or behaviours of peers) and life-skills training combined with initiatives intended to strengthen protective family factors and modify risk factors.*

It is usual to look to systematic reviews to identify high quality evidence of effectiveness. Only four reviews were identified that included reference to some form of SNA. Jepson, Harris, Platt and Tannahill (2010) concluded that there was insufficient evidence to determine effectiveness due to the small number of available reviews (p. 8). A later systematic review (Foxcroft, Moreira, Almeida Santimano & Smith, 2015), focussed on university campaigns rather than schools and recommended further research to better capture the evidence of social marketing campaigns.
As small effects could provide important cost benefits for prevention programs, it is important for researchers to undertake studies with sufficient statistical power to detect small effects and to undertake cost/benefit analyses... Reporting of program content and context should be more detailed and systematic to enable better comparison of these aspects across different studies (p. 25).

Two systematic reviews that focussed on smoking and each identified only one or two studies that used SNA in their methodology (Thomas et al., 2013; Whittaker, McRobbie, Bullen, Rodgers & Gu, 2016).

Thus, the available set of rigorous experimental evaluation of SNA programs in secondary schools is so limited that the following discussion relies heavily on the findings from the wider body of SNA literature.

Interventions using a social norms approach provide evidence that SNA can be effectively applied as a universal prevention strategy for alcohol to reduce high-risk drinking and promote moderate use, and for smoking to reduce smoking prevalence and delay its onset (Berkowitz, 2005). Targeted social norms interventions directed at particular groups of at-risk students when used alone or in combination with other strategies, seem to have higher impact when the normative data are tailored to the group in question and when they are presented in an interactive manner through long running programs (Berkowitz, 2005).

Some researchers have been critical about the application of SNA since they are not convinced that there is enough evidence that social normative interventions are effective in reducing excessive levels of alcohol or other drugs consumption in educational institutions. A recent study found that undergraduate students in the UK were consuming more alcohol than previously reported and the misperceptions of others’ drinking were not predictive of individual consumption, particularly among heavy drinkers, causing SNA interventions to be ineffective in these settings (John & Alwyn, 2014). In 2006 Cameron and Campo conducted a study with university students to assess the relationships among socio-demographics, normative perceptions, and individual attitudes on their consumption of alcohol, tobacco use, and exercise behaviours. For all three behavioural conditions, the variable accounting for the greatest variance was whether or not the individual liked participating in that particular behaviour while the effect of normative perceptions on behaviours was not so significant. This finding goes against the basis on which SNA campaigns are built. Earlier studies also found some evidence that student drinking behaviour is positively related not to the perception of typical students’ drinking as assumed by SNA, but to perceptions of friends’ drinking (Campo et al., 2003). This finding would need to be tested in secondary school cohorts before assuming that a school-based SNA campaign would be effective.

**Effectiveness of school-based programs**

The context for this review was secondary school programs. There were less SNA programs identified for this cohort, compared to university level programs. Obviously, there are major differences between the two contexts. While social policy measures such as restricting access and high price setting are seen as probably the most successful approaches to prevention with this age group (Martinus et al., 2012), there is little question about the continuing need for health education and primary prevention in schools. In this case the discussion becomes about the relative effectiveness of the SNA compared to other possible school programs.
Even if the literature confidently or consistently reported that SNA was successful, readers would be left with the question of how this success rated against other approaches. Hughes et al., (2008a) discuss two approaches to school health education and harm minimisation.

1. **Information approaches – risk education**
   Based on an assumption that young people lack knowledge about risks, and that if the school provides education about risks, their improved knowledge will result in a decrease in risky behaviour

2. **Affective approaches – self-esteem and refusal skills**
   A more holistic approach building self-esteem and skills so students are less vulnerable to risky behaviour

Griffin and Botvin (2010) describe three categories of approaches to school-based programs: 1) social resistance skills training; 2) normative education, and 3) competence enhancement skills training. Others categorise school-based health interventions into five types (Thomas et al., 2013).

1. **Information only**
   Interventions that provide information to oppose use

2. **Social competence**
   Interventions that aim to help adolescents refuse offers by improving their general social competence, described as “social learning processes or life skills such as problem-solving and decision-making, cognitive skills for resisting interpersonal or media influences” (p. 4)

3. **Social influence**
   Interventions that aim to overcome social influences promoting use by developing the necessary skills in adolescents (also called social skills interventions)

4. **Combined social competence and social influences**
   Methods that draw on both social competence and social influence approaches

5. **Multimodal**
   Programs that combine approaches with wider initiatives within and beyond the school

Australian schools-based drug education programs are strongly informed by the Australian Government’s publication, *Principles for school drug education* (Meyer & Cahill, 2004), which describes effective drug education programs as:

*based on the needs and interests of students, and which address their contexts, cultural backgrounds and experiences... that schools access local prevalence data, engage in community consultation and monitor needs and priorities, to determine relevant and culturally appropriate drug education for their students.*

Comparison of SNA with all possible alternative approaches to school-based drug and alcohol education was outside the scope of this review. We consulted a small number of large scale systematic reviews relevant to this topic (Chilton, Pearson & Anderson, 2015; Lee, Cameron, Battams & Roche, 2014; Thomas et al., 2013), and identified limited directly relevant findings. Thomas et al., (2013) review of 134 randomised controlled trials related to school-based programs aimed at preventing children who had never smoked from becoming smokers found that:
programs that used a social competence approach and those that combined a social competence with a social influence approach were found to be more effective than other programs. However, at one year or less there was no overall effect, except for programs which taught young people to be socially competent and to resist social influences (p. 2).

Cost effectiveness

Very few studies have investigated the cost benefits of universal school-based alcohol education programs (Martin, Nelson & Lynch, 2013).

The relative cost of a SNA intervention can vary widely depending on the scope and methodology of the project. Small scale activity within a single school or campus may be as straightforward as conducting a survey, developing the message and delivering it using in-person and electronic communication channels to hand. Whole of country, or whole of state campaigns employing mass media advertising, such as that described by Linkenbach and Perkins (2003) represent a whole other dimension of cost. Although interventions may be quite effective and provide relevant feedback, if they are resource and time-intensive, researchers need to explore the alternative of correcting normative misperceptions in small-group settings (Reilly & Wood, 2008).

Haug et al., (2014) make the point that online and text messaging interventions can be quite cost-effective relative to face-to-face interventions, as well as matching the lifestyle and communication habits of young people. While face-to-face programs increase in cost as intensity increases, automated interventions have an upfront development overhead, but then become more cost-effective as use increases.

It is fitting to give Perkins (2003b) the last word on this point.

Social norms interventions can be quite cost-effective compared to other strategies. ... There is tremendous potential in just getting the truth out about youth and young adult norms. If you are considering introducing multiple strategies, the social norms approach is likely to be the most useful starting point as it produces a benefit on its own and sets the stage for other interventions to be more effective. If one must make practical decisions about which approaches to employ because of budget and personnel limitations, doing just a little bit of everything to be comprehensive and yet stay within the budget may be counterproductive (p. 295).
CONCLUSION AND RECOMMENDATIONS

So how does this review assist in answering the two key questions posed (listed below) at the beginning of this project?

Question 1: If we make more realistic the perceptions of young people about the levels of risky behaviour, and attitudes towards these risky behaviours, amongst their peers, is that likely to reduce the likelihood of them engaging in such risky behaviour?

Question 2: If so, what are the critical design features of interventions targeting young people that have been successful in correcting perceptions about peer attitudes and behaviours?

There is consistent evidence through the literature that supports the behavioural theory underlying SNA, that misperceptions can be corrected through a SNA intervention, and that the SNA approach may change students’ thinking or attitudes towards the risky behaviours in question.

However evidence that SNA programs influence behaviour of secondary-aged students is inconsistent and therefore inconclusive. This is not to suggest that a well-designed and implemented SNA program won’t reduce the likelihood of engaging in risky behaviour. Based on the evidence available, such an outcome cannot be confidently predicted.

Social norms programs have suffered from inconsistently or poorly defined data collection, implementation and analysis of results. It is important to design or adopt a rigorous methodology that overcomes limitations identified in past programs. The GOOD life study protocol published by Stock et al., (2016) could provide a sound basis for a replication study.

The answer provided to Question 2 is influenced by the reservations expressed in the above response to Question 1. If evidence of behaviour change is the only success criteria being considered, then this review provides limited critical design features guaranteed to produce a successful intervention. It would be important to implement a rigorous, well-designed trial of a SNA program before embarking on a significant investment in a scaled-up SNA approach. This is particularly the case as there have been only two reported implementations of the social norms approach in Australian secondary schools. Thus, there is an argument for developing and trialling a contemporary program for the Australian context.

If however the intention is to proceed with the trial of a SNA intervention, with its design to be informed by those interventions which have been successful in correcting perceptions about peer attitudes, this review identifies a number of success factors, as well as issues to consider. While there seems little risk in implementing a SNA approach for this purpose, and indeed, there remains a distinct possibility that a well designed and implemented intervention may in fact achieve some behaviour change, this decision becomes a question of cost-benefit analysis.

Social norms interventions have been used to target a range of risky behaviours. Some programs have focussed on a single substance; others have considered norms across multiple areas. Those planning a program will need to weigh up the benefit of collecting data about a broad range of behaviours in a single survey, versus the possibility that a multi-focal campaign may have less impact, or cause confusion or fatigue in students.
REFERENCES


APPENDIX A: REVIEW METHODOLOGY

Sources
The literature for the review was identified using Cunningham Library’s discovery service. This tool searches across the Library’s main databases including

- PsycINFO
- A+ Education
- Education Research Complete
- British Education Index
- SCOPUS

Each of these databases is highly relevant to the topic of this review, covering disciplines such as psychology, education and health disciplines. While many additional resources are searched via the Library Search, the listed databases were considered the most relevant resources available for this literature search.

The initial search collected a range of journal research literature, books and grey literature. Further searching was conducted in Google Scholar and OpenDOAR (Directory of Open Access Repositories) to identify additional grey literature.

Search statement
The search statement was:

“Social norms approach” or “Social norm approach”

OR

“Social norm theory” OR “social norms theory”

Filters

Date range
The scope of the literature was initially limited to a publication date range covering the last 20 years but early on it was decided to further limit the review to literature from 2003 onwards.

The starting date of 2003 was based on the publication date of Wesley Perkins’ edited book entitled, ‘The social norms approach to preventing school and college age substance abuse: A handbook for educators, counselors, and clinicians’. As this is an extensive and seminal publication it was relied on to provide the most relevant references up until 2003. A publication from Berkowitz in August 2004 entitled The Social Norms Approach: Theory, research and annotated bibliography was also identified that contained an extensive list of studies in its bibliography. Thus, this literature search endeavours to identify relevant research produced since those publications.

Population
The search was further limited to an age range from secondary school age students to young adults including tertiary education aged students.
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Geographic

Both Australian and international literature was included.

Checking for Gaps

Finally, in order to check for research that may have been missed in the use of this search strategy, the search results were briefly checked against some individual database searches using the thesaurus term “social norms” together with some other relevant key words such as attitudes, behaviour, drugs and drinking.

Very few additional relevant references were found so it was decided not to continue the search process in individual databases.

A search check was also conducted on the names of specific researchers identified during the first search, such as Wesley Perkins, Clarissa Hughes (Cook) and Alan D. Berkowitz.

Search results

The initial search identified a substantial list of 71 references. Of these references, the word ‘alcohol’ appears as an index term in 53 of the results, while drug (or drugs) appears in 27 of the results. There is overlap between these two sets of records. On initial analysis there appear to be 46 publications that discuss a particular program or intervention.

Chart 1 shows the spread of publication dates of these search results. The level of publication in the year 2003 reflects the inclusion of ten chapter-level records for Perkins (2003) book, The social norms approach to preventing school and college age substance abuse: A handbook for educators, counselors, and clinicians.

Chart 1. Number of references by year of publication

It was interesting to note that there were six Australian articles in these search results.

On receiving the list of candidate publications, the researchers made an initial categorisation by perceived level of relevance based on title, journal and abstract (where available), and then by the subtheme of the research. Each researcher was allocated a subtheme and commenced reviewing the documents.

It is usual to look to systematic reviews to identify studies that present high quality evidence of effectiveness. For this review only four systematic reviews were found that included SNA studies. One
was an umbrella review of systematic reviews on six health behaviours by Jepson et al., (2010). Thomas et al., (2013) reviewed 134 randomised controlled trials related to school-based programs for preventing smoking. A later systematic review of 66 studies (Foxcroft et al., 2015) conducted for the Cochrane Collaboration, focused on social norms information for alcohol misuse in university and college students (Foxcroft et al., 2015). This was a systematic review of 52 studies conducted in the USA, and 14 studies completed in other countries, including Australia, Brazil, New Zealand, Sweden and the United Kingdom. In their systematic review on smoking cessation, Whittaker et al., (2016) included one study (out of a total of 12) that used the SNA approach.

During reviewing, particular attention was paid to the second research question: critical design features of interventions targeting young people that have been successful in correcting perceptions about peer attitudes and behaviours that should inform the design of an intervention.

Some further studies were included during the reviewing stage as they were identified in references.
APPENDIX B: SOCIAL NORMS APPROACH TIMELINE

This brief timeline sets out key developments in SNA, and sets the period of this review into its historical perspective.

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<th>History of the social norms approach</th>
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<td><strong>Late 1980s</strong></td>
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<td>2012-2016</td>
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# APPENDIX C: RESOURCE LIST

<table>
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<th>Resources for designing and implementing social norms campaigns</th>
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| **Alcohol Education Project**  
http://www.alcoholeducationproject.org/current/currentevents.htm |
https://www.cdc.gov/tobacco/stateandcommunity/best_practices/index.htm |
| **A Guide to marketing social norms for health promotion in schools and communities** (Haines, Perkins, Rice & Barker, 2005)  
| **MobileCoach**  
https://www.mobile-coach.eu |
| **Montana Institute**  
http://www.montanainstitute.com |
| **Most of Us Website**  
http://www.mostofus.org |
| **National Social Norms Center**, Michigan State University: Includes a list of research literature by year  
http://socialnorms.org |
| **New Jersey Department of Education Social Norms Project** (2010)  
http://www.nj.gov/education/students/safety/behavior/norms |
| **Small Groups Model Norms-Challenging Model Training manual** (Far & Miller, 2003)  
| **Social Norms Forum**  
http://www.socialnormsforum.eu |
| **Social Norms Guidebook** (McAlaney et al., 2010)  
https://europeansocialnormsinstitute.files.wordpress.com/2014/05/social-norms-uk-guidebook-june-2010.pdf |
| **Social Norms Surveys Online** (Hobart and William Smith Colleges)  
http://www.socialnormsurveys.org |
| **Social Norms Toolbox** (2010)  
Detailed set of questions to guide implementation planning using the 7-Step Montana Model  
| **RUDifferent?** Social norms delivery guide for schools (Social Sense UK) (2014)  
https://s3-eu-west-1.amazonaws.com/rudifferent/docs/ru-userguide.pdf |
| **Stop Underage Drinking**  
Includes curriculum samples for Years 7 & 8, and Years 9 & 10 It’s OK not to drink: A social norms curriculum for NSW secondary school students Years 9 & 10  
http://stopunderagedrinking.com.au |
| **University of Leeds Unitcheck project**  
Email service providing information on an individual’s drinking levels compared to others. This project has been offline since 2016, ‘being updated to ensure that all feedback provided is in line with the new UK alcohol guidelines.’  
http://web.archive.org/web/20160309043527/http://unitcheck.co.uk |