NSMC REPORT 3

National Social Marketing Centre

A REVIEW OF THE EFFECTIVENESS OF SOCIAL MARKETING ALCOHOL, TOBACCO AND SUBSTANCE MISUSE INTERVENTIONS

Undertaken by

ISM Institute *for* Social Marketing

A collaboration between the University of Stirling and The Open University

The Open University

UNIVERSITY OF STIRLING

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INTRODUCTION – National Social Marketing Centre review work

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The aim of the Centre:

to help realise the full potential of effective social marketing in contributing to national and local efforts to improve health and reduce health inequalities.

This paper is part of work contributing to the independent National Review of health-related programmes and social marketing campaigns that was first announced as part of the Public Health White Paper 'Choosing Health'. The work was undertaken by the National Social Marketing Centre and was published in June 2006.

The discussion and consultation that fed into the development of that White Paper had highlighted a number of concerns. Two of particular relevance to this work were:

- A growing realisation that continuing with existing methods and approaches was not going to deliver the type of impact on key health-related behaviours that was needed.
- Other comparable countries appeared to be achieving more positive impacts on behaviours by using and integrating a more dynamic customer-focused social marketing approach into their methods.

As a result, it was agreed that a National Review should be undertaken to examine the potential of social marketing approaches to contribute to both national and local efforts, and to review current understanding and skills in the area among key professional and practitioner groups.

The National Consumer Council was asked to lead this work as they had been key advocates for a more consumer-focused approach. It was also recognised that an independent aspect to the review would be important so that existing practice across the Department of Health could be considered and recommendations developed.

To inform the National Review a range of research methods and approaches were used. The overarching objectives of the research programme were as follows:

Research programme – overarching objectives

1: To review the growing evidence-base for Social Marketing in some key priority areas
2: To examine current government practice and effectiveness in delivering health-related programmes and campaign interventions.
3: To better understand stakeholder understanding and perceptions of social marketing
4: To consider key behavioural trends and progress towards government health-related targets.
5: To consider and assess the costs to society of preventable ill-health and assess the potential of Social Marketing to contribute to reducing that cost.
6: To map current national capacity to utilise and deliver Social Marketing approaches.
7: To map key social and market research sources available to those developing health-related programmes or campaigns.

While the NSM Centre has a small core team, a larger number of external associates have been actively contributing to developing work. These have included colleagues from a number of research organisations and individual consultants who have been commissioned to assist with developing aspects of the research programme.

This report is one of a range of research and review reports that have informed the National Review.

Summary of NSM Centre papers – currently being developed

NSMC1 Effectiveness Review: Physical Activity and Social Marketing

NSMC2 Effectiveness Review: Nutrition and Social Marketing

NSMC3 Effectiveness Review: Alcohol, Tobacco and Drug misuse & Social Marketing

NSMC4 Social Marketing Capacity in the UK: Academic Sector – initial selective review

NSMC5 Social Marketing Capacity in the UK: Commercial Sector – initial selective review

NSMC6 Social Marketing for Health in the European Union – initial selective review

NSMC7 National Health-Related Campaigns Review – selective review of 11 campaigns

NSMC8 National Stakeholder Research Findings – current understanding and views

NSMC9 Summary review of current use of Social Marketing across Government

NSMC10 Health economic analysis: Initial look a the societal costs of preventable ill-health

NSMC11 Social Marketing Research – compendium of social & market research sources

NSMC12 Overview of key behavioural trends and targets re: 'Choosing Health' priorities

Providing comments and views

The research programme is revealing invaluable insights into the use and effectiveness of social marketing related interventions and has provided a robust platform to inform the first National Social Marketing Strategy for Health.

The work however also has a much wider value and interest. Anyone working to elicit positive behavioural effects within different audiences, whatever the focus or topic, should find these reports of interest. It will be of particular relevance to those working on or contributing to health-related programmes and campaigns, whether in public health, health promotion, communications or as dedicated social marketers, at a national or local level.

To encourage debate about Social Marketing we would like to take this opportunity to invite readers to offer their views and feedback on the ways they think health-related programmes and campaigns might be improved, drawing on core social marketing principles.

As other work and material is developed it is being made available via the website on: www.nsmcentre.org.uk. We welcome your comments and ideas which can be emailed to us at: nsmc@ncc.org.uk

Finally, we would like to thank particularly colleagues Ross Gordon, Laura McDermott, Martine Stead, Kathryn Angus and Gerard Hastings, at the Institute for Social Marketing for undertaking this work and contributing to our national review.

Thanks are also due to our other National Social Marketing Centre colleagues and associates who have all helped ensure this work could contribute to the national review.

We look forward to receiving further comments and views.

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1: WHAT IS SOCIAL MARKETING?

The systematic application
of marketing concepts and techniques
to achieve specific behavioural goals
relevant to a social good

In recent years, attention has turned to social marketing as a promising approach for health behaviour change.

It is increasingly being advocated as a core public health strategy, particularly for influencing voluntary lifestyle behaviours such as smoking, drinking, drug use and diet (CDC 2005). The UK Government 2004 White Paper on Public Health recommends that social marketing is used to make behaviour that harms health less attractive, and to encourage behaviour that improves health (Department of Health 2004).

The National Social Marketing Strategy for Health, led by the National Consumer Council and the Department of Health, has been established to *"help realise the full potential of effective social marketing in contributing to national and local efforts to improve health and reduce health inequalities"* (NCC/DH 'Realising the Potential of Effective Social Marketing 2005).

Although social marketing has been used to inform interventions for around 30 years, there have been few reviews of its effectiveness in general as a health behaviour change approach. One difficulty has been the lack of an easily operationalised definition of a social marketing *intervention*. Generic definitions of social marketing are not precise enough to help in deciding whether a *specific intervention* does or does not qualify as social marketing. One solution to the difficulty is simply to select interventions that are called social marketing programmes by their managers or evaluators.

However, our recent experience of reviewing 'social marketing nutrition interventions' demonstrated that relying solely on the label is a problematic approach (McDermott et al 2005a, McDermott et al 2005b). Firstly, it excludes many interventions which are not labelled social marketing but which incorporate social marketing principles. Secondly, it includes interventions which, despite their label, are poor examples of social marketing or not social marketing at all. The resulting evidence base, if a search is restricted only to interventions called 'Social Marketing', is likely to be limited and flawed.

In our previous systematic review, we resolved this challenge by searching instead for interventions which met all six benchmark criteria for a social marketing intervention (Andreasen 2002). Eligible interventions had to provide evidence of:

Andreasen's Social Marketing Benchmark Criteria

Benchmark	Explanation
1. Behaviour Change	Intervention seeks to change behaviour and has specific measurable behavioural objectives
2. Consumer Research	Formative research is conducted to identify target consumer characteristics and needs. Intervention elements are pre-tested with the target group.
3. Segmentation & Targeting	Different segmentation variables are considered when selecting the intervention target group. Intervention strategy is tailored for the selected segment/s.
4. Marketing Mix	Intervention consists of promotion (communications) plus at least one other marketing 'P' ('product', 'price', 'place'). Other Ps might include 'policy change' or 'people' (eg. training is provided to intervention delivery agents).
5. Exchange	Intervention considers what will motivate people to engage voluntarily with the intervention and offers them something beneficial in return. The offered benefit may be intangible (eg. personal satisfaction) or tangible (eg. rewards for participating in the programme and making behavioural changes).
6. Competition	Intervention considers the appeal of competing behaviours (including current behaviour). Intervention uses strategies that seek to minimise the competition.

These same criteria have been applied in this review to identify social marketing alcohol, tobacco and substance misuse interventions.

2: REVIEW AIM AND METHODS

The aims of the review are:

1. *To review how effective social marketing interventions have been in changing the behaviour of individuals, groups, organisations and public policy in relation to alcohol, tobacco and substance misuse.*
2. *To map the diversity of social marketing approaches that have been used to address alcohol, tobacco and substance misuse.*
3. *To describe what, if any, behavioural models / theories are used by campaigners to develop social marketing alcohol, tobacco and substance misuse interventions.*
4. *To describe how social marketing alcohol, tobacco and substance misuse interventions have been evaluated and make recommendations as to how they should be evaluated in the future, including identification of common indicators of short, medium and long-term effectiveness.*

Time constraints did not permit us to conduct a systematic search for primary empirical studies. We therefore decided to search for existing good quality systematic reviews, and to use these as our sample frame for potentially eligible intervention studies.

This strategy had two advantages:

- it reduced the search process to one that was manageable in the timeframe
- it ensured that all the studies we subsequently included had already been judged of sufficient methodological quality, by previous reviewers, to yield reliable evidence.

A list of potentially eligible studies was compiled from these systematic reviews and retrieved in fulltext for assessment against the social marketing criteria. A full description of the search strategy is provided in ***Appendix 1***.

The studies included in the review are listed in ***Appendix 2***.

In total, 310 papers were assessed in full text against the social marketing criteria.

35 studies met all six social marketing criteria and have been included in the review.

By ‘a study’, we mean all the published papers reporting on a single evaluation of a specific programme (for example, where a programme was followed up over several years within one evaluation, all the outcome papers are included as one study).

Sometimes the same programme or variants of it are evaluated in different settings with different participants; in this case, each evaluation is counted as a separate study, again each potentially comprising more than one paper.

3: THE STUDIES

The **35 studies** represented a wide range of different types of intervention, and were heterogeneous in aims, intervention approach, methods, and evaluation design.

3.1: Types of Intervention

They have been grouped into five categories:

- 16 = School-based prevention programmes,
- 10 = Multi-component community interventions,
- 4 = Mass media interventions,
- 2 = Access interventions and
- 3 = Interventions in other settings.

An overview of the studies, including their settings, target groups and theoretical bases, is given below.

I: School-based Prevention Programmes

- 16 of the interventions were school-based prevention programmes
  - *(Ary 1990, Botvin 1997, Botvin 1999, Botvin 2001, Cuijpers 2002, De Vries 1994, Elder 1996, Ellickson 1990, Ellickson 2003, Flay 1995, Hansen 1988, Hecht 1993, McBride 2000, Sussman 1993, Sussman 1998, Sussman 2002).*
- 5 of the 16 primarily targeted smoking
- 1 primarily targeted alcohol
- 1 illicit drugs
- 9 were generic substance use programmes or targeted particular combinations of substances (eg. alcohol and drugs).
- The majority of the programmes comprised theory-driven interactive classroom curricula adopting a social influences approach, usually involving practice of resistance skills and other activities designed to address direct and indirect pressures to use substances.
- Several were well-established programmes which have been evaluated in several studies:
- **Life Skills Training**
  - *(Botvin 1997, 1999 and 2001)*
- **Project ALERT**
  - *(Ellickson 1990, 2003)*
- **Project Towards No Tobacco Use and Towards No Drug Abuse**
  - *(Sussman 1993, 1998, 2002).*

II: Multi-component Community Interventions

- 10 of the interventions were multi-component community interventions
  - *(Biglan 2000, Carleton 1995, COMMIT, Fortmann 1993, Lando 1995, Pentz 1989, Perry 1992, Perry 1996, Vartiainen 1998, Wagenaar 2000).*
- 4 were targeted at the general adult population and addressed either smoking cessation only, or smoking cessation within the context of cardiovascular risk disease behaviours.
- 6 targeted youth substance use.
- 4 included a school-based prevention programme reinforced by extensive community components

  - *(Pentz 1989, Perry 1992, Perry 1996, Vartiainen 1998),*
- 2 included community and policy activities designed to reduce youth access to substances as well as activities targeted at youth themselves (see group (iv) below).
  - *(Biglan 2000, Perry 1996)*

- Several in this group were well-known programmes which have been evaluated over many years:
- **Minnesota Heart Health Program**
  - *(Perry 1992)*
- **Project STAR**
  - *(Pentz 1989)*
- **Stanford Five-City Program**
  - *(Fortmann 1993)*
- **North Karelia project**
  - *(Vartiainen 1998).*

III: Mass Media-based Interventions

- 4 interventions were primarily mass media-based
  - *(Egger 1983, Flynn 1994, McAlister 1992, McPhee 1995).*

- 3 of the 4 targeted adult smoking cessation
  - *(Egger 1983, McAlister 1992, McPhee 1995)*
- 1 Flynn, targeted youth smoking prevention.
- 2 of the interventions were specifically designed for minority ethnic communities
  - *(McAlister 1992, McPhee 1995).*

- All 4 interventions included activities delivered through other channels in addition to the media element (eg. telephone helpline, support in the community).

IV: Environmental Interventions

- 2 interventions were designed to restrict youth access to substances through increasing retailer/server compliance with existing laws, greater enforcement of the law, or adoption of new policies and legislation
  - *(Wildey 1995, Forster 1998)*

The Project TRUST intervention

- Mostly comprised retailer education backed up with media and community events *(Wildey 1995)*

Tobacco Policy Options for Prevention (TPOP)

- Adopted a direct action, community organisation approach directed both at retailers and local legislators *(Forster 1998).*

- 3 of the multi-component community interventions listed above included community and policy activities designed to reduce youth access to substances as well as activities targeted at youth themselves
  - *(Biglan 2000, Perry 1996, Wagenaar 2000).*

V: Interventions in Other Settings

- 3 interventions were delivered in heterogeneous settings and have been grouped together for the purpose of the review.
- 1 of the 3 was a smoking cessation programme delivered through church coalitions and primarily targeted at African-Americans
    - *(Schorling 1997)*
- 1 was a workplace smoking cessation programme implemented in a university
    - *(Windsor 1988)*
- 1 was a family-training and child-training programme designed to reduce drug and alcohol use by strengthening family protective factors
    - *(Spoth 2001).*

3.2: Theories and Models Used in the Programmes

Social Influences theory

- The majority of the school-based programmes were informed by the social influences approach.
- Social influences theory emphasises "the importance of social and psychological factors in promoting the onset of drug use" and comprises three major components: psychological inoculation / normative education / resistance skills training *(Botvin 2000).*
- The majority of systematic reviews and meta-analyses of school-based prevention programmes have found that curricula using the social influences approach, specifically including normative education and practice of resistance skills, are consistently more effective than curricula adopting other approaches such as information-only or 'affective' *(Stead et al 2006)*.
- Several of the interventions were 'multi-component'. In the context of drug prevention, this refers to interventions which, using multiple channels and activities, target not only the individual but also their immediate family and peer group and the wider environment which shapes drug use norms.

Project STAR *(Pentz 1989)*

- Represents a typical multi-component programme
- It comprises a school curriculum, media, parent activities, community organisation and policy activity.

Community organisation or Community Participation

- Several programmes were 'community interventions' addressing smoking cessation or cessation within the context of a range of cardiovascular disease risk factors.
- These programmes are typically underpinned by theories of community organisation and community participation.
- (For the purpose of this review, multi-component and community interventions have been discussed together, as they share many features).

Media advocacy

- Media advocacy is used in some interventions, particularly those concerned with policy and environmental change.

For example

Project TRUST *(Wildey 1995)*

- Retailers who complied with the law on underage access to tobacco were 'rewarded' with positive newspaper coverage, while those who did not were 'named and shamed'.

Family-focused interventions *(Spoth 2001, Perry 1996)*

- 2 family-focused alcohol interventions
- These drew on models of problem behaviour protective and risk factors to foster factors which would protect against the development of substance use, such as family cohesion and managing emotions and conflict.

3.3: Target Groups

- North America accounted for all but 5 of the programmes
- 2 were Dutch
    - *(De Vries 1994, Cuijpers 2002)*
- 1 was Finnish
    - *(Vartiainen 1998)*
- 2 were Australian
    - *(Egger 1983, McBride 2000).*

- Most of the school-based programmes targeted the **early secondary school years** (11-14).
- 1 targeted a **younger age group**
    - *(Elder 1996)*
- 1 targeted an **older age group**
    - *(Wagenaar 2000).*
- Although the majority of the school-based programmes were 'universal', that is, designed for the whole **student population** in specific school years, some were deliberately tailored for high risk or disadvantaged populations.
- 3 trials of **Life Skills Training** were targeted specifically at **inner city minority ethnic pupils** in New York
    - *(Botvin 1997, 1999, 2001)*
- 2 trials of **Project Towards No Drug Abuse** were targeted at pupils in Californian 'continuation high schools', schools for students who are not able to complete formal high school education because of **behavioural or other problems**, including drug use
    - *(Sussman 1998, 2002).*

- 3 adult-targeted studies were designed for **minority ethnic communities**:
    - 1 of the 3 was designed to reach **African-American communities** – a church-based project
        - *(Schorling 1997)*
    - 1 was targeted at **Vietnamese men** in the USA
        - *(McPhee 1995)*
    - 1 reported on a media campaign developed for **Hispanic adults** in the Texas-Mexican Border area.
        - *(McAlister 1992)*

3.4: How the Interventions were Evaluated

- The vast majority of the interventions were evaluated using a randomised controlled trial or quasi-experimental design.

- For the school-based programmes, this typically involved random assignment of classes or schools to an intervention or control condition, while for the multi-component community interventions, intervention sites were typically compared with comparison communities matched on key characteristics.
- Access interventions were usually evaluated through quasi-experiments and/or through time series analysis of sales data.

Follow-up

- The period of follow-up ranged widely in the studies from a month after implementation to several years
    - (*Vartiainen 1998* was unusual in having a 15 year follow-up).
- The majority of the studies involved one to two year follow-up.

Outcomes:

- The main outcomes examined in the prevention programmes included:
    - overall prevalence of substance use (including alcohol, tobacco, marijuana and other drugs),
    - onset of use, experimental use, weekly use, monthly use
    - progression from one stage of use to another (eg. from experimental to regular use).

- Some also took attitudinal, knowledge and skills measures.

- 1 alcohol-focused intervention also measured alcohol-related behaviours and incidents (drink-driving, drink-related crashes)
    - *(Wagenaar 2000).*

- The mass media and other smoking cessation programmes typically measured smoking prevalence, number of cessation attempts and continuous quitting over a given period.

- The main outcomes measured in the access interventions were:
    - illegal sales to underage minors (usually assessed through test purchasing)
    - other measures of retailer behaviour and attitudes, such as frequency of checking ID and perceptions of the risk of prosecution.

3.5: Social Marketing Characteristics of the Interventions

All included interventions had to show evidence of having met all 6 social marketing benchmark criteria. This meant that they had to:

I: Have a specific Behaviour Change goal.

- Behaviour change goals sought by the included interventions included: to reduce or delay onset of substance use, to increase smoking cessation, to encourage retailers to comply with laws on underage access to substances, to persuade local councils to pass or strengthen legislation on sales of substances.

II: Have used Consumer Research to inform the intervention.

- Typical consumer research conducted by the interventions included community needs assessments, focus groups, qualitative interviews, pre-testing of materials, and pilot tests of intervention activities prior to the main trial.

III: Consider different Segmentation variables and Target interventions appropriately.

- Interventions demonstrated segmentation and targeting if, for example, activities were designed interventions to be age-appropriate or particularly appropriate to the setting in which they were delivered, or if they tailored activities and materials to specific groups, such as low income or minority ethnic participants.

IV: Demonstrate use of more than one element of the Marketing Mix.

- The marketing mix was defined as comprising '6 Ps':
- Product, Price, Place, Promotion/communication, Person and Policy.
- For example, a school-based intervention might comprise a curriculum element, teacher training, materials and home activities (place, promotion/communication, person)
- Whereas an access intervention might comprise media advocacy, policy development and community activities (place, promotion/communication, policy).

V: Utilise the 'exchange' concept.

- Consider what would motivate people to engage voluntarily with the intervention and offer them something beneficial in return (**Exchange**).
- The exchange could be tangible or intangible.
- Examples include: school-based prevention programmes which emphasised the positive benefits of non-use or offered students the opportunity to participate in appealing alcohol-free activities; smoking cessation programmes which used motivation strategies or provided inspirational role models in the form of testimonials; and access interventions which rewarded responsible retailers with positive publicity and community approval.

VI: Utilise the 'competition' concept.

- Consider the appeal of competing behaviours and use strategies that seek to minimise this **Competition**.
- These strategies could address competition at an external or internal level, or both.
- External competition strategies included adopting or encouraging compliance with policies making it harder for young people to obtain substances.
- Internal competition strategies included teaching relapse prevention and coping skills. School-based prevention curricula based on a social influences approach, which seeks to 'inoculate' young people against peer, social and advertising pressures to use drugs, addressed competition at several different levels.

More detailed information on the social marketing characteristics and results of each intervention is provided in Appendix 3.

4: RESULTS

Results from the studies are briefly summarised below under 6 headings:

- 21 = Smoking prevention
- 15 = Alcohol prevention and harm minimisation
- 13 = Illicit drug use prevention
- 9 = Smoking cessation
- Several = Changes in professional and organisational behaviour
- 3 = Changes in policy.

4.1: Smoking Prevention

- 21 studies examined whether interventions were effective in preventing smoking among young people.

- 14 of the 21 comprised school-based programmes
- 5 multi-component community interventions
- 1 media-based programme
- 1 environmental intervention.
- The follow-up period in the studies ranged from one month to 15 years, with the majority following up respondents for 1 to 2 years.

- The majority of the studies which examined short term impact (up to 1 year) reported significant positive effects on prevalence ((13 out of 18 studies)
- The majority of the studies which examined medium term impact (up to 2 years) reported significant positive effects on prevalence (7 out of 11 studies)
- 2 out of 5 studies which examined longer term impact (over 2 years) reported sustained significant positive effects on prevalence.
- 4 interventions had no effect at any period of follow-up.

The results are summarised below.

I: Short-term Impact

- 18 studies examined *short-term impacts* on smoking prevalence (up to 12 months).

- 13 of these 18 found significant positive effects on prevalence
- 4 found weak or partial effects
- 1 intervention was not effective.

Significant positive effects:

The 13 short-term effective interventions comprised 8 school-based programmes, 4 multi-component community programmes, and one media-based intervention.

School-based programmes

- 3 of the effective school interventions were trials of the **Life Skills Training programme** with different minority ethnic inner city student populations.
- 1 found significantly lower frequency of smoking ($p<0.01$) in intervention students compared with control students at 3 months
    - *(Botvin 1997)*
- 2 found significantly lower prevalence in intervention students at 12 months ($p<0.001$ for both)
    - *(Botvin 1999, 2001).*
- **Project Towards No Tobacco Use**, which compared four different types of social influences and informational curricula, found that most of the curricula were associated with significantly lower increases in experimental and weekly tobacco use compared with control schools at 1 year follow up ($p<0.05$), and that the combined social influences curriculum had significantly lower weekly smoking compared with other curricula and the control group at 2 years ($p<0.05$)
    - *(Sussman 1993)*

- A trial of **Project ALERT** followed up over 5 years found, among baseline experimenters, significant reductions in ever, weekly and daily smoking compared with the control group at 3 and 12 months.
    - *(Ellickson 1990)*
- In a trial of the revised version of **Project ALERT**, involving 55 schools, there were 19% fewer smokers post-intervention compared with controls ($p<0.01$)
    - *(Ellickson 2003)*
- Students who received the **Project SMART** social influences programme had significantly lower smoking onset than control students, equivalent to a 38% reduction, at the end of one year.
    - *(Hansen 1988)*
- A 12-session version of **Project Towards No Drug Abuse** found lower monthly smoking at 1-year follow-up for students who received the programme led by a health educator, compared with students who learned it through self-instruction and control group students.
    - *(Sussman 2002)*

Multi-component community interventions

Project SixTeen *(Biglan 2000)*

- Designed to reduce both illegal sales of tobacco and youth tobacco use, the intervention was associated with lower smoking prevalence (smoking in the past week) at one-year follow-up.

Project STAR *(Pentz 1989)*

- The multi-component drug prevention programme Project STAR, or the Midwestern Prevention Project, resulted in a significantly lower increase in smoking in intervention schools compared with controls at one year follow-up.

North Karelia (Vartiainen 1998)

Students who received the youth component of the **North Karelia** project, a major community intervention to reduce cardiovascular disease, had significantly lower once-a-month smoking than the control group at 6-month and subsequent follow-ups (see below).

Minnesota Heart Health 'Class of 89' study *(Perry 1992)*

- Students who received a 3-year school-programme within the 5-year Minnesota Heart Health Program, had significantly lower weekly smoking prevalence than control community students at one-year and subsequent follow-ups (see below).

Media-based intervention *(Flynn 1994)*

- The remaining short-term effective programme was a media-based intervention. Students who received mass media smoking prevention television programming combined with a school curriculum had significantly lower weekly smoking (equivalent to 7.3% difference) and smokeless tobacco use at one year follow-up ($p<0.05$) compared with a control group.

Weak and partial effects:

School programme PATH *(Ary 1990)*

- This trial of the school programme found no effect on smoking prevalence at 12 months, but did significantly reduce the number of cigarettes smoked by baseline smokers.

Dutch 5-session school programme (*De Vries 1994)*

- A trial of a 5-session Dutch programme found a small but significant impact on rates of smoking experimentation at one year among students in some of the intervention schools, but not in other intervention schools.

Dutch school programme *(Cuijpers 2002)*

- A trial of a 3-year programme found a significant impact on daily smoking immediately after the first year of intervention, but not on other measures of smoking.

TPOP (Tobacco Policy Options for Prevention) *(Forster 1998)*

- A three-year environmental intervention, which adopted a direct action community organising approach to encourage adoption of tobacco ordinances and deter illegal underage sales in Minnesota, found that youth smoking prevalence increased less steeply in intervention communities compared with controls, although the difference was only significant on one measure, daily smoking

No effect:

Project Towards No Drug Abuse *(Sussman 1998)*

- This 9-session version of the school-based programme found, at 12 months, no effects on smoking, although hard drug use and alcohol use were reduced (see below)

II: Medium-term Impact

- 11 studies examined *medium-term* impacts (one to two years) on smoking prevalence.

- 7 of the 11 had significant positive effects
- 1 had weak effects.
- 1 had mixed effects.
- 2 were not effective.

Significant positive effects:

Multi-component community interventions

- 4 of the interventions with a significant medium-term impact on smoking were multi-component community interventions.

Project SixTeen *(Biglan 2000)*

- Designed to reduce both illegal sales of tobacco and youth tobacco use, had a significant effect on smoking prevalence (smoking in the past week) five years after the start of a 3-year intervention ($p<0.05\%$); prevalence was 3.8% lower in the intervention communities compared with communities which had received only a school-based programme

Project STAR *(Pentz 1989)*

- The multi-component drug prevention programme Project STAR, or the Midwestern Prevention Project, resulted in a significantly lower increase in smoking in intervention schools compared with controls at both one and two year follow-ups.

North Karelia project *(Vartiainen 1998)*

- Students who received the youth component of the North Karelia project, a major community intervention to reduce cardiovascular disease, had significantly lower once-a-month smoking than the control group at two-year follow-up and beyond (see below).

Minnesota Heart Health 'Class of 89' study *(Perry 1992)*

- Students who received a 3-year school-programme within the 5-year Minnesota Heart Health Program, had significantly lower weekly smoking prevalence than control community students at 2-year and subsequent follow-ups (see below).

School-based programmes

- 3 of the interventions with a significant medium-term impact on smoking were school-based programmes.

Project Towards No Tobacco Use *(Sussman 1993)*

- Which compared four different types of social influences and informational curricula, found that most of the curricula were associated with significantly lower increases in experimental and weekly tobacco use compared with control schools at 1 year follow up ($p<0.05$), and that the combined social influences curriculum had significantly lower weekly smoking compared with other curricula and the control group at 2 years ($p<0.05$)

Project Towards No Drug Abuse *(Sussman 2002)*

- A 12-session version of Project Towards No Drug Abuse found lower monthly smoking at 2-year follow-up for students who received the programme led by a health educator, compared with students who learned it through self-instruction and control group students.

Media-based intervention *(Flynn 1994)*

- Students who received mass media smoking prevention television programming combined with a school curriculum had significantly lower weekly smoking (equivalent to 7.3% difference) and smokeless tobacco use at 2 years ($p<0.05$ for all) compared with a control group.

Weak effects:

Project SMART *(Hansen 1988)*

- Students who received the Project SMART social influences curriculum had lower smoking onset than control students at both 1 and 2 year follow-ups, although at 2 years the difference was no longer significant.

Mixed effects:

A trial of Project ALERT *(Ellickson 1990)*

- With follow-up over 5 years found mixed results. Among baseline experimenters, there were significant reductions in ever, weekly and daily smoking compared with the control group up to 15 months ($p=0.03$ – $p=0.007$). However, among baseline regular smokers, the programme had a boomerang effect and appeared to increase smoking relative to the control group at 15 months.

Ineffective:

2 interventions were ineffective in the medium-term:

Combined TV and school programme *(Flay 1995)*

- Compared a combined television and school programme with each element separately but found no consistent effects on behaviour over 2 years, although normative perceptions and knowledge improved in the combined group.

Dutch school programme *(Cuijpers 2002)*

- A Dutch trial of a school-based programme found that early effects on daily smoking disappeared by three years after baseline.

III: Long-term Impact

- 5 studies followed up participants for more than two years to assess *long-term* impact on smoking prevalence.

- 2 of the 5 found sustained effects
- 3 found no effects over this longer period.

Sustained effects:

North Karelia project *(Vartiainen 1998)*

- Students who received the youth component of the North Karelia project, a major community intervention to reduce cardiovascular disease, had significantly lower once-a-month smoking at 8 years but only for students who had received the teacher-led programme. At 15-year follow-up, when participants were aged 28, meantime lifetime consumption was 22% lower in the intervention community compared with the control area (p=0.01).

In the 'Class of 89' study *(Perry 1992)*

- Students who received a 3-year school-programme within the 5-year Minnesota Heart Health Program, had significantly lower weekly smoking prevalence than control community students at all follow-ups up to 5 years ($p<0.04$ – $p<0.0001$)

No long-term impact:

- 3 interventions found no long-term impact on smoking prevalence.

In the CATCH trial *(Elder 1996)*

- A school-based cardiovascular disease prevention programme, found no significant impact on smoking prevalence at 3 year follow-up, although the main tobacco focus of the programme was on increasing adoption of smokefree policies in schools (see section 4.6 below).

In Project Northland *(Perry 1996)*

- A school-based alcohol harm minimisation programme, found a non-significant reduction in tobacco use 2.5 years after the programme, although the main focus of the programme was on alcohol (see section 4.2).

Project ALERT *(Ellickson 1990)*

Although effective at earlier follow-up, the programme found no effects at 5 years.

4.2: Alcohol Prevention and Harm Minimisation

- 15 studies examined whether interventions were effective in preventing alcohol use or reducing the harm associated with alcohol use (eg. drink-driving).

- These comprised:
  - 10 school-based programmes
  - 4 multi-component community interventions
  - 1 intervention delivered in a family setting.
- All except one targeted school-age populations
- 1 targeted 12th grade students and young adults
  - *(Wagenaar 2000)*

- The majority of studies which examined short-term impact (up to 12 months) reported some significant impacts on preventing or reducing alcohol use (8 out of 13)
- 3 of 6 studies which examined medium-term impact (up to 2 years) reported some significant impacts on preventing or reducing alcohol use.
- 2 of 4 studies which examined long-term impact (over 2 years) reported sustained impacts on preventing or reducing alcohol use.
- 2 studies found no effects at any period of follow-up
  - 1 of these, however, had an impact on alcohol-related harms (arrests for drink driving).

The results are summarised below, again grouped by duration of follow-up.

I: Short-term Impact

- 13 studies examined short-term impacts on alcohol use (up to 12 months).

- 8 had positive effects
- 4 had weak or partial effects
- 1 was not effective.

Positive effect:

- 2 of the effective studies were trials of the school-based **Life Skills Training** programme with minority ethnic inner city student populations.
- 1 found significantly lower frequency of alcohol use ($p<0.01$) in intervention students compared with control students at 3 months
  - *(Botvin 1997)*
- 1 found significantly lower frequency of drinking ($p<0.0001$), getting drunk ($p<0.004$) and amount consumed on each occasion ($p<0.0007$) at 12 months
  - *(Botvin 2001)*.

Project SHAHRP *(McBride 2000)*

- An Australian school-based alcohol harm minimisation programme, found a lower increase in alcohol consumption in intervention students compared with control one month after the intervention.

Project SixTeen *(Biglan 2000)*

- Designed primarily to reduce illegal sales of tobacco and youth tobacco use, this intervention also had an impact on alcohol use; last week use increased significantly in communities which had received only a school-based programme but not in the intervention communities.

Dutch shool programme *(Cuijpers 2002)*

- This Dutch trial of a 3-year school-based programme found a significant impact on daily alcohol use at immediate post-test , and also a significant decrease in number of drinks consumed per occasion.

Project STAR, or the Midwestern Prevention Project *(Pentz 1989)*

- Resulted in significantly lower increases in last week and last week alcohol use in intervention schools compared with controls at one year follow-up ($p<0.05$).

Family-focused intervention *(Spoth 2001)*

- A family-focused intervention, targeting both parents and children, found significantly lower alcohol use onset in the intervention group compared with the control at one year follow-up. The increase in 'ever use' and 'ever been drunk' was also lower in the intervention group than the control group.

Project SMART

- Students who received the **Project SMART** social influences programme had lower alcohol use onset than control students, equivalent to a 38% reduction, at the end of one year.
    - o *(Hansen 1988)*

Weak or partial effects:

Project Towards No Drug Abuse *(Sussman 1998)*

- The 9-session version of this school-based social influences programme had no overall effect on prevalence but was associated with a significant reduction in alcohol use ($p<0.01$) only among pupils with higher levels of baseline alcohol use.

Project Towards No Drug Abuse *(Sussman 2002)*

- Similarly, the 12-session version of Project Towards No Drug Abuse comparing two types of delivery had a slight impact on alcohol use only among pupils with higher levels of baseline alcohol use.

Project ALERT *(Ellickson 1990)*

- A trial of the school-based programme Project ALERT found some weak effects on alcohol use at 3 and 12 months.

Revised Project ALERT *(Ellickson 2003)*

- A trial of the revised version of Project ALERT had some effects on past-month alcohol use, alcohol misuse and alcohol-related consequences for students who were baseline users, but not for other groups.

No effect:

PATH trial *(Ary 1990)*

- A trial of the school programme PATH found no effect on alcohol use at 12 months.

II: Medium-term Impact

- 7 studies examined medium-term (one to two years) impact on alcohol use.

- 4 of the studies found significant impacts on alcohol use.
- 1 had weak or partial effects.
- 2 were not effective.

Significant effects:

Project SixTeen *(Biglan 2000)*

- Designed primarily to reduce illegal sales of tobacco and youth tobacco use, also appeared to have affected alcohol use; five years after the start of a 3-year intervention, alcohol use in the last week had increased significantly in communities which had received only a school-based programme but not in the intervention communities.

Dutch school programme *(Cuijpers 2002)*

- In a trial of a 3-year school-based programme, found a significant impact on daily alcohol use at immediate post-test and at two years after the start of the intervention, and also a significant decrease in number of drinks consumed per occasion at both follow-ups.

Family-focused intervention *(Spoth 2001)*

- A family-focused intervention, targeting both parents and children, found significantly lower alcohol use onset in the intervention group compared with the control at both one and two year follow-ups.

Project SMART *(Hansen 1988)*

- A school-based social influences programme found lower alcohol use onset among students who received the intervention compared with control group students at 1 and 2 year follow-ups.

Modest or weak effects:

Project ALERT *(Ellickson 1990)*

- A trial of the school-based programme Project ALERT found some weak effects on alcohol use at 15 months, but these had disappeared by two years.

No effects:

Project STAR, or the Midwestern Prevention Project *(Pentz 1989)*

- Resulted in significantly lower increases in last week and last week alcohol use in intervention schools compared with controls at one year follow-up but results were no longer found at two years.

Project Towards No Drug Abuse *(Sussman 2002)*

- A version of Project Towards No Drug Abuse comparing two types of delivery had no significant impact on alcohol use at 2 years.

III: Long-term Impact

- 4 studies examined long-term impact (over two years) on alcohol use.

- 2 of the 4 had positive effects
- 1 was a multi-component community intervention
  - *(Perry 1996)*
- 1 was a family programme
  - *(Spoth 2001)*.

Positive effects:

Project Northland *(Perry 1996)*

- Comprising a 3-year school curriculum, peer and parent activities and community taskforces, found a significant impact on past month and past week alcohol use ($p<0.05$ for each) in the intervention group compared with the control group at 2.5 years, although the effect had dissipated at 4 years. Project Northland also found a significant reduction in 'proneness to alcohol, drug and family problems' after 3 years of the programme, suggesting that the family-focused 6th grade component of the programme was effective in influencing wider precursors of problem behaviour.

Family-focused intervention *(Spoth 2001)*

- A family-focused intervention, targeting both parents and children, found significantly lower alcohol use onset in the intervention group compared with the control at both one and two year follow-ups. The increase in 'ever use' and 'ever been drunk' was lower in the intervention group than the control group at every follow-up up to 4 years,

with increasing effect sizes, suggesting that the intervention intensified in impact over time.

Weak or no effects:

Project ALERT *(Ellickson 1990)*

- A trial of the school-based programme Project ALERT with follow-up over 5 years found some early relatively weak effects which were not sustained.

Communities Mobilising for Change *(Wagenaar 2000)*

- A multi-component community intervention, Communities Mobilising for Change on Alcohol programme, found no effects on self-reported drinking or heavy drinking at 3-year follow up, but arrests for drink-driving decreased in the intervention communities relative to control communities over the intervention period (p=0.05, equivalent to 30 fewer arrests per 100,000 population per year.

4.3: Illicit Drug Use Prevention

- 13 studies examined whether interventions were effective in preventing or reducing illicit drug use.

- 10 of the 13 school-based programmes
- 3 were multi-component community interventions.

- The majority of studies which examined short-term impact (up to 12 months) reported some significant positive impact on illicit drug use (8 out of 12)
- 2 out of 6 studies which examined medium-term impact (up to 2 years) reported some significant positive impact on illicit drug use
- Neither of the 2 studies which examined long-term impact (over 2 years) found sustained effects.

The results are summarised below, again grouped by duration of follow-up.

I: Short-term Impact

- 12 studies, all school-based programmes, examined short-term impacts on drug use (up to 12 months).
- 8 found positive significant impacts on drug use
- 2 found weak or partial effects
- 1 mixed
- 1 no effect.

Significant positive effects:

5-session curricula trial *(Hecht 1993)*

- A trial of different 5-session curricula found significantly lower generic drug use at one month follow-up among students who received interactive versions of a film- or drama-based programme compared with a less interactive version.

Life Skills Training *(Botvin 1997)*

- A trial of Life Skills Training with minority ethnic inner city students found less frequent marijuana use ($p<0.05$), lower polydrug over use ($p<0.0001$) and lower monthly polydrug use ($p<0.01$) at three month follow-up.

Project Towards No Drug Abuse *(Sussman 2002)*

- Another school programme tested with minority ethnic inner city students found significantly lower marijuana and hard drug use at one year among students who received a health-educator led version of the programme.

Project ALERT *(Ellickson 1990)*

- A five year study of the school-based Project ALERT found initial short-term reductions in marijuana use .

Revised Project ALERT *(Ellickson 2003)*

- Found significantly lower marijuana use at one year compared with controls.

Dutch school programme *(Cuijpers 2002)*

- Found significant reductions in marijuana use immediately after the intervention.

Project STAR *(Pentz 1989)*

- The multi-component project found significant reductions in last month marijuana use in intervention students compared with controls at one year follow-up.

Project SMART *(Hansen 1988)*

- A comparison of a social influences and an affective curriculum found that the social influences programme had a modest impact on slowing the increase in marijuana use, compared with the control group.

Weak or partial effects:

Life Skills Training *(Botvin 2001)*

- A trial of LST with a minority ethnic population found apparent decreases in marijuana and inhalant use and in getting high at 12 months, but more complex analysis suggested only the impact on inhalant use was significant.

Project SixTeen

- The multi-component Project SixTeen, primarily designed to reduce illegal sales of tobacco and youth tobacco use, appeared also to damp down the increase in marijuana use seen in communities not receiving the multi-component intervention.

Mixed effect:

Project Towards No Drug Abuse study *(Sussman 1998)*

- Found mixed results: at 12 months there was no apparent impact on marijuana use but a significant reduction in 'hard drug use' was found.

No effect:

PATH programme *(Ary 1990)*

- Found no effect on marijuana use at 12 months.

II: Medium-term Impact

- 6 studies examined medium-term impact (one to two years) on drug use:

- 2 found significant medium-term impacts
- 1 found weak or partial effects
- 3 found no effects.

Significant medium-term impacts:

Project Towards No Drug Abuse *(Sussman 2002)*

- Another school programme tested with minority ethnic inner city students, found significantly lower hard drug use at two years among students who received a health-educator led version of the programme; some other effects were found for marijuana use in some sub-groups.

Project STAR *(Pentz 1989)*

- The multi-component project found significant reductions in last month marijuana use in intervention students compared with controls at two year follow-up.

Weak or partial effects:

Project SixTeen

- The multi-component Project SixTeen, primarily designed to reduce illegal sales of tobacco and youth tobacco use, appeared also to damp down, over 2 years, the increase in marijuana use seen in communities not receiving the multi-component intervention.

No effects:

Dutch school programme *(Cuijpers 2002)*

- Found that earlier reductions in marijuana use disappeared at further follow-up.

Project ALERT *(Ellickson 1990)*

- A five year study of the school-based Project ALERT found initial short-term reductions in marijuana use but these were no longer sustained at two years.

Project SMART *(Hansen 1988)*

- Early modest impacts on slowing the increase in marijuana use disappeared at 2-year followu-up. The affective curriculum appeared to increase marijuana use.

III: Long-term Impact

- 2 studies reported longer-term impacts on drug use (over two years). Neither found sustained effects.

Project ALERT *(Ellickson 1990)*

- A five year study of the school-based Project ALERT (found initial short-term reductions in marijuana use but these were no longer sustained at five years.

Project Northland

- The multi-component Project Northland, which focused primarily on alcohol use, found no significant impact on marijuana use at two or four year follow-up.

4.4: Smoking Cessation

- 9 studies examined whether interventions had an impact on smoking cessation.

- 4 of the 9 were multi-component community interventions
- 3 were media-based interventions
- 2 interventions in other settings,
    - a church-based programme
    - a worksite programme.

- 2 of the interventions had a significant impact on cessation
- 5 had modest or weak effects
- 2 had no or unclear effects.

The results are summarised below.

Significant impact:

- The 2 effective interventions were mass media-based programmes.

The North Coast Quit for Life programme *(Egger 1983)*

- A two-year mass media cessation programme combined with a community programme in New South Wales, Australia, found lower smoking prevalence in the intervention communities than the comparison after two years of the intervention, and the reduction was more sustained in the intervention community in which the full programme had been implemented

Media programme for Vietnamese American men *(McPhee 1995)*

- Found higher likelihood of being a quitter and lower odds of being a smoker in the intervention communities after the two-year programme

Modest or weak effects:

- 5 interventions had modest effects.

The Alliance of Black Churches Project *(Schorling 1997)*

- Adopted a community organisation approach to smoking cessation and included the formation of church coalitions as well as individually-focussed activities and community activities. The intervention community had a higher quit rate than the comparison community, and church goers had higher quit rates than non-church goers. Although the differences were not significant, the trend suggested a possible intervention effect.

- 3 large multi-component community cardiovascular disease interventions had modest or partial effects.

The Stanford Five-City Project *(Fortmann 1993)*

- The decline in smoking in the intervention communities over the five years of the intervention tended to be greater than in the comparison cities, although the differences did not generally reach significance

The Minnesota Heart Health Programme *(Lando 1995)*

- Comprising media, community organisation, training of professionals and community cessation support, had a significant impact on women's smoking prevalence but not on men's.

COMMIT trial (Community Intervention Trial for Smoking Cessation)

- One of the largest community cessation programmes ever implemented, had only partial effects; the quit rate in the intervention communities was significantly higher among light to moderate smoking after five years of intervention but not among heavy

smokers, and overall prevalence was not significantly different in the 11 intervention communities.

Hispanic Americans mass media-based programme *(McAlister 1992)*

- A mass media-based programme designed to improve the general health of Hispanic Americans living in the Texas-Mexican Border area had an impact on the smoking quit rate in one intervention community compared with the control, but not in the other

Ineffective interventions:

- 2 interventions appeared to be ineffective.

The Pawtucket Heart Health Programme *(Carleton 1995)*

- Another community trial, had no significant impact on smoking prevalence.

US university worksite intervention *(Windsor 1988)*

- A worksite intervention implemented in a US university had unclear effects.

4.5: Changes in Professional and Organisational Behaviour

- Several of the interventions sought also to change behaviour at a professional or organisational level, and to increase community-wide attention to and action on an issue.
- Retailer behaviour (illegally selling age-restricted substances) was targeted and measured in four studies, while a number of other studies reported changes relating to professional, organisational and community practice and capacity.
- Data on the latter usually came from process evaluation or were anecdotal, and tended to be less robust than the data on retailer behaviour.

I: Retailer Behaviour

- 4 studies reported changes in retailers' behaviour (selling tobacco and alcohol illegally to underage youth).

- In 2 studies this was the main focus of the programme
  - *(Forster 1998, Wildey 1995)*
- In 2 other studies, the work with retailers was part of a multi-component community intervention also involving school- and youth-targeted activities
  - *(Biglan 2000, Wagenaar 2000)*.

Project Trust *(Wildey 1995)*

- A one-year retailer education campaign which included personal visits and positive media coverage for law-abiding retailers, reduced illegal sales from 70% to 32% in four out of six intervention communities, compared with a comparison area; the effect was sustained at six-month follow-up.

TPOP (Tobacco Policy Options for Prevention) *(Forster 1998)*

- Adopted a direct action community organising approach to encourage adoption of tobacco ordinances and deter illegal underage sales in Minnesota.
- Illegal sales fell from 36.7% to 3.1% in intervention communities, but also by a similar amount in control communities; the difference was not significant.

Oregon community intervention *(Biglan 2000)*

- A multi-component community intervention in Oregon, comprising media advocacy, youth anti-tobacco activities, community mobilisation, and giving retailers feedback on their response during test purchase attempts, showed a reduction in the mean level of illegal sales from 57% to 22%.
- There was no comparison community in this study which limited the conclusions which could be drawn.

Alcohol intervention *(Wagenaar 2000)*

- The intervention addressed alcohol and included community mobilisation, media advocacy and merchant education.
- Retailers reported more frequent checking of age ID and a higher perceived risk of prosecution following the intervention, while test purchase attempts found lower incidence of selling under-age, but none of the differences were significant.

II: Organisational and Community Activity

- Some studies reported apparent increases in community-wide attention to and action on an issue.

Oregon study *(Biglan 2000)*

- In the Oregon study mentioned above, surveyed parents perceived that community and business leaders' support for restrictions on underage access to tobacco increased over the course of the intervention.

North Karelia study

- Process evaluation of the North Karelia study suggested that the intervention encouraged more activity among health professionals, including organising health education meetings, making contact with other health promoters, and giving smoking cessation advice more frequently; all these were higher in intervention than comparison communities.

Project No Drug Abuse trial *(Sussman 1998)*

- In a trial of Project No Drug Abuse, intervention schools successfully implemented various 'school-as-community' activities including weekly Associated Student Body meetings addressing drug abuse from a wider perspective; these involved approximately 6% of the student population in each intervention school.

Project Northland *(Perry 1996)*

- In Project Northland, planned community task force activities such as discussion with alcohol merchants and policy advocacy took place, although any further impacts of these are not reported.

- One unplanned result was that a majority of schools in comparison communities switched from their previous drug education programmes (including Project DARE, a largely ineffective programme) to adopt Project Northland after the end of the formal evaluation.

III: Sustainability

- A number of studies also reported adoption of programme activities and processes in the wider community after the end of the formal intervention funding period.

Stanford Five-City programme *(Fortmann 1993)*

- At the end of the Stanford Five-City programme, community organisations adopted and carried on implementing intervention activities for several years after the end of the programme.

Minnesota Heart Health programme *(Lando 1995)*

- In the Minnesota Heart Health Programme, a specific programme goal was that activities would be established and maintained in communities after the formal funding period ended.
- Local sponsors enabled 70% of all intervention programmes to continue after the formal study, dropping only slightly to 60% three years later.

Pawtucket Heart Health programme *(Carleton 1995)*

- This was also a goal of the Pawtucket Heart Health programme, but no data are available on this.

COMMIT programme *(1995)*

- Programme maintenance was not an explicit goal of the COMMIT programme, but in the event all 11 communities did in fact continue tobacco control activity.
- A year after the formal end of the programme, nine of the 11 communities had an active tobacco coalition or board, and ten communities had in place paid tobacco control staff. Activities in worksites, cessation and with youth were recorded.

4.6: Policy Changes

- 3 interventions specifically sought to promote the adoption of substance-related policies.

TPOP *(Forster 1998)*

- One goal of the TPOP intervention was to "change local ordinances to more effectively restrict youth access to tobacco". At the end of the intervention period, all seven intervention communities had adopted a comprehensive ordinance, with varying ingredients.
- All seven involved a license fee, imposed financial penalties for the license holder and banned cigarette vending machines in particular locations;
- six required that test purchase attempts be carried out annually to monitor compliance;
- five prohibited self-service displays of tobacco products; and four included fines both for retail staff and for minors involved in illegal under-age sales.
- Over the same period, three of the seven control communities adopted modifications to their tobacco ordinances, including a self-service ban and penalties; one adopted a tobacco-industry proposed ordinance.
- The study authors decised the control community ordinances as "weaker and much less comprehensive" than the intervention community ordinances.

The CATCH intervention *(Elder 1996)*

- This sought to promote the adoption of formal tobacco-free policies in its 56 intervention schools, spread across 3 states.
- The number of schools adopting policies increased markedly over the three years of the study from a baseline figure of 49.7% to 76.8%.
- Because of other events and trends at the time of the intervention, it was difficult to attribute the policy adoption process to the intervention: for example, several school districts and states moved towards blanket adoption of school policies in the period, demonstrating that policies tended to be adopted on a district-wide rather than individual school basis.

Project Northland *(Perry 1996).*

- Finally, in Project Northland, the authors note that five alcohol-related ordinances were successfully passed in the first year of the intervention, including requirement of responsible beverage service training to prevent illegal sales to underage youth and intoxicated patrons.
- Although school alcohol education programmes used in the control communities were monitored in the control communities during the intervention, policy developments in the same period are not recorded, and therefore it is not clear to what extent the alcohol policy changes in Project Northland communities were attributable to the intervention.

5: DISCUSSION

All of the interventions included in this review were judged to have adopted social marketing principles in their design and implementation. That is to say, they all had specific behavioural objectives, used consumer research to understand the target audience, the people whose behaviour they were trying to change, considered ways of segmenting the population and tailored the intervention accordingly and appropriately. They all considered what would motivate people to change ('exchange'), used a combination of the channels and activities that make up 'the marketing mix', and addressed competition or barriers to behaviour change.

Overall, the review has found reasonable evidence that substance use interventions developed using social marketing principles can be effective. A majority of the interventions which sought to prevent youth smoking, alcohol use and illicit drug use reported significant positive effects in the short term. Effects tended to dissipate in the medium and longer term, although around half of the tobacco and alcohol interventions still displayed some positive effects 2 or more years after the intervention. The evidence is more mixed for for adult smoking cessation, although small numbers of programmes were nonetheless effective in this area. To put these results into some sort of context, a recent Cochrane Review of primary prevention for alcohol misuse in young people concluded that 20 out of 56 studies were ineffective; a Cochrane Review of mass media interventions for preventing smoking in young people found two out of six interventions effective; and a Cochrane Review of high quality school-based programmes for preventing smoking found eight out of 15 studies effective (Foxcroft et al 2002, Sowden & Arblaster 1998, Thomas 2002).

The interventions examined in this review also may have had an influence on the behaviour of retailers, on policy adoption, and to have stimulated increases in professional and community attention to substance use issues, although the data on these are less robust and it is difficult to attribute changes to the interventions rather than to other events and trends in the community.

The results should be considered in the light of several potential methodological limitations. In many studies, allocation to intervention or comparison group was carried out at the level of the school, city or community, followed by analysis at the level of the individual, which may lead to spurious findings.

Differences at baseline between intervention and comparison communities were found in several studies, which may cause differential rates of change in outcomes between groups, and attrition was also a problem in a number of studies, particularly those with long-term follow-ups. All these factors mean that results should be treated with caution.

While noting the methodological limitations above, it should be emphasised that the nature of several of the interventions examined in this review precluded the use of a strictly randomised controlled design.

In large-scale multi-component and community interventions and mass media programmes, it is impossible to control fully for other factors which might influence outcomes, even where matched comparison cities or communities are used. It is also difficult, where effects *are* found, to identify whether these are attributable to particular intervention components, or to the combination of activities, or to other factors such as secular trends. Furthermore, intervention approaches such as community organisation, direct action and media advocacy do not lend themselves readily to precise statement as independent variables whose effects can be measured (Stead et al 2002).

The quasi-experimental design also tends to neglect effects and changes which may in themselves be deemed worthwhile, such as changes in community empowerment or shifts in the policy formation process. These sorts of changes are noted in some of the studies examined in this review, but it is possible that they are omitted, or were not measured, in many others.

Another important consideration when assessing the effectiveness of school-based programmes in particular is quality of implementation: in several studies, substance use prevention curricula were not implemented as intended, or were poorly implemented, meaning that any failure to detect effects may reflect weaknesses in delivery rather than in programme theory and design. In other words, it is not sufficient for substance misuse interventions to use appropriate behavioural theories and to be consumer-oriented; they also need to be capable of good quality implementation in real life settings.

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APPENDIX 1

Alcohol, Tobacco and Substance misuse Review Search Methodology

Time constraints did not permit us to conduct a systematic search for primary empirical studies. We therefore decided to search for existing good quality systematic reviews, and to use these as our sample frame for potentially eligible intervention studies.

This strategy had two advantages: it reduced the search process to one that was manageable in the timeframe, and it ensured that all the studies we subsequently included had already been judged of sufficient methodological quality, by previous reviewers, to yield reliable evidence.

An initial search was conducted for systematic reviews of substance misuse interventions. This search was limited to systematic reviews designed, conducted and the studies analysed in such a way that biases were minimised and therefore deemed to be of good quality (as defined by Khan et al 2001[1]).

For this review, the key sources were taken to be:

- The Cochrane Database of Systematic Reviews;
- The Centre for Reviews and Dissemination's databases (Database of Abstracts of Reviews of Effects and Health Technology Assessment Database);
- The EPPI-Centre (the Evidence for Policy and Practice Information and Co-ordinating Centre's) publications list; and
- NICE (the National Institute for Health and Clinical Excellence's) publications database.

The reviews which met these criteria and were used to generate the sample frame are listed below.

No limits were set on the types of interventions; as social marketing interventions can use many different methods and be implemented in many different settings, it was not desirable to exclude any intervention types at this stage. This yielded 35 systematic reviews, covering a diverse range of interventions (for example, health promotion in schools, interventions for preventing tobacco sales to minors, therapeutic drug treatment programmes, workplace interventions).

Where information on individual interventions was provided in the systematic review, this was examined for Andreasen's six benchmarks (Andreasen 2002[2]) to identify if the intervention could be potentially described as social marketing. If insufficient information was provided then the full text of the study articles was retrieved. Supplementary papers were often required to be retrieved to provide information on, for example, a programme's development.

From the **35 reviews**, 310 individual studies were retrieved and assessed in full text against Andreasen's six criteria.

35 interventions met all six of Andreasen's criteria for a social marketing intervention, and were included in the review.

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Alcohol, Tobacco & Substance misuse Review
Systematic Reviews Used to Generate Sample Frame

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APPENDIX 2

Alcohol, Tobacco & Substance misuse Review Studies included

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APPENDIX 3

Alcohol, Tobacco and Substance misuse Review
Overview of included Studies

SUMMARY

Project PATH	Ary 1990
Oregon communities [Project PATH & Community Programme]	Biglan 2000
LST (Life Skills Training for Minority Adolescents)	Botvin 1997
LST (Life Skills Training for Minority Adolescents)	Botvin 1999
LST (Life Skills Training for Minority Adolescents)	Botvin 2001
Pawtucket Heart Health Program	Carleton 1995
COMMIT	1995
Netherlands School-based drug prevention	Cuijpers 2002
Netherlands School-based smoking prevention programme	De Vries 1994
Queensland mass media-based smoking cessation programme	Egger 1983
CATCH	Elder 1996
Project ALERT	Ellickson 1990
Revised Project ALERT	Ellickson 2003
TVSFP (Television, School and Family Project)	Flay 1995
Vermont mass media plus school intervention	Flynn 1994
TPOP	Forster 1998
Stanford Five-City Project	Fortmann 1993
Project SMART	Hansen 1988
USA school-based drug prevention programme	Hecht et al 1993
Minnesota Heart Health Program	Lando 1995
US-Mexican border smoking cessation campaign	McAlister 1992
Project SHAHRP	McBride 2000
USA Vietnamese men smoking cessation campaign	McPhee 1995
Project STAR	Pentz 1989
'Class of 89' study within the Minnesota Heart Health Program	Perry 1992
Project Northland	Perry 1996
Rural African-American smoking cessation programme	Schorling 1997
Iowa Strengthening Families Program	Spoth 2001 / Spoth et al 1999 JCC Psych / Spoth et al 2001 JCC Psych
Project TNT (Towards No Tobacco Use)	Sussman 1993
Project TND (Towards No Drug Abuse)	Sussman 1998
North Karelia Project youth component	Vartiainen 1998
Midwestern community intervention	Wagenaar et al 2000
Project TRUST	Wildey 1995
Alabama workplace quit smoking programme	Windsor & Lowe 1988 (also 1989)

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Ary 1990 Project PATH	6th-9th grade pupils in 22 elementary/middle schools and 15 high schools in Oregon.	School-based prevention programme (Project PATH) comprising 5 sessions per year (grades 6-10). Underpinned by social influences approach, lessons used videotapes and were taught by teachers and peer leaders.	1. Behaviour change goal: Prevent smoking, smokeless tobacco use, marijuana and alcohol. 2. Consumer research: Videos were extensively pretested. 3. Segmentation and targeting: Curriculum content changed each year to reflect developmental stage of target group. 4. Marketing mix: Curriculum, videos, teacher training, peers. 5. Exchange: Videotapes and activities modelled positive forms of friend support in substance use situations. 6. Competition: Curriculum taught resistance skills and addressed social influences.	Randomised controlled trial. **Outcomes and Method:** Self-reported smoking. Baseline survey of 7,837 6th-11th grade students in 37 middle/elementary and high schools. Follow-up at 12 months. **Results:** No effect on uptake among baseline non-smokers. Baseline smokers reported significantly fewer cigarettes smoked per month ($p<0.05$). No effects on alcohol or marijuana use.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Biglan 2000 Oregon communities [Project PATH & Community Programme]	7th-9th grade students in eight pairs of small Oregon communities. Retailers and community organisations.	1. School-based prevention programme (Project PATH) Vs. 2. Community programme comprising: - media advocacy - youth anti-tobacco activities - family communications about tobacco - community mobilisation component to reduce sales to minors.	1. Behaviour change goal: Prevent youth tobacco use. 2. Consumer research: Community mobilisation component previously tested. 3. Segmentation and targeting: Population-wide programme with components designed for different segments in community. 4. Marketing mix: Media, community activities, parent communications, community mobilisation, merchant education. 5. Exchange: Creative anti-tobacco activities for youth; positive reinforcement for responsible retailers. 6. Competition: Reduced availability of tobacco for underage youth.	Matched pairs of communities with random assignment to experimental or control condition. **Outcomes and Method:** Self-reported smoking and intentions; illegal sales. Baseline survey of 4,400 7th and 9th grade pupils in 16 schools. Cross-sectional follow-up surveys at 1, 2, 3 and 4 years (final follow-up 2 years after the intervention). Two conditions compared: 2-yr school-based programme only vs. 4-yr community programme (Oregon 1995). **Results:** At 1-year follow-up, amount of intervention activity was correlated with prevalence of tobacco use ($p<0.10$). Correlation between cumulative number of activities over 3-years of intention and smoking prevalence ($p<0.05$). School-only group had significantly higher intentions ($p=0.01$). Prevalence of smoking in school-only condition increased significantly from baseline to each follow-up, but not in community intervention condition ($p<0.001$). Prevalence of weekly alcohol use increased significantly from baseline to each follow-up in the school-only condition, but not in the community intervention condition ($p<0.001$). Marijuana use had increased less markedly in the community intervention condition by final follow-up. Illegal sales measured through test purchase attempts, in retail outlets in 8 communities. Measures taken at 2-week intervals over 6 months. Aggregate results showed a significant reduction in mean level of sales, from 57% to 22%.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Botvin 1997 *LST (Life Skills Training for Minority Adolescents)*	Predominantly minority ethnic 7th grade students in 7 inner city New York schools.	School-based intervention comprising 15 sessions. Programme is underpinned by social influences theory and cognitive behavioural theory, and emphasises personal competence skills. Lessons are interactive. This version modified for minority youth.	1. Behaviour change goal: Prevent cigarette smoking and other forms of drug use. 2. Consumer research: Previous pilots of programme elements with minority youth. 3. Segmentation and targeting: Curriculum designed to be age-appropriate. Materials and activities modified to be understood by and appealing to minority adolescents. 4. Marketing mix: Classroom activities, media materials, homework assignments, teacher training. 5. Exchange: Curriculum taught cognitive-behavioural skills to build self-esteem and assertiveness. Videos feature positive non-drug using minority ethnic same age role models. 6. Competition: Curriculum taught skills to resist advertising and interpersonal pressure to use drugs, and challenged normative perceptions of drug use prevalence and acceptability.	Randomised controlled trial. **Outcomes and Method:** Self-reported drug use behaviour plus cognitive and attitudinal variables. Baseline survey of 833 7th grade students followed-up at 3 months. **Results:** Intervention students: lower frequency of marijuana use ($p<0.001$), ever use of multiple drugs ($p<0.0001$) and current use of multiple drugs ($p<0.0001$). Other drug outcomes not significant. Lower frequency of smoking and alcohol use ($p<0.01$ for both).

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Botvin 1999 *LST (Life Skills Training for Minority Adolescents)*	7th and 8th grade girls in 29 inner city junior high schools in New York.	School-based intervention (Life Skills Training) comprising 15 sessions in 7th grade and 10 booster sessions in 8th grade. Programme is underpinned by social influences theory and cognitive behavioural theory, and emphasises personal competence skills. Lessons are interactive. This version modified for minority youth.	1. Behaviour change goal: Prevent cigarette smoking and other forms of drug use. 2. Consumer research: Informed by previous evaluations of LST plus focus group with minority youth. 3. Segmentation and targeting: Curriculum designed to be age-appropriate. Materials and activities modified to be understood by and appealing to minority adolescents. 4. Marketing mix: Classroom activities, media materials, homework assignments, teacher training. 5. Exchange: Curriculum taught cognitive-behavioural skills to build self-esteem and assertiveness. Videos feature positive non-drug using minority ethnic same age role models. 6. Competition: Curriculum taught skills to resist advertising and interpersonal pressure to use drugs, and challenged normative perceptions of drug use prevalence and acceptability.	Randomised controlled trial. **Outcomes and Method:** Self-reported smoking frequency. Baseline survey of 2,690 7th grade minority ethnic girls followed-up in 8th grade. **Results:** Significantly lower ever smoking in intervention group (28% vs. 34.5%, $p<0.001$), 30-day smoking (8.8% vs. 12.3%, $p<0.005$), initiation (19.6% vs. 23.9%, $p<0.02$) and escalation from ever to monthly (6.7% vs. 9.9%, $p<0.009$).

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Botvin 2001 *LST (Life Skills Training for Minority Adolescents)*	7th and 8th grade students in predominantly minority ethnic inner city New York schools.	School-based intervention (Life Skills Training) comprising 15 sessions in 7th grade and 10 booster sessions in 8th grade. Programme is underpinned by social influences theory and cognitive behavioural theory, and emphasises personal competence skills. Lessons are interactive. This version modified for minority youth.	1. Behaviour change goal: Prevent cigarette smoking and other forms of drug use. 2. Consumer research: Focus group with minority youth and key informants to assess modifications needed to original LST. 3. Segmentation and targeting: Curriculum designed to be age-appropriate. Materials and activities modified to be understood by and appealing to minority adolescents. 4. Marketing mix: Classroom activities, media materials, homework assignments. 5. Exchange: Curriculum taught cognitive-behavioural skills to build self-esteem and assertiveness. Videos feature positive non-drug using minority ethnic same age role models. 6. Competition: Curriculum taught skills to resist advertising and interpersonal pressure to use drugs, and challenged normative perceptions of drug use prevalence and acceptability.	Randomised controlled trial. **Outcomes and Method:** Self-reported drug use measured in survey of 5,222 7th grade students at 29 schools pre-intervention, post-intervention and at 1 year follow-up. Carbon monoxide breath samples. **Results:** Slight decreases post-intervention in frequency of marijuana and inhalant use, and in frequency of 'getting high'; further analysis found that only the decrease in inhalant use was significant. At 1-year follow-up, lower frequency of smoking in intervention group ($p<0.0012$) and lower cigarette consumption ($p<0.0001$). Lower frequency of drinking ($p<0.0001$), getting drunk ($p<0.004$) and amount drunk on each occasion ($p<0.0007$).

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Carleton 1995 *Pawtucket Heart Health Program*	Adults in a Rhode Island city with relatively low mean household income.	7-year multi-component community intervention to reduce cardiovascular risk factors. Underpinned by social learning theory, community behavioural psychology and community participation, the intervention comprised formal behaviour change programmes (including counselling and groups), grass-roots community and worksite activities, volunteer delivery, unpaid publicity, quit contests and a quitline.	1. Behaviour change goal: To reduce smoking. 2. Consumer research: Ongoing formative evaluation was undertaken to feed back into the programme (eg. led to the decision to add a community-wide programme). Some individual programme elements were pilot tested. 3. Segmentation and targeting: Targeting strategy combined individually- and community- / environmental-targeted activities. Materials were culturally relevant and designed for people with low literacy. 4. Marketing mix: Education, counselling, media, community and worksite activities. 5. Exchange: Quit contests, social support for new behaviours. 6. Competition: Components emphasised “ease of adoption” and support for behaviour change in different community settings.	Quasi-experiment, with Pawtucket receiving the intervention and another city acting as comparison. **Outcomes and Method:** Two cross-sectional baseline surveys, one survey during intervention, and two annual follow-up surveys. Between 1,000-1,900 respondents at each stage. Self-reported smoking. **Results:** Smoking prevalence declined in both Pawtucket and the comparison community by a similar amount. No significant impact.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
COMMIT 1995	Adult smokers in 11 North American communities; community and other organisations.	Community smoking cessation underpinned by community organisation and community participation principles. Components included community organisation and task forces; mass media and media advocacy; cessation groups, contests and resources; and policy advocacy.	1. Behaviour change goal: cessation among heavy smokers 2. Consumer research: community analyses of channels and sectors with potential to address problem, and of facilitating and inhibiting factors. 3. Segmentation and targeting: Activities targeted at different sectors of community including heavy smokers. 4. Marketing mix: Community, media, policy. 5. Exchange: Intervention sought to foster positive smokefree norms; incentives in form of Quit contests. 6. Competition: Self-help materials, cessation support in different environments.	Randomised controlled trial with one of each matched pair of communities being randomly allocated. **Outcomes and Method:** Smoking (self-report and biochemical measure), attitudes. Baseline telephone survey of approximately 60,000 adults. Cross-sectional follow-up survey 5 years later. **Results:** Smoking prevalence decreased in both intervention and control communities; the difference was not significant. Quit rate (quit in past 5 years) significantly higher for light/moderate smokers in intervention communities (p=0.004). Other outcomes not significant.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Cuijpers 2002 Netherlands School-based drug prevention	12 year olds in 12 schools in the Netherlands	School-based drug prevention programme comprising 3 lessons per year over 3 years plus home activities. Underpinned by needs identified in needs assessment, plus social influences approach. Curriculum complemented by school policy development work and information for parents.	1. Behaviour change goal: Prevent smoking. 2. Consumer research: Extensive qualitative and quantitative needs assessment and pre-testing. 3. Segmentation and targeting: Tailored to needs and developmental stage of target. 4. Marketing mix: Curriculum, videos, peers, home activities. 5. Exchange: Sought to provide "fun" "attractive" activities, positive peer role models. 6. Competition: Dealt with indirect and direct pressures to use substances.	Quasi-experiment. **Outcomes and Method:** Reported ever and daily smoking, number of cigarettes per week; alcohol and marijuana use. Baseline survey of 1,930 7th grade students in 12 schools followed-up every year for 3 years after the baseline. **Results:** Intervention students had significantly lower daily smoking immediately after 1st year of intervention ($p<0.05$). No differences 3 years after baseline. Intervention students had significantly lower daily alcohol use immediately and 3 years after baseline, and reported significantly fewer drinks per occasion. Intervention group had significantly lower marijuana use immediately after the intervention but this effect disappeared at later follow-ups.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
De Vries 1994 Netherlands School-based smoking prevention programme	8th grade students in Dutch vocational and high schools.	School-based smoking prevention programme. Underpinned by social influences approach, the programme comprised 5 lessons, including videos, peer-led content and homework activities.	1. Behaviour change goal: Prevent smoking. 2. Consumer research: Needs assessment survey of young people's motives for smoking and non-smoking. 3. Segmentation and targeting: Tailored in light of needs assessment findings; designed to target age of onset. 4. Marketing mix: Curriculum, peers, video, home activities. 5. Exchange: Offered attractive, fun activities as alternatives to tobacco. 6. Competition: Addressed peer and advertising pressures to smoke.	Randomised controlled trial. **Outcomes and Method:** Reported ever, weekly and daily smoking. Baseline survey of 1,784 2nd (US 8th) grade students in 6 vocational and 8 high schools followed-up 1 year later. **Results:** Small but significant impact on experimental smoking at 1 year: onset rate of 42% of baseline non-smokers in intervention group (high schools only) and 52% in control ($p<0.02$). Regular smoking in vocational schools increased less in intervention group (by 7% from 16% to 24%) than in control (by 14% from 16% to 30%). Some short-term non-significant effects on cessation.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Egger 1983 Queensland mass media-based smoking cessation programme	Adults in two communities in New South Wales, Australia	Mass media-based smoking cessation programme. Underpinned by communication theory and "social marketing", comprised mass media (paid and unpaid press, radio, TV), self-help materials, quit line, cessation groups, fun runs, health professional intervention.	1. Behaviour change goal: Smoking cessation. 2. Consumer research: Adverts were pretested. 3. Segmentation and targeting: Targeted at adult population in 3 towns. Some elements were universal, others tailored for a specific community. 4. Marketing mix: Mass media, cessation groups, community activities. 5. Exchange: Testimonials from successful quitters. 6. Competition: Stress management, self-help.	Quasi-experiment. **Outcomes and Method:** Self-reported and biochemical measure of smoking. Baseline survey of knowledge and attitudes followed-up with cross-sectional surveys at 1 and 2 years, approximately 1,600-3,600 adults per wave. **Results:** Significant decline in intervention towns compared to control ($p<0.05$).

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Elder 1996 *CATCH*	5th grade pupils in 96 elementary schools, USA	School-based intervention to promote cardiovascular health (diet, activity, smoking). Underpinned by social learning theory and organisational change, the programme comprised a 4-session smoking prevention curriculum, home-based parent-child component, and environmental component to promote adoption of tobacco-free school policies.	1. Behaviour change goal: Reduce smoking experimentation. Adoption of school tobacco policies. 2. Consumer research: Pilot and process evaluation of programme elements prior to main trial. 3. Segmentation and targeting: Different health behaviours targeted in different years. Activities designed to be age-appropriate. Elementary school years selected as appropriate period for heart health promotion. 4. Marketing mix: Curriculum, home programme, policy. 5. Exchange: Focused on benefits of not smoking, support for quitting. 6. Competition: Encouraged schools to adopt tobacco-free policies.	Randomised controlled trial. Seven schools at each site randomised to school-based intervention, 7 to school and family intervention, 10 to control. **Outcomes and Method:** Smoking prevalence. Number of schools adopting smoke-free policies. Baseline survey of 7,827 5th grade students in 96 schools followed-up for 3 years. **Results:** No significant differences in smoking prevalence between intervention and control group at 3 years. Proportion of schools with policies increased from 45% to 78% in intervention schools, and from 55% to 75% in controls. Significance values not stated.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Ellickson 1990 *Project ALERT*	Junior high school students (age 12-13) in California and Oregon, USA	School-based intervention comprising 8 lessons in 7th grade and 3 lessons in 8th grade. Curriculum is underpinned by 'social influences' approach, highly interactive, and delivered by health educators and teen leaders.	1. Behaviour change goal: Reduce and/or delay use of gateway drugs (alcohol, tobacco, marijuana). 2. Consumer research: Focus groups with students to explore drug use pressures. Pilot test of different delivery methods. 3. Segmentation and targeting: Targeted at optimum age for preventing progression to regular use. Curriculum content designed to be age-appropriate. 4. Marketing mix: Curriculum, teen leaders, media materials. 5. Exchange: Underpinned by Health Belief Model, which emphasises benefits as well of costs of behaviours. Activities designed to elicit students' own beliefs about positive consequences and to personalise benefits of and incentives for non-use. 6. Competition: Drew on Self-Efficacy theory to foster belief that it is possible to resist pro-drug use pressures. Lesson activities include decoding alcohol and tobacco adverts, and practising resistance skills.	Randomised controlled trial comparing health-educator led group, teen-led group and control. **Outcomes and Method:** Self-reported alcohol, tobacco and marijuana use. Baseline survey of 6257 7th grade pupils in 30 schools, followed up at 3, 12, 15 months, 2 years and 5 years. **Results:** Slight reductions in alcohol use at 3, 12 and 15 months; no differences at 2 and 6 years. Significant reductions in ever, weekly and daily smoking at 3-month, 12-month and 15-month follow-up for baseline experimenters: weekly smoking decreased significantly at 15 months (by 50% in teen-led group p=0.006) and current smoking decreased by 50% relative to control in teen-led group (p=0.03). However, among baseline regular smokers, smoking *increased* at 15 months. Baseline regular smokers in intervention reported higher weekly smoking than control. No significant differences at 5 years. Marijuana experimentation was one third lower in intervention compared with control among baseline non-users at 15 months (p<0.05). Baseline non-users in health educator-led group were almost 50% less likely to become current users at 15 months (p=0.01).

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Ellickson 2003 *Revised Project ALERT*	7th grade pupils in middle schools in South Dakota, USA	School-based intervention comprising 11 lessons in 7th grade and 3 lessons in 8th grade, plus home learning activities to involve parents in prevention. New material from original Alert focuses on smoking cessation and alcohol use. Underpinned by 'social influences' approach, highly interactive, and delivered by health educators and team leaders.	1. Behaviour change goal: Reduce and/or delay use of gateway drugs (alcohol, tobacco, marijuana); curb alcohol misuse. 2. Consumer research: Original programme developed using focus groups; this version modified in light of previous evaluation (Ellickson 1990). 3. Segmentation and targeting: Curriculum content designed to be age-appropriate; new activities targeted at smokers and users of alcohol, and at parents. 4. Marketing mix: Curriculum, team leaders, media materials, parents. 5. Exchange: Underpinned by Health Belief Model, which emphasises benefits as well of costs of behaviours. Activities designed to elicit students' own beliefs about positive consequences and to personalise benefits of and incentives for non-use. 6. Competition: Drew on Self-Efficacy theory to foster belief that it is possible to resist pro-drug use pressures. Lesson activities included decoding alcohol and tobacco adverts, and practising resistance skills.	Randomised controlled trial. **Outcomes and Method:** Alcohol, marijuana and tobacco use. Baseline survey of 4,689 7th grade students from 55 middle schools, follow-up 18 months later. **Results:** Intervention students had significantly lower uptake of smoking (19% fewer, $p<0.01$) at follow-up compared with control. Past month and weekly smoking were 23% in intervention group compared with control ($p<0.01$). Significant reductions in marijuana use at follow-up. Non-significant reductions in past month alcohol use, alcohol misuse and alcohol-related consequences, for baseline users; no changes for other groups.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Flay 1995 *TVSFP (Television, School and Family Project)*	7th grade pupils in schools in Los Angeles and San Diego	School-based smoking prevention and cessation programme combined with mass media plus parent involvement. Underpinned by social influences approach and with a strong emphasis on resistance skills, the classroom prevention curriculum comprised 10 sessions delivered over 2 weeks, complemented by daily television programming reinforcing content from the curriculum. The cessation programme comprised sequenced workbooks for pupils and parents, again complemented by daily television programming.	1. Behaviour change goal: Reduce smoking. Increase cessation. 2. Consumer research: Interviews, focus groups, extensive pre-testing and pilot-testing. 3. Segmentation and targeting: Curriculum designed for "transition-prone" junior high school students. Television programming tailored for 7th grade students watching with parents and older adolescents. 4. Marketing mix: Curriculum, mass media, homework. 5. Exchange: Curriculum sought to strengthen motivation for not smoking and provided positive non-smoking role models. Cessation programme included rewards and enjoyable alternatives to smoking. 6. Competition: Strong emphasis on resistance skills in prevention curriculum. Cessation programme included coping strategies and relapse prevention.	Randomised controlled trial comparing combined school and TV programming with each separately. **Outcomes and Method:** Self-reported smoking. Baseline survey of 7,352 grade 7 students in 35 Los Angeles and 12 San Diego schools, with 2 year follow-up. Four conditions were examined: classroom curriculum only, TV only, classroom curriculum and TV, and control. **Results:** Significant changes in mediating variables, including resistance skills, but no consistent effects on behaviour. TV programme was poorly implemented, and classroom delivery very variable.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Flynn 1994 Vermont mass media plus school intervention	4th-10th grade students in two Vermont communities	4-year mass media plus school intervention. Mass media component comprised 36 television and 17 radio spots, broadcast over 4 years. Ads included: portrayal of positive consequences of non-smoking, modelling of refusal, depictions of coping with stress without cigarettes. School programme was underpinned by social influences approach, and comprised a 22-session curriculum delivered over 6 years (grade 4-10).	1. Behaviour: Reduce youth smoking. 2. Consumer research: Extremely extensive diagnostic, formative and pretesting research. 3. Segmentation and targeting: Ads and curriculum designed to be age-appropriate. Some ads tailored for 'conformists' and 'rebels'. 4. Marketing mix: School, mass media. 5. Exchange: Depiction of social support for non-smoking, positive attractive non-smoking role models. 6. Competition: Ads and curriculum modelled refusal skills and addressed pro-smoking norms.	Quasi-experiment. Compared school and media and school-only conditions. **Outcomes and Method:** Smoking in past week, daily smoking. Attitudes and norms. Baseline survey of 5,458 4th-6th grade students with repeat waves up to 2 years after end of intervention. **Results:** School and media group had significantly lower weekly smoking at all follow-ups ($p<0.05$), and significantly lower smokeless tobacco use ($p<0.05$). School and media group had 7.3% lower weekly smoking at 2 years. Significant improvements in attitudes and norms in school and media group ($p<0.05$ each).

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Forster 1998 *TPOP*	Retailers, local officials, media and other stakeholders in Minnesota communities. 8th-10th grade students.	Direct action community organising to encourage adoption of ordinances (local legislation) to curb youth access to tobacco. 3-year intervention included community awareness building, test purchasing, media advocacy, stakeholder consultation and lobbying.	1. Behaviour change goal: Encourage community officials to pass ordinances curbing youth access to tobacco. 2. Consumer research: Stakeholder interviews to assess awareness of issue and motivation/barriers to action. 3. Segmentation and targeting: Power structures were analysed in each community to identify key stakeholders. Activities targeted at key power segments and individuals. 4. Marketing mix: Interpersonal communication, media advocacy, policy development, test purchasing, lobbying. 5. Exchange: Surveys, letters and media coverage were used to show council officials and retailers the benefit (in terms of public approval) of tobacco ordinances. 6. Competition: Establishment and enforcement of legislation to curb under-age access to tobacco.	Controlled trial with stratified random allocation. **Outcomes and Method:** Illegal sales data (obtained through test purchases). Youth smoking behaviour surveys in grades 8-10. **Results:** Illegal sales reduced from 36.7% to 3.1% in intervention communities and 41% to 8% in controlled communities (n.s.). Smoking prevalence increased in intervention and control communities over course of study, but less steeply in intervention community (-4.9%, 95% C1 -9.0 to -0.7). The difference was significant for daily but not weekly or monthly smoking. Other data suggested the difference was not attributable to the intervention.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Fortmann 1993 *Stanford Five-City Project*	Adults aged 25-74 in five California communities.	Community and mass media programme to reduce smoking and other CVD risk factors. Underpinned by social cognitive theory, "social marketing", and community organisation, the intervention comprised television-based smoking cessation programme, PSAs, radio, newspaper articles, cessation booklets, worksite smoking cessation, cessation groups and quit contests.	1. Behaviour change goal: Smoking cessation. 2. Consumer research: Formative research informed media and other elements. 3. Segmentation and targeting: Components for different segments of community, including Spanish-language and rehab patients. 4. Marketing mix: Media, cessation groups, worksite support. 5. Exchange: Motivating media programes, contests, testimonials from successful quitters. 6. Competition: Strategies to avoid weight gain; behavioural problem-solving techniques.	Quasi-experiment, with two intervention and two comparison cities. **Outcomes and Method:** Self-reported and biochemical smoking, knowledge, attitudes and quit attempts. Baseline survey of around 1,800 adults with 4 follow-ups for 6 years throughout intervention. Cross-sectional surveys for 6 years during intervention. **Results:** Smoking prevalence in cross-sectional surveys declined by similar amounts in intervention and comparison communities, but cohort analysis found greater rate of decline in intervention communities (p=0.007). Higher quit rate in intervention cities than control.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Hansen 1988 *Project SMART*	7th grade students in 44 junior high schools in Los Angeles, USA.	School-based substance abuse prevention programme comparing three conditions: Affective programme focused on decision-making, values clarification and stress management; Social influences programme focused on social pressures and resistance techniques; Control. Both comprised 12 sessions.	1. Behaviour change goal: Prevention of tobacco, alcohol, marijuana use. 2. Consumer research: Pilot testing of programmes. 3. Segmentation: Content designed to be appropriate to age of onset. 4. Marketing mix: Curriculum, teacher training 5. Exchange: Affective programme focused on goal setting and motivation; Social influences programme explored how to keep friends in substance use offer situations. 6. Competition: Affective programme taught stress management; Social influences programme taught resistance skills.	Randomised controlled trial comparing social influences programme with affective programme. **Outcomes and Method:** Alcohol, marijuana and tobacco use, plus psychosocial variables. Baseline survey of 2,863 7th grade students followed up at 1 and 2 years. **Results:** Lower smoking onset in social influences group than control (equivalent to a 38% reduction in onset at 1 year $p<0.05$, and 32% at 2 years n.s.). Lower alcohol use onset in social influences programme group than control at 1 year and 2 years. Lower marijuana use onset in social influences than control group at 1 year; only weak effects at 2nd follow-up. Affective programme was ineffective or *increased* marijuana use.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Hecht et al 1993 USA school-based drug prevention programme	High school students in south-western USA	School-based drug prevention programme testing four conditions: • Film. • Film plus discussion. • Live performance. • Live performance plus discussion. Underpinned by resistance and normative approaches.	1. Behaviour change goal: Reduce drug and alcohol use. 2. Consumer research: Focus groups to test materials and approach. 3. Segmentation and targeting: Programme intended to be developmentally and age - appropriate. 4. Marketing mix: Media, drama, class discussion. 5. Exchange: Films and drama designed to be entertaining and engaging; positive role models. 6. Competition: Films and drama modelled resistance skills and addressed social norms.	Randomised controlled trial comparing 5 conditions. **Outcomes and Method:** Drug use, attitudes, skills. baseline survey of 465 high school students, follow-up at 1 month. **Results:** Students in the two interactive groups (film plus discussion, drama plus discussion) had lower generic drug use than control.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Lando 1995 *Minnesota Heart Health Program*	Adults in six communities in Minnesota, USA	5-year community intervention to reduce cardiovascular risk factors (smoking, cholesterol, blood pressure, physical activity). Underpinned by social cognitive theory and community participation, the intervention comprised community organisation, citizen taskforces, mass media, training of health professionals, risk factor screening, quit and win contests, smoking cessation classes and community efforts to change workplace smoking policies.	1. Behaviour change goal: reduce smoking. 2. Consumer research: Intervention components were based on different formative work (eg. telephone survey of parents, needs assessment surveys with students). 3. Segmentation and targeting: Targeting strategy combined individual-, group- and community-targeted activities and activities designed for delivery agents (eg. training) . Some activities targeted at heavier smokers. 4. Marketing mix: Community organisation, media, training, classes, policies. 5. Exchange: Quit and Win contests, support for quitting. 6. Competition: Encouraged adoption of workplace smoking policies.	Quasi-experiment with two countries allocated to intervention and two to control. **Outcomes and Method:** Smoking, attitudes, quit attempts. Baseline survey of 6,379 adults, with annual cross-sectional and cohort surveys throughout four years of intervention and for 2 years after. **Results:** Significantly lower prevalence of smoking among women intervention group compared to control ($p<0.04$). Intervention group women smoked significantly fewer cigarettes per day ($p<0.02$). No significant impact on men.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
McAlister 1992 *US-Mexican border smoking cessation campaign*	Adults in low income, high chronic disease communities on US-Mexican border.	Mass media smoking cessation campaign plus intensive and community components. Media elements (which were in English and Spanish) included television stories about healthy role models, newspaper coverage and radio. Community activities included volunteer networking, self-help booklet distribution; intensive support was offered through one-to-one counselling and support.	1. Behaviour change goal: Smoking cessation. 2. Consumer research: Pilot work including focus groups. 3. Segmentation and targeting: Tailored for Hispanic community. 4. Marketing mix: Media, community, interpersonal support. 5. Exchange: Featured positive Hispanic Mexican role models. 6. Competition: Media depicted alternative coping skills. Counseling for problems perceived to limit ability to change (eg. unemployment, finances).	Quasi-experiment with 2 intervention and 1 control communities. **Outcomes and Method:** Smoking cessation. Baseline survey of 3,200 Mexican Americans age 16-60 with follow-up (of smokers) at 2 years. **Results:** Significantly higher quit rate in one intervention community compared with control (p=0.02), but no difference in the other intervention community.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
McBride 2000 *Project SHAHRP*	13-15 year olds in Western Australia	School curriculum-based programme to reduce alcohol-related harm. Underpinned by social inoculation and normative theory with a strong information and harm minimisation component, curriculum comprised 15 sessions and was highly interactive.	1. Behaviour change goal: Reduce alcohol-related harm. 2. Consumer research: Focus groups, pretesting with students and teachers. 3. Segmentation and targeting: Programme designed to be developmentally-appropriate. 4. Marketing mix: Curriculum, media materials. 5. Exchange: Programme based on a harm minimisation approach (as opposed to prevention/abstinence approach), offering information and skills to enjoy drinking more safely. 6. Competition: Curriculum taught resistance skills and strategies for dealing with high risk situations.	Randomised controlled trial. **Outcomes and Method:** Self-reported alcohol consumption and alcohol-related harm. Baseline survey of 2,343 13 year old pupils in 14 schools with follow-up one month after end of 2-year intervention. **Results:** Both intervention and control group had increased alcohol consumption at follow-up, but this was significantly greater in control group. Control group also had a greater increase in reported alcohol-related harms (n.s.). Significant increases in knowledge found in intervention students (greater among students with low baseline knowledge).

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
McPhee 1995 *USA Vietnamese men smoking cessation campaign*	Vietnamese men in California, USA	Culturally appropriate media-led information and education smoking cessation campaign. Included Vietnamese-language programme on quitting smoking, 35 newspaper feature articles, billboards, PSAs, training for physicians, and translation of smoking ordinances for Vietnamese businesses.	1. Behaviour: Smoking cessation. 2. Consumer research: Prior pilot; focus groups. 3. Segmentation: Tailored for Vietnamese men. 4. Marketing mix: Media, distribution of quit kits. 5. Exchange: Media coverage modelled successful quitting in Vietnamese family context. 6. Competition: Media coverage modelled refusal skills; provision of counselling to support quitting.	Quasi-experiment with one intervention and one comparison area. **Outcomes and Method:** Smoking cessation, attitudes, quit attempts. Baseline telephone survey of 2,900 Vietnamese men, with repeat survey (different respondents) of 2,400 at 2 years. **Results:** No significant difference in smoking prevalence, or in number of cigarettes smoked daily, or in quit rate.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Pentz 1989 *Project STAR*	6th-7th grade pupils in 34 schools in Kansas City, USA	Multi-component 4-year drug prevention programme comprising: paid mass media advertising, school and homework sessions, parents' programme, community organisation, promotion of local health policy change. Underpinned by social learning theory and theory of person-community-environment influences.	1. Behaviour change goal: Substance use prevention. 2. Consumer research: School and community needs assessment. 3. Segmentation and targeting: Components for different segments of community; components for primary target change each year to reflect changes in drug experiences. 4. Marketing mix: Media, school, parents, community, policy. 5. Exchange: Curriculum included assertiveness, peer reinforcement, respected peer role models. 6. Competition: Curriculum taught resistance skills; community policy changes.	Quasi-experiment, with 8 schools randomly assigned to intervention or control, 20 to intervention and 14 to control. **Outcomes and Method:** Alcohol, marijuana and tobacco use, plus intentions, knowledge, skills, norms. Parent alcohol use. Baseline survey of 1,607 6th grade students with follow-up at 1 and 2 years. 8-school subset follow-up at 3 years. **Results:** Smoking: significant changes in intentions ($p<0.01$) and some attitudes ($p<0.05$). Increase in smoking was significantly lower in intervention compared with control at 1 year and 2 years ($p<0.05$). Alcohol: increase in last month and last week alcohol use was lower in intervention group than control ($p<0.05$). No effects at 3 years. Some effects on parental drinking. Marijuana: increase in last month use was lower in intervention than control at 1 yr ($p<0.05$) and 2 yrs.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Perry 1992 *'Class of 89' study within the Minnesota Heart Health Program*	11 year olds in 13 public schools in two Minnesota communities.	Community intervention (Class of 89, implemented as part of Minnesota Heart Health Program) to reduce cardiovascular risk factors. Comprised a school-based intervention underpinned by social influences approach, community organisation, and mass media health education.	1. Behaviour change goal: Reduce smoking and other cardiovascular risk factors. 2. Consumer research: Needs assessment surveys. 3. Segmentation and targeting: Activities targeted at different sectors of population; community activities intended to reinforce impact of youth programme. 4. Marketing mix: School, media, community organisation. 5. Exchange: Depiction of positive healthy role models in mass media programme. 6. Competition: Curriculum addressed social influences and taught resistance skills.	Quasi-experiment invoking schools and communities in 2 matched cities. **Outcomes and Method:** Smoking. Baseline survey of 2,401 primary school 6th grade students in 13 schools with longitudinal and cross-sectional survey follow-up for 3 years (7 schools). **Results:** Significantly lower smoking prevalence and intensity in intervention communities at all follow-ups ($p<0.04$ - $p<0.0001$) (eg. 14.6% weekly smokers in intervention group vs. 24.1% control when students at end of high school).

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Perry 1996 *Project Northland*	6th- 9th grade students in NE Minnesota	Multi-component intervention targeting adolescent alcohol use, comprising 3-year school curriculum, parent activities, peer-led activities, theatre, community taskforces, local alcohol ordinances.	1. Behaviour change goal: Prevent or reduce alcohol use. 2. Consumer research: Extensive pilot tests. 3. Segmentation and targeting: Each year of the intervention was tailored to students' developmental level and to school context. Parent-targeted activities were implemented. 4. Marketing mix: Curriculum, peer-led activities, home activities, materials, community and policy-level activities. 5. Exchange: Attractive alcohol-free activities and materials ('Amazing Alternatives! Program, T.E.E.N.S. [The Exciting and Entertaining Northland Students]. Sponsorship of alcohol-free activities and a youth centre. 6. Competition: Curriculum taught skills for resisting alcohol influences, and challenged normative perceptions of prevalence. Community taskforce activities included passing ordinances requiring responsible beverage service training to prevent illegal sales to minors and intoxicated patrons.	Randomised controlled trial. **Outcomes and Method:** Self-reported alcohol, tobacco, marijuana use. Baseline survey of 2,351 6th grate pupils in 24 Minnesota schools, with follow-up 2.5 years later. **Results:** Alcohol use increased in both groups by follow-up. Past week and past month alcohol use were significantly lower ($p<0.05$) in intervention group than control. Intervention students also had lower tobacco and marijuana use than control students at follow-up (n.s.). 4 year follow-up found no significant differences.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Schorling 1997 *Rural African-American smoking cessation programme*	African-American adults in a rural community in Virginia, USA	Smoking cessation programme delivered through church coalitions, comprising one-to-one counselling, self-help materials, community activities.	1. Behaviour change goal: Increase smoking cessation rate and increase progress along cessation stages of change. 2. Consumer research: Community health needs assessments and community resource inventories. 3. Segmentation and targeting: Within the one-to-one counselling programme, interventions were tailored to individuals' stage of change. Activities were developed for and delivered through both church and non-church channels (eg. "smoking cessation devotional booklets"). 4. Marketing mix: Counselling, materials, community activities. 5. Exchange: Intervention underpinned by community empowerment principles which sought to increase participants' control over issues of importance to them and their community. Counselling emphasised benefits of quitting. Social activities (eg. Gospel Quit Nights) and cessation contests were implemented. 6. Competition: Counselling and self-help materials sought to develop coping skills.	Quasi-experimental, with one county allocated to receive intervention and one to act as comparison. **Outcomes and Method:** Self-reported smoking cessation and stage of change. 648 adults interviewed pre-intervention and 18 months after start of intervention. **Results:** Quit rate post-intervention was 9.6% in intervention community, 6.2% in comparison community. Among church goers, quit rates were 10.5% vs. 5.8%, and among non-church goers 8.8% vs. 6.4%. None of the differences were significant, but a trend towards greater effectiveness in intervention community compared with comparison, and among church goers in particular, was suggested.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Spoth 2001 *Iowa Strengthening Families Program*	6th grade pupils and their families in rural schools in a midwestern state	Iowa Strengthening Families Program comprising 7 sessions delivered once per week (parents and children trained separately for first 6 weeks). Underpinned by Bio-psychosocial model and family protective and risk factor models.	1. Behaviour change goal: Reduce drug and alcohol use by enhancing family protective factors. 2. Consumer research: Programme previously piloted; some programme elements informed by consumer research. 3. Segmentation and targeting: Components for children and parents; tailored for each family; high-risk families. 4. Marketing mix: Interpersonal training, parent sessions, child sessions, video 5. Exchange: Intervention encouraged activities to increase famiily cohesion and positive interactions. 6. Competition: Sessions taught peer resistance skills, managing emotions and conflict.	Randomised controlled trial. **Outcomes and Method:** Alcohol initiation, ever use, been drunk. Baseline survey of 446 families (6th grade students and parents) with 2 year (293 families) and 4 year (303 families) follow-ups. **Results:** Lower alcohol initiation in intervention compared with control at 1 and 2 years. Increase in alcohol 'ever use' and 'ever been drunk' lower in intervention group than control at every year at follow-up, with increasing effect sizes over time.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Sussman 1993 *Project TNT (Towards No Tobacco Use)*	7th grade students in 48 junior high schools in California.	School-based 5-year smoking prevention programme. Compared four curricula, all underpined by social includes approach: Normative social influence, Information social influence, Physical consequence, and Combined. Each curriculum comprised 10 lessons and was interactive.	1. Behaviour change goal: Prevent smoking. 2. Consumer research: Curriculum building blocks were pretested with same age students. 3. Segmentation and targeting: Targeted at age of onset, designed to address appropriate theoretical determinants. 4. Marketing mix: Curriculum, videos. 5. Exchange: Normative programme – included discussion of how to 'still be liked by their friends' in substance use offer situations. 6. Competition: Addressed direct and indirect influences on tobacco use.	Randomised controlled trial comparing social influences curricula: 1. Normative social influences, 2. Informational social influence, 3. Physical consequences, 4. Combined. **Outcomes and Method:** Experimental and weekly use of tobacco and smokeless tobacco. Baseline survey of 6716 7th grade students followed up at 2 years. **Results:** Experimental tobacco use and weekly tobacco use increased significantly less at one year for curricula 2,3 and 4 compared with control ($p<0.05$ for both). For students receiving curriculum 4 (combined), the increase in weekly prevalence was 64% less than in control. Experimental tobacco use increased significantly less at 2 years for all curricula compared with control ($p<0.05$, absolute difference 6-10%. Weekly tobacco use was significantly lower at 2 yrs in combined curriculum than all others ($p<0.05$). Combined curriculum reduced the increase in weekly prevalence by 56% compared with control.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Sussman 1998 *Project TND (Towards No Drug Abuse)*	Continuation high school (high risk) students in California, USA	School-based intervention (Project Towards No Drug Abuse) comprising 9 sessions, reinforced by school-wide events. Curriculum is underpinned by social influences approach, combined with motivational activities and social skills training, and is highly interactive	1. Behaviour change goal: Reduce cigarette, alcohol, marijuana and hard drug use. 2. Consumer research: Focus groups, small scale experiments and piloting used to develop curriculum. 3. Segmentation and targeting: Traditional social influences-type curriculum is modified and tailored to high-risk older adolescents. 4. Marketing mix: Curriculum, school-wide events (eg. sports, job training), workbooks. 5. Exchange: Motivation-type classroom activities helped high-risk students develop more positive self-image. School-wide activities offered drug-free activities (sports, drug-free parties). 6. Competition: Curriculum taught coping and self-control skills and challenged pressures to use drugs.	Randomised controlled trial. **Outcomes and Method:** Self-reported drug use. Survey of 1,074 students from 21 continuation high schools pre-intervention and 1 year post-intervention. Carbon monoxide breath samples. **Results:** No significant reduction in smoking in past 30 days or marijuana use. Significant reduction in hard drug use ($p<0.04$ or $p<0.01$?) and in alcohol use ($p<0.01$) among pupils with higher levels of baseline alcohol use.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Sussman 2002 *Project TND (Towards No Drug Abuse)*	Continuation high school students in California, USA	School-based intervention (Project Towards No Drug Abuse) comprising 12 sessions, taught in one version by health educators and in a second version through self-instruction. Curriculum comprised 9 session TND (see above) plus 3 additional sessions on marijuana use prevention, smoking cessation, and self-control for drug abuse and violence prevention.	1. Behaviour change goal: Reduce cigarette, alcohol, marijuana and hard drug use. 2. Consumer research: Focus groups, small scale experiments and piloting used to develop curriculum. 3. Segmentation and targeting: Traditional social influences-type curriculum is modified and tailored to high-risk older adolescents. 4. Marketing mix: Curriculum, school-wide events (eg. sports, job training), workbooks. 5. Exchange: Motivation-type classroom activities helped high-risk students develop more positive self-image. School-wide activities offered drug-free activities (sports, drug-free parties). 6. Competition: Additional sessions dealt with coping with withdrawal.	Randomised controlled trial comparing health educator delivery, self-instruction and control. **Outcomes and Method:** Self-reported drug use. Survey of 1,037 students from 18 continuation high schools pre-intervention and 1 year later. Carbon monoxide breath samples. 2 year follow-up by telephone and mail. **Results:** Lower monthly use at 2 years for health educator-led group (p=0.16) and for hard drug use (p=0.024). No significant differences found for self-instruction version. Other effects on drug use found for some subgroups.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Vartiainen 1998 *North Karelia Project youth component*	12-13 year olds in 6 schools in North Karelia, Finland.	School- and community-based smoking prevention programme implemented during a community-wide cardiovascular disease prevention programme. Comprised 10 classroom sessions underpinned by social influences approach; a second experimental condition added 5 sessions in the following year.	1. Behaviour change goal: Prevent smoking, reduce cardiovascular risk behaviours. 2. Consumer research: Community analyses, surveys, pilot testing. 3. Segmentation and targeting: Activities targeted at different sectors of population; community activities intended to reinforce impact of youth programme. 4. Marketing mix: curriculum, community activities. 5. Exchange: Programme principles emphasised importance of individual motivation, and sought to "inspire" a community action ethos 6. Competition: Addressed social influences and pressures to smoke; general programme emphasis on social support and environment modification to support adoption of new behaviours in the community.	Quasi-experiment. Compared health-educator led and teacher-led programmes with control. **Outcomes and Method:** Smoking prevalence, number of cigarettes smoked. Baseline survey of 903 7th grade students in 6 schools, followed-up for 15 years (until age 28). **Results:** One-third fewer reported smoking 'once a month' in intervention than control group at 6 months and 2 years; difference found at 8 years only for teacher-led programme. No significant difference at 15 years. Significantly lower uptake of smoking in intervention than control groups over 15 years: 30.8% health educator-led, 29.3% teacher-led, 41.2% control, p=0.02).

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Wagenaar et al 2000 *Midwestern community intervention*	7 Midwestern communities (Minnesota and Wisconsin); 12th grade students and 18-20 year olds in these communities	Community intervention (over 2.5 years) to reduce youth access to alcohol, youth alcohol use, and alcohol-related car crashes. Comprised: • community mobilisation • adoption of local ordinances and enforcement of existing laws on alcohol access • alcohol-free activities for youth • policies on alcohol promotions • media advocacy • merchant education	1. Behaviour change goal: Reduce youth alcohol access, use and related crashes. 2. Consumer research: Community analysis to map local power structure, assessment of community perceptions and local drinking norms. 3. Segmentation and targeting: Components for different segments of community. 4. Marketing mix: Policy change, community mobilisation, media, youth activities. 5. Exchange: Alcohol-free recreational activities for youth, rewards for responsible retailers/servers. 6. Competition: Intervention sought to foster anti-alcohol community norms.	Randomised controlled trial with time series design. **Outcomes and Method:** Alcohol use, heaving drinking, number of drinks on last occasion and in last month; drink-driving; drink-related crashes. Self-reported retailer behaviour. Baseline telephone survey of 5,885 12th grade students with 13 year follow-up. Baseline survey of 3,095 18-20 year olds with 3 year follow-up. Alcohol purchase attempts from licensed outlets. Analysis of archival records on alcohol-related injuries and arrests. **Results:** Arrests for drink-driving were significantly lower in intervention than control communities (p=0.05). No difference in drink-related crashes. No differences found in any alcohol use outcomes. Retailers: intervention retailers had higher rates of checking age ID (n.s.), lower incidence of selling underage (n.s.), and higher perceived risk of prosecution (n.s.). 18-20 year olds reported increased difficulty in buying alcohol (n.s.).

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Wildey 1995 *Project TRUST*	Retailers in 6 low income ethnically diverse communities in San Diego county, CA, USA	One-year long retailer educational campaign to promote greater compliance with laws on youth access to tobacco, comprising mass media, educational materials, employee training videos, community events.	1. Behaviour change goal: To increase retailers' compliance with law and reduce sales to minors. 2. Consumer research: Educational materials were pretested with retailers and community stakeholders. 3. Segmentation and targeting: Different educational strategies developed for managers and sales assistants. Activities developed for secondary target groups of community and media. 4. Marketing mix: Face-to-face education, educational materials, media, community events. 5. Exchange: Compliant retailers were rewarded with positive newspaper coverage and letters of approval. 6. Competition: Education materials sought to provide retailers with skills to refuse underage customers, backed up by free POS materials.	Controlled study. **Outcomes and Method:** Illegal sales data gathered from 260 stores pre-intervention and 1 month post-intervention. 236 stores were followed-up at 6 months. **Results:** Illegal sales reduced from 70% of stores to 32% post-intervention ($p<0.001$). Illegal sales in control stores reduced from 65% to 59% (n.s.). Similar results at 6 month follow-up.

Alcohol, Tobacco & Substance misuse Interventions: Social Marketing Characteristics

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Windsor & Lowe 1988 *(also 1989)* *Alabama workplace quit smoking programme*	University of Alabama employees	Voluntary workplace quit smoking programme comprising 4 interventions: a) brief advice and self help manuals. b) as (a) plus counselling, skills training and buddy support. c) as (a) plus monetary awards for cessation. d) as (b) plus monetary awards for cessation.	1. Behaviour change goal: Smoking cessation. 2. Consumer research: Employee Working Group had input into programme design. 3. Segmentation and targeting: Designed for worksite; some components individually tailored. 4. Marketing mix: One-to-one advice, manuals, incentives. 5. Exchange: Incentives, buddy support, motivation. 6. Competition: Skills counselling and methods to increase social support.	Randomised pre- and post-test comparing (i) cessation manual, (ii) manual plus skills training and buddying, (iii) manual plus financial incentives, (iv) all. **Outcomes and Method:** Smoking cessation. Baseline survey of 378 smokers in a university workplace with follow-up at 6 weeks, 6 months and 1 year. **Results:** Unclear. Continuous quitting was higher in combined group (ii) and (iv), and lower in combined group (1) and (iii) (14.4% vs. 5.8%).