

EFFECTIVE DRUG EDUCATION FOR YOUNG PEOPLE: LITERATURE REVIEW AND ANALYSIS

**By
Allen & Clarke
Policy and Regulatory Specialists Limited**



**MINISTRY OF
YOUTH DEVELOPMENT**
TE MANATŪ WHAKAHIATO TAIOHI

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1. Executive summary

*Waiho mā te tangata e mihi
Let someone else acknowledge your virtues*

The project

The Ministry of Youth Affairs (Youth Affairs) is leading and coordinating a review to identify and encourage best practice in alcohol and drug education. This review is being undertaken in consultation with the Ministries of Education, Health and Justice, and the Alcohol Advisory Council of New Zealand (ALAC). The purpose of the review is to contribute to the following outcomes:

- reduced alcohol and drug use, particularly by young people
- increased understanding about what constitutes effective drug education
- increased uptake of effective drug education by schools and communities
- increased understanding about drugs and their economic and social costs
- identification of gaps in service delivery and research.

The project consists of three phases.

1. *2002/03: information gathering and analysis*
 - undertake a national/international literature review identifying evidence-based best practice and key messages for drug education for young people (in and out of schools), families and communities that not only raise awareness, but also result in sustained behaviour change.
2. *2003/04: Resource development*
 - develop guidelines for effective drug education
 - develop standards for effective drug education
 - develop criteria for purchasers of drug education to use when deciding which programmes best meet their needs
3. *2004/05: Publish standards and guidelines and develop options for community pilots*
 - publish guidelines, standards and criteria developed during 2003/04
 - develop options for pilots in selected communities to develop and introduce appropriate key messages and initiatives for their young people, families and the wider community.

This review is part of the first phase of the project: Information gathering and analysis. The terms of reference for this review are:

To complete a national/international literature review and analysis identifying evidence-based best practice and key messages for drug education for young people (in and out of schools), families and communities that not only raise awareness, but also result in sustained behaviour change.

Overview of findings of this literature review

The literature on drug education shows the following:

- Young people's drug use is shaped by social, cultural and economic contexts. These contexts are also important in developing effective education about drugs for young people. Effective drug education requires the coordination of messages, and active support, by all levels of government and community.
- Young people are more at risk of drug-related harm if they have poor relationships with their families, communities, school or peers. Improving these relationships is one element in effective drug education.
- The development of young people's strengths is likely to reduce their chances of suffering drug-related harm. Development of strengths is one element in effective drug education.
- Drug education is most effective when it reflects the needs and attitudes of young people, and when it is delivered in an interactive manner. Young people should also be involved in the development of drug education programmes to ensure the programmes' relevance.
- Information about young people's drug use is essential for developing effective drug education programmes. Effective drug education sometimes involves the provision of factual and relevant information about drugs and drug use.

These findings are generally consistent with the *Youth Development Strategy Aotearoa* (Youth Affairs 2002).

Summary of key findings of this literature review

Objectives of drug education

The overall objective of any drug education programme should be a net reduction of drug-related harm. This means that a harm minimisation approach should be adopted for drug education. Harm minimisation can include a number of objectives, including abstinence or reduction in use. However, harm minimisation also emphasises realistic, evidence-based strategies, and there is evidence that "drug education programmes having [the goal of abstinence] consistently fail to produce behavioural effects" (WHO 2002). While abstinence should be available as an option for young people, drug education programmes should have other harm minimisation objectives as their focus.

Drug education programmes must be developed carefully to ensure that they result in a net reduction of harm. Drug education strategies should therefore be based on a thorough assessment of the evidence about the likely effects of the strategy.

Particular harm reduction objectives for drug education programmes should be realistic, achievable and measurable. These objectives will vary depending on the nature of the programme, its setting, and the needs of the group undergoing intervention. Those who are participating in the programme should be involved in developing its objectives, and those objectives should reflect the needs of the target group, including the needs as the target group perceives them.

Effectiveness of drug education

The term 'effective' can be used to describe different aspects of drug education programmes or their implementation. A programme can be effective in one way, but ineffective in others. For example, a programme that is effectively delivered in the classroom may not be effective at producing any changes in behaviour among the programme participants. It is not possible to define indicators of effectiveness for a drug education programme without first knowing its objectives.

Evaluation of drug education

The purpose of this report was not to evaluate New Zealand drug education programmes, but to identify best practice. However, in the course of the research, it was noted that there has been little reliable evaluation of drug education in New Zealand, and the report recommends that a framework for evaluation be developed to improve the evaluation of New Zealand drug education programmes.

There are three main types of evaluation that are applicable to drug education:

- **Formative evaluation**, which is evaluation activity directed at optimising a programme.
- **Process evaluation**, which describes and documents what happens in the context and course of a programme to assist in understanding a programme and interpreting programme outcomes, and/or to allow others to replicate the programme in the future.
- **Outcome (and impact) evaluation**, which assesses the positive and negative results of a programme.

To know whether a drug education programme achieves sustained effects, it is necessary to undertake an outcome evaluation, which is usually highly complex and expensive. It is unrealistic to expect all New Zealand drug education programmes to be subjected to outcome evaluations of the rigour necessary to establish their effectiveness at achieving sustained behaviour change.

Instead, this report recommends a three-tier framework for evaluation. Best practice would be established from overseas and New Zealand research, including outcome evaluations. Formative and process evaluations would allow New Zealand drug education programmes to be compared with best practice and developed or modified accordingly. These programmes would then be implemented, and process evaluation would be used to monitor how well this implementation was proceeding.

A subsequent stage of the Effective Drug Education Project is to develop standards for drug education based on current knowledge about best practice. Drug education programmes should be evaluated according to whether they implement best practice.

Proposed three-tier framework for evaluation of drug education		
<i>What is evaluated</i>	<i>Where evaluation takes place</i>	<i>What the evaluation shows</i>
Programme elements	In experimental test sites (formative, process and outcome evaluations)	Whether elements of drug education achieve changes in knowledge, attitudes or behaviour
Programme design	During programme development, in test sites and through evaluation of materials (formative, process and impact evaluations)	Whether the programme is consistent with best practice and likely to achieve harm minimisation
Programme implementation	Classrooms, communities and other settings (process and impact evaluations)	Whether the drug education programme is being implemented properly as designed

Cultural issues

For drug education programmes to work, they must be accepted by and appropriate to their target communities. Therefore, it is important for drug education programmes to be developed in partnership with target communities, which include Māori, Pacific and Asian communities. Drug education programmes should recognise varying concepts of health, family and community that are associated with different target groups.

Causes of drug use – risk and protective factors

It is important to understand how drug education works in order to design effective drug education programmes. Most research in this area focuses on risk and protective factors – it is believed that risk and protective factors are measures of a young person's potential vulnerability or resistance to drug-related harm. For example, an important risk factor is early onset of drug use: the earlier young people are exposed to drugs, the more likely that they will experience later drug-related harm. However, the links between risk and protective factors and drug-related harm are complex and uncertain. Also, there is little research into the way that drug education acts upon risk and protective factors.

There are also functional reasons for drug use beyond risk and protective factors. Some young people may use drugs for functional purposes, such as to achieve excitement or to relax. There are also developmental pathways of drug use – patterns of progression from one drug to the next – although this does not mean that use of one drug causes use of another. These issues in young people's drug use require more research.

It is clear that drug use is not simply about an individual's risk and protective factors, but is also determined by social and environmental factors, such as how a drug is regarded and used in the community. In fact, many risk and protective factors have social and environmental causes. If drug education alters risk and protective factors at the level of the individual, it is likely that the social and environmental causes of

drug use will continue to exert their influence on the individual, and gradually erode any beneficial effects of drug education. For drug education to achieve lasting effects, it is important to have coordinated drug education support in the community, society and in media.

Targeting populations

Targeted programmes are necessary for dealing with young people who are particularly at risk, who are not likely to benefit from universal programmes (eg, because they have left school). There appears to be a special need for programmes targeted at young people who have finished school or have dropped out of school. Programmes should also be targeted at young people who are subject to a high degree of risk, including homeless young people, young offenders, those in special care or those with mental illnesses. Population-wide programmes should be adaptable to account for differences between groups participating in the programmes.

School-based drug education

There is more evidence and literature about drug education in schools than there is about community-based or family-based drug education. It is possible to identify a number of features of effective drug education in schools, and there is growing international consensus about what those features are.

The evidence from international literature suggests that the following elements contribute to the success of drug education programmes in schools:

- relevance to the needs of young people, including the needs as young people perceive them
- interactive and activity-oriented design
- follow-up and ongoing education
- provision of factual information
- social influence approaches (factual information, normative information and resistance skills training).

There is also some evidence for the importance of:

- training for those who deliver the programme
- family-based components
- consistency of the message throughout the school and community.

One of the challenges facing school-based drug education in New Zealand is the autonomy schools have been given in their approach to drug issues. A drug education programme is likely to be less effective if it is provided in a school that has inconsistent policies on drug issues.

Another issue is how to support drug education in the classroom with coordinated policies of government agencies, drug education providers and communities.

New Zealand best practice guidelines or standards should be developed after consultation with stakeholders, and should take into account local needs, attitudes and cultures.

Family-based drug education

Compared with school-based education, there is less evidence about the effectiveness of family-based drug education, but the evidence is positive. Targeted family-based drug education programmes have been shown to be effective in the short term. Although family-based programmes may involve considerable resources, they are an important strategy for reducing drug-related harm among high-risk populations. There is also a small amount of evidence that school-based programmes involving family components can be successful.

Programmes that involve parents and children together appear to be more effective than those that do not. Evaluations of family-based programmes in the United States show the importance of including components that deal with parent-child communications and dynamics.

Community-based drug education

Community-based projects are also promising, although they involve the expenditure of considerable resources and require long-term support to be effective. New Zealand projects are small, and are often based in very small communities. Projects have had most success when they are based on cross-sectoral, collaborative action by groups and agencies that have an existing interest in and responsibility for reducing drug-related harm.

Funding for a coordinator has been a key factor in successful projects and in sustaining community efforts over time. Community ownership has been identified as a key factor in success, and this is particularly important for Māori communities, with whom health promotion has been less effective than with the general population. Māori communities are, however, responsive to involvement in their own projects based on Māori tikanga.

It is important that community action projects be sustained over a reasonable period of time. Social change takes time, and short-term or pilot projects may be working but will not allow for sufficient change to be captured in evaluations or local harm data. Recent community action projects have set realistic objectives related to community capacity building and activities affecting risk-and-protective factors that are known to influence drug use by young people and drug related harm.

Mass media and other interventions

A final means of providing drug education is through mass media and product labelling. These strategies may have cumulative effects that are not captured by evaluation over short periods. Cumulative effects may contribute to slow change in the social cultures around tobacco, alcohol and other drugs that influence individual behaviour, and reinforce messages provided through community action, family-based or school-based education.

Industry sponsorship

There has been recent controversy over tobacco and alcohol industry sponsorship of drug education programmes. To avoid such controversy in the future, and to identify if/when such involvement may be appropriate, it is recommended that guidelines be prepared to provide guidance for drug education providers. There are international precedents for this in Canada and the United States.

Recommendations

This report's recommendations are set out in section 14.

2. Methodology

Introduction

This section of the report describes the process of searching for and locating the literature that has been reviewed and analysed. After a search strategy was developed in consultation with drug education experts, literature was located through searches of national and international databases, references in significant documents, and conference proceedings. The search also involved personal contact, searching of databases, and requests posted to Internet discussion groups. New Zealand literature has been specifically searched for, particularly literature relating to Māori and Pacific people.

Coverage of this review

This report presents key findings from an extensive review and analysis of literature about drug education for young people aged 12 to 24 years. The purpose of the report is to provide a description of the evidence base for drug education that not only raises awareness about drug issues, but also results in sustained behaviour change.

One of the difficulties of developing an evidence base for drug education in New Zealand is that the vast bulk of literature on drug education derives from the United States of America, including the majority of studies that meet scientific standards of rigour. This has meant that the initial literature search conducted for this report resulted in a bias towards international (particularly American) literature, and there was insufficient information about the New Zealand context for drug education.

The context for drug education in New Zealand is quite different to that in the United States. The salient differences are:

- different laws relating to the legal age of drinking and the use of other drugs
- cultural differences, including different mix of cultures and cultural practices
- differences in the availability of drugs and prevalence of drug use
- different overall approach to drug education (harm reduction in New Zealand, as opposed to abstinence in the United States).

Because of these differences, what is evidence of effectiveness in drug education in the United States is not necessarily evidence of effectiveness in New Zealand.

It was decided to conduct a second search for literature with a New Zealand focus, employing different search terms and selection criteria from those used in Allen & Clarke's earlier search of national and international literature. Because scientific models of evaluation and research predominant in the international literature do not reflect Māori and Pacific approaches to research and knowledge, the second search had a particular focus on Māori and Pacific literature.

Research from Australia and the United Kingdom has also been sought for inclusion in this review, as those countries have greater similarities with New Zealand (eg, an

emphasis on harm minimisation and similar legal and cultural attitudes to drugs), than the United States.

There is a growing body of review and research literature in the United Kingdom and Australia. However, there are differences between New Zealand and these other countries that must be considered when evaluating the evidence, including cultural and legal differences.

Categories of literature reviewed

The literature surveyed for this review can be categorised as follows:

- *Large scale literature reviews*
Prompted by concerns about growing drug use and the effectiveness of drug education programmes, there has been a recent burgeoning of literature reviews in the area. This report summarises and synthesises the results of large-scale reviews from Australia, North America and the United Kingdom.
- *Best practice guidelines for drug education*
A number of jurisdictions, researchers and organisations have developed best practice guidelines or principles, intended to guide purchasers and developers of drug education programmes. These are discussed and compared in this review.
- *Meta-analyses of drug education programmes, and research into evaluation methods*
A significant body of literature has developed around the evaluation of drug education programmes, including a number of meta-analyses¹. However, the area of programme evaluation is complicated and controversial, and there is also little consistency about the manner in which programmes are evaluated.
- *Surveys of drug education programmes and individual programme analyses*
There are numerous evaluations and reviews of individual programmes, which employ a variety of evaluation techniques to determine the success of the programmes against their stated intentions. Some of these evaluations are discussed in this review where they shed light on matters that are otherwise not well-researched. However, not all individual evaluations are of equal reliability, and in many cases little evidential weight can be attributed to the evaluation reports.
- *Literature providing a New Zealand context*
There is a fair amount of New Zealand literature that, while not falling into one of the above categories, has been reviewed in order to provide a local context to the international literature and to set out cultural issues that must be taken into account when developing or evaluating drug education programmes for New Zealand.

Conduct of the literature search

¹ A meta-analysis is a type of analysis using a combination and standardisation of the findings of a number of quantitative surveys. This is a useful tool in analysing drug education outcomes as it can both assimilate differing measurement outcomes as well as eliminate potential researcher bias inherent in literature reviews.

The literature search undertaken to inform this review covered numerous electronic databases, the Internet, resource libraries and bibliographies. Some literature was also supplied by the Ministry of Youth Affairs and the Alcohol Advisory Council of New Zealand (ALAC). The search also involved contact with Māori and Pacific researchers and research organisations, searching of New Zealand databases, and posting of requests on Internet discussion groups.

Database search

A database search of several international and national electronic databases of literature was conducted. Draft search terms were developed by the project team to achieve as broad a coverage as possible within the scope of this literature review. Four researchers with expertise in drug education were asked to review and provide comment on the draft search terms.

The search covered:

- literature dealing with the prevention of drug use or abuse
- an age range of 12 to 25 years
- literature published since 1990, although post-1995 literature was favoured
- literature relating to Māori whānau, hapū and iwi
- literature relating to Pacific populations.

The databases searched were: MEDLINE, ERIC, EMBASE, PsycINFO, Cochrane Library, ACP Journal Club, Cochrane Controlled Trials Register, Cochrane Database of Systematic Reviews, DARE (a database not to be confused with the drug education programme), Social Science Citations Index, Science Citations Index, Current Contents, Dissertation Abstracts, INNZ, and Te Puna. The list of databases is set out in Appendix A, which also gives a description of the scope of each database. Allen & Clarke's reference librarian prepared the search strategies and conducted the searches for each database. The search strategies were adapted to deal with differences in the search functionality and subject thesauri of each database.

It was possible to search some of the databases simultaneously. However, the databases were also searched separately to ensure that the search strategies were tailored to the database search languages.

Search terms

The search was conducted using the following keywords (or their stems and variant spellings) in different combinations depending on the syntax or subject thesauri of the databases:

Evaluation

effectiveness
review
meta-analysis
efficacy
program effectiveness

Harm minimisation

abstinence
cessation
attitudinal change
behavioural change
informed use
safe use
knowledge
beliefs
cost-effectiveness
reduced use
reduced harm
harm reduction
prevention

Guidelines

standards
criteria

Programmes

programme
drug education
peer
community
awareness
prevention
strategy
school
media
campaign
health education
health promotion
promotion
health program

Drug

drugs
solvents
alcohol
narcotics
tobacco
smoking
mind-altering substances
psychotropic substances
marijuana
marihuana
cannabis

Internet search

A search of the Internet was conducted using the Google search engine (<http://www.google.com>). This search engine was chosen because of its sophisticated method for ranking the relevance of search results, and because it includes dynamically-generated text extracts in its search results. The search employed combinations of the search terms listed above.

The Internet search was most useful for locating documents produced by institutions with a known interest in drug education. The websites of government education departments and drug education agencies were checked for information.

Selection of articles

Search results from the first search were prioritised by three researchers. Highest priority was given to literature where the abstract described an evaluation methodology based on an experimental or quasi-experimental research design. However, where the abstract indicated an innovative programme or experimental methodology, or was

prepared by a known authority on the subject of drug education or programme evaluation, the reference was also given priority. The factors taken into account in determining priority were:

- evidence of reliable evaluation methodology
- meta-analyses and literature reviews
- date of publication, with most recent publications given priority
- studies conducted in populations with high relevance to New Zealand, including Australia or studies involving indigenous minorities
- whether a programme evaluation was conducted according to experimental or quasi-experimental design or, if not, whether the evaluation could be soundly rationalised
- whether a programme evaluation was conducted by an independent party rather than by those who had developed the programme
- whether any literature review had comprehensive coverage, was thoroughly researched, and assessed the literature carefully according to well-articulated principles.

The next stage involved checking for holdings of the selected literature, and retrieving the literature in order of priority.

Library and resource searches

Specialist libraries were checked for relevant information. The library of ALAC was found to be a useful resource, as was its online research directory: (<http://www.alcohol.org.nz/resources/researchdb/index.html>). Libraries at the Ministry of Youth Affairs, the Ministry of Education, and Wellington School of Medicine were also checked for resources. Publications databases of the Centre for Social and Health Outcomes Research Evaluation (SHORE) and the Ministry of Health were searched. Recent issues of important journals in the field (such as *Addiction*) were scanned for relevant articles.

Bibliography checks

Significant publications were scanned for references. Recent literature reviews in the field of drug education produced a number of useful sources.

Recent conference proceedings

From 24 to 27 February 2003, a representative from the Ministry of Youth Affairs attended an international symposium in Perth, Western Australia titled *Preventing Substance Use, Risky Use and Harm: What is Evidence-Based Policy?* The symposium was organised and hosted by the National Drug Research Institute of Australia, located at Curtin University. Copies of relevant publications were provided to Allen & Clarke.

The Fourth International Conference on Drugs and Young People, *Focusing on Solutions – The Way Forward*, was jointly hosted in Wellington from 26 to 28 May

2003 by ALAC and the Australian Drug Foundation. Conference presentations were sought from numerous participants.

A team member from Allen & Clarke attended the 12th World Conference on Tobacco or Health in Helsinki from 3 to 8 August 2003, and provided copies of relevant presentations.

Focus groups

The Ministry of Youth Affairs held 32 focus groups on drug education in Northland, Auckland, Wellington, Christchurch and Southland during March 2003. A total of 280 young people and 69 adults (30 from schools and 39 from drug education providers) took part.

A report on the focus groups describes the perceptions about drug education held by young people, schools and drug providers who participated in the focus groups.

Internet discussion groups

Requests were posted to Internet discussion groups, seeking suggestions for literature to include in the review. The requests to the A&D Netlink and Te Kupenga Hauora discussion groups produced few responses.

Personal contacts

Numerous individuals and organisations were contacted for suggestions about literature, particularly literature relating to Māori, Pacific and Asian populations. The gratitude of the project team is extended to those people who gave up their time to discuss the project and who provided suggestions.

Feedback from expert review panel

A panel of New Zealand and Australian experts in drug education, research and intervention practice was put together by the Ministry of Youth Affairs. This panel has provided feedback on three drafts of this paper. The feedback has been incorporated where possible, taking into account the project's terms of reference. In addition, the Ministries of Youth Affairs, Health, Justice and Education, the New Zealand Police, and ALAC provided comments on a draft of the report.

Two specialist advisors were contracted to assist with searches for Māori literature and Pacific literature respectively, and to provide comments on a late draft of the report.

3. Definitions of key concepts

In this section, key terms are defined for the purposes of this report. The terms defined are:

- young person
- drug
- drug education
- drug use, misuse and abuse
- harm minimisation.

The term “harm minimisation” is discussed in some detail. Harm minimisation can involve a range of possible strategies to reduce overall harm from drug use, including the promotion of abstinence. However, there should be evidence that the approach taken will result in an overall reduction in drug-related harm.

“Young person”

A young person is a person aged between 12 and 24 years.

The Ministry of Health has identified the period between 12 and 24 years of age as a period of high risk for drug-related harm (Ministry of Health and Ministry of Youth Affairs 2002a). This period coincides with the definition of young person provided by the Ministry of Youth Affairs for the purposes of this report. The upper age limit of 24 years allows for the inclusion of school- and university-based prevention initiatives, and the lower age limit of 12 years ensures the inclusion of the early teens, which are a particularly risky period for the formation of drug-taking behaviour.

“Drug”

The following definition of “drug” from the Ministry of Health’s *National Drug Policy* (1998b) has been adopted:

Tobacco, alcohol, illegal drugs, volatile substances (such as petrol, solvents, and inhalants) and other substances used for psychoactive effects, recreation, or enhancement, as well as prescription and pharmacy-only drugs used outside medical or pharmaceutical advice.

“Drug education”

In this report, the term “drug education” is used to refer to:

Educational strategies that aim to reduce the demand for, and harm from, drug use.

A number of media and methods may be used in drug education. The definition covers school-based drug education as well as the educational components of family and community action projects, and examples of health promotion or education in the

mass media. In this report, the main focus is on preventive drug education, as opposed to education aimed at current drug users.

“Drug use”, “drug misuse” and “drug abuse”

In this report the term “drug use” is preferred over the terms “misuse” and “abuse”.

“Drug use” includes all forms of drug taking, including relatively harmless legal consumption of drugs (such as moderate consumption of alcohol by over-18s), or harmful use of drugs.

There is considerable debate about the use of the terms “misuse” and “abuse” in relation to drugs. There is also a great deal of inconsistency about the way in which these terms are defined. For example, Hawkins et. al. (1991) suggest that the term “drug abuse” has been used to identify at least six conceptually and empirically distinct types of drug-related behaviour, ranging from single use of a drug to repeated pathological use over an extended period.

The concepts of “drug misuse” and “drug abuse” are variable rather than fixed, because the riskiness or harmfulness of drug use varies with the type of drug involved, the personal attributes of the user (including age and the existence of risk factors) and the context or setting of drug use. Social and legal views about drugs can also affect the way these terms are used. For example, “in the United States, especially for illicit drugs among young people, the term ‘use’ has largely been superseded by ‘abuse’, reflecting the view that any use constitutes abuse. According to this view, since abstinence from substances is the ‘only defensible goal for minors’, there is no need for distinctions of use and abuse” (Gilvarry et. al. 2001).

However, such an attitude tends to ignore the fact that drug use (including alcohol and tobacco) is statistically predominant among young people, and that some drug use is tolerated as normal, if not by society, then by young people themselves. In this context, it is unrealistic to stigmatise or pathologise all forms of drug use as “abuse”.

“Harm minimisation”

Harm minimisation is sometimes also known as “harm reduction” or “risk reduction”. Some people draw a distinction between “harm minimisation” and “risk reduction” on the basis that the former focuses on indicators of actual harm (eg, number of overdoses from opiates), whereas the latter focuses on the risk of actual harm (eg, number of persons using opiates) (UNDCP 2000). In this review we have used the term “harm minimisation” to include the reduction of both harm and risk of harm.

Harm minimisation is not any one particular policy or programme; it includes numerous strategies aimed at reducing risks both to individuals and to society (Velleman and Rigby 1990). The following definition is adapted from a briefing prepared in 2000 by the National Drug Policy Team at the Ministry of Health.

Harm minimisation is an approach to drug policy focusing on reduction of any harm arising from drug use, without necessarily eliminating use. Harm minimisation policy should demonstrate an overall net reduction in health, social and economic harms from

drug use.

Harm minimisation does not dictate a particular legal, preventive or treatment approach. Prohibition, legalisation, abstinence or responsible drug use are all legitimate harm minimisation approaches (insofar as they contribute to a net reduction in harm).

A broad range of strategies may be encompassed by a harm minimisation framework, including strategies of:

- supply control
- demand reduction
- problem limitation.

Harm minimisation is a pragmatic public health and societal welfare-based policy. Drug use is accepted as fact, without moral judgment. There is recognition that different harm reduction approaches are appropriate for different drugs, people and situations.

Principles of harm minimisation

The main principles of harm minimisation are as follows (adapted from Riley et. al. (1999):

- Pragmatism: This includes the acknowledgement of actual drug use with its associated risks, but also possible benefits, to the user. Containment and harm reduction may be more practical and feasible than elimination of use.
- Humanistic values: The drug user's decision is accepted as fact. No moral judgment is made condemning or supporting drug use. The dignity and rights of the user are respected.
- Focus on harms: The risk of harms from drug use is the primary issue of concern. Harms are broad and can relate to health, social, economic or a multitude of other factors. Abstinence, as a long-term goal, is neither excluded nor presumed.
- Balancing costs and benefits: Harm minimisation involves a pragmatic process of identifying, measuring (Lenton and Midford 1996), and assessing the relative importance of drug-related problems, their associated broad societal harms, and the costs/benefits of intervention, so that resources can be focused on priority issues.
- Priority of immediate goals: There is a focus on addressing the most pressing, achievable goals, under a hierarchy of goals.

Approach to drug use

Although abstinence from drug use should always be made available as an option for young people, harm minimisation takes into account the belief that drug use will probably never be eliminated. Some forms of drug use are integral to our culture. For example, the legal drug alcohol is an integral part of most Western cultures, just as kava is an integral part of some Pacific cultures. Illegal drug use is never likely to be eliminated by prohibition and law enforcement. Prevalence figures from recent national drug surveys illustrate just how great a part of social experience drug-taking is in New Zealand. Some 87 percent of New Zealanders have ever tried alcohol,

according to the 2001 National Drug Survey, and 52 percent of respondents have tried the illegal drug cannabis (APHRU 2002).

Some people are under the misapprehension that harm minimisation generally condones or facilitates drug use. In fact, while illicit drug use is acknowledged as a fact, it is not condoned in a harm minimisation approach. As well as likely negative health effects, illicit drug use generally has harmful legal and social consequences (eg, fines, prison terms or criminal records). Harm minimisation approaches are therefore generally opposed to illicit drug use, but they seek to avoid any unnecessary compounding of harm through excessive punishment or restrictions on preventive and treatment measures (Ministry of Health 1999). An over-emphasis on law enforcement approaches to drug use, for example, may appear to reduce the harm from drug use, but may generate more harmful secondary consequences.

Harm minimisation recognise a difference between illicit and licit drugs in that illicit drug use can have important social and legal consequences for the user that may not result from licit drug use. However, harm minimisation does not consider that licit drug use is necessarily better for the user, and approaches all drug use with the same principles and set of harm reduction strategies.

Measurement of harm

According to some commentators, harm minimisation focuses on reducing the degree of danger by assessing risks and altering the probabilities of harms occurring (Velleman and Rigby 1990). It is a fundamental principle of harm minimisation that there be a likelihood or demonstration that the policy is effective at reducing net harm (Lenton and Midford 1996; Lenton and Single 1998). This means that it should be demonstrated, against broadly agreed criteria and preferably on the basis of empirical evidence, that net harm has been, or is likely to be, reduced by the policy.

Reduction of harm is far harder to measure than abstention, as measurement of overall harm must be based on a broader set of indices, including health, social and economic factors. The difficulties of measuring harm and risk of harm are illustrated by the National Drug Policy, which cites the promotion of low-tar cigarettes as an example of harm reduction (Ministry of Health 1998b). It is now widely suspected that the promotion of low-tar cigarettes has increased, rather than reduced, harm from smoking (Hughes 2001).

Recommendation

- Drug education programmes in New Zealand should have harm minimisation as their overall objective.

4. Objectives of drug education

Introduction

This section discusses a number of issues about the objectives of drug education. The objectives of any drug education programme should be realistic, in that it should be possible to achieve the objectives given what is known about drug education. They should also be relevant to the needs of young people (including the needs as young people perceive them). A harm minimisation approach is the best framework within which to achieve these requirements.

The objectives of drug education programmes should be tailored to meet the needs of target groups, or to deal with particular harms. Harm minimisation allows for a range of objectives, and can respond to the needs of different harms and target groups. Issues surrounding the development of objectives are also discussed, including partnership with Māori and recognition of cultural differences.

Realistic objectives

It should be an overriding concern that programme objectives are realistic. Programmes should therefore be carefully evaluated against realistic objectives to ensure that they are effective and not harmful. It may be possible to achieve more than one objective with the same drug education programme. However, objectives should be related to what is known to be achievable (ie, for which there is an evidence base), and should be relevant to the known risks for young people in New Zealand (eg, Midford, Lenton and Hancock 2000).

Midford, Lenton and Hancock (2000) see the greatest potential barrier to good drug education as the tendency of decision-makers to select drug education programmes on the basis of what they would like to see happen rather than on the evidence of what can reasonably be achieved. This in turn can lead to the discrediting of an approach when the programme is found to be ineffective at achieving the selected objective.

Harm minimisation and abstinence objectives

There is considerable ongoing debate about whether the objective of drug education programmes should be driven by a focus on abstinence or harm minimisation. Abstinence from drug use will inevitably result in a reduction of drug-related harm, but is not a realistic objective for many young people. The promotion of abstinence to young people is not likely to encourage them to stop using drugs. The WHO report on the prevention of psychoactive substance use concluded that “There is evidence that programmes having [the goal of abstinence] consistently fail to produce behavioural effects, suggesting that there is a need to develop programmes with outcomes other than abstinence as a goal” (WHO 2002).

Abstinence-based approaches offer only one way to deal with the wide range of drugs that are consumed for numerous purposes and in various social settings, legal and illegal. Harm minimisation treats all drugs as potentially risky, and can offer a variety of strategies to prevent their abuse.

There are difficulties in applying principles of abstinence in drug education, since society condones some drugs as legal, and sanctions their use (Duncan 1994). The

promotion of abstinence may not be credible to the target audience if they are already users, or if they live in communities that appear to tolerate some drug use (such as drinking or smoking). Furthermore, for young users who cannot or will not give up drug use, abstinence-focused approaches may miss opportunities to deliver harm-reducing messages about safer drug use. Abstinence messages may also, if they are not delivered in an appropriate manner, stigmatise experimentation with drugs as a deviant form of behaviour. This can have the effect both of alienating young drug users and undermining the credibility of the message.

The equation of effectiveness with use reduction or abstention can stifle the examination of alternative prevention benefits, such as reductions in drug-related harm. Midford, Munro, McBride et. al. (2002) consider that equating effectiveness with use reduction hinders the identification of components of effective practice, “because if only use reduction programs are implemented there is no opportunity to identify other strategies that may offer prevention benefits”.

Harm minimisation provides an alternative to strictly abstinence focused approaches, allowing regulators to coordinate strategies across a range of policy areas. It allows the Government to continue sanctions against illicit drug use, but also takes into account licit drug use (including alcohol, tobacco and pharmaceuticals) and other associated behaviour that can be potentially harmful to an individual or society. For example, criminal activity or health problems associated with some drug use can be targeted as part of a harm minimisation approach (Velleman and Rigby 1990).

There is a wide range of possible prevention objectives that are compatible with a harm minimisation approach. A harm minimisation approach will usually have several objectives at once, including:

- the elimination of pathological drug use
- reducing transitions from experimental drug use to regular drug use
- elimination of any use of drugs, whether experimental, regular or ongoing, and whether or not use is accompanied by social or personal problems (the “abstinence goal”)
- delaying age of onset of drug use
- delaying or reducing initiation into the use of commonly used substances (such as tobacco and alcohol), to prevent later transition into use of illicit substances
- controlling exposure to circumstances involving drug use which may lead to immediate personal harm to self or others
- amelioration of the major precursors of drug use before children are exposed to the possibility of first use.

Relating objectives to the target group

There is a strong consensus that drug education works best when it is tailored to the needs of those who are receiving the education. This forms one of the key recommendations of the major review literature (White and Pitts 1998, Dusenbury and Falco 1995, WHO 2002). It is also important for programmes to be relevant to the needs of young people. This may influence the manner in which programmes

are delivered, and it may also influence the objectives of programmes, particularly in the case of community action projects where communities are given ownership over the programmes (see section 11 of this report). Young people and their communities should be involved in the design of programmes to ensure that objectives identified by them (and reflecting their concerns about drugs) are addressed by the programme.

In particular, there are populations of young people with multiple and complex problems that require specially designed programmes and services. These include homeless young people, young offenders, truants or school drop-outs, those who are in special care, those with learning disabilities, and those with mental illnesses. Because many programmes are likely to be delivered through schools, there is a particular need for targeted programmes that reach young people who are not in school, including young people who have dropped out of school, or who have finished school.

Since drug education programmes are more effective when they are relevant to the needs of young people, one desirable factor in programme design is flexibility – universal programmes should achieve broad coverage, but also be sufficiently adaptable to take into account the requirements of specific groups, while recognising that other groups may require specially developed programmes to meet their needs.

Objectives of drug education and cultural issues

In New Zealand (and in other countries) there is a need to consider the targeting of drug education to different cultures. This is because patterns of use and attitudes towards drug use vary among cultures. In addition, certain prevention measures may be more appropriate for some cultures (or communities) than for others. For example, family-based drug education programmes that are based on a nuclear concept of the family may be less appropriate prevention strategies for a rural Māori community where whānau is the predominant family structure.

Furthermore, concepts of health vary among cultures. Te Whare Tapa Whā model of health is widely accepted as reflecting a Māori view of health. Te Whare Tapa Whā involves a broad view of health as a state of physical, mental, social and spiritual well-being and is based on the concept of a four-sided house. All four sides of the house need to be strong and harmonised to ensure health and well-being (Durie 1994):

Te taha whānau
(family/community)

Te taha wairua
(spiritual)

“Te whare
tapa whā”
concept of
health

Te taha tinana
hinengaro
(physical)

Te taha
(mental)

Spiritual health is not necessarily limited to organised religion, and can extend to “the experience of mutually rewarding encounters between people, a sense of communion with the environment, access to heritage and cultural integrity” (Kingi and Durie 2000).

The Ministry of Health’s publication *He Taura Tieke* (1995) sets out a number of key attributes of health services that can be used to measure their effectiveness for Māori. Many of the key attributes are not only pertinent to health services, but are also relevant to education programmes and have application beyond Māori populations. Parts of the checklist *He Taura Tieke*, and particularly the parts relating to sexual health promotion among rangatahi, can be adapted as a set of objectives for drug education programmes.

Considerations about universal programmes

The evidence set out above suggest that it is likely to be difficult to design a successful “one size fits all” drug education programme. Such programmes can have several disadvantages when compared to programmes that are developed to meet specific local or targeted needs, including the following:

- At-risk young people and families often do not participate because of lack of attendance and involvement (eg, dropout, truancy, frequent absences or illness) (Kumpfer 2002).
- As programmes are targeted at the majority of young people, the programmes often do not contain content tailored for minorities [or any specific groups] (Kumpfer 2002).
- Intensity, dosage, content and method of delivery may be insufficient to change risk factors in higher risk young people. Hence, their effectiveness may be diminished, producing insufficient or temporary outcomes (Kumpfer 2002).
- The programme content may be diluted in order to make it acceptable or relevant to a wider cross-section of the population. Key messages may therefore lose their impact.
- Specific local or sub-group harms are not targeted by universal programmes, so some harms may go unaddressed.

On the other hand, universal, population-wide drug education programmes can help to create an environment that is more supportive of targeted or local initiatives (Toumbourou 2003).

The biggest disadvantage of targeting drug education is that it can be difficult to identify the target population. It is possible that many people who experience drug-related harm in later life would not have been identified as high-risk in adolescence. A recent analysis of data from Australian cross-sectional and longitudinal studies shows that the great majority of teenagers who drank excessively and/or frequently smoked cigarettes had not been categorised as high-risk in early adolescence. Stockwell et. al. (2003) suggests that “a comprehensive prevention policy must include elements which have universal applicability to young people rather than a more selected high risk group”, particularly with respect to alcohol and tobacco. Risk factors were more accurately predictive of the risky use of illicit drugs in adolescence, so there is possibly greater value in targeting high-risk young people for drug education relating to illicit drugs than for alcohol and tobacco.

In the case of solvents (and possibly some other drugs), there are risks in advertising the ready availability of the drug to a wide non-using population in order to reach a small number of users, as it is possible that increasing the public profile and knowledge of solvents may encourage young people to experiment with them. A compromise position adopted in New Zealand by the Ministry of Youth Affairs is to take a low key approach to solvent education, aimed at users, and concentrating on safety issues rather than teaching about solvents as drugs (Drugs and Crime Prevention Committee 2002).

Conclusions and recommendations

Objectives of drug education

The objectives of drug education programmes should be realistic, achievable, measurable, and based on a harm minimisation approach, which aims for an overall reduction in drug-related harm.

It is important for drug education programmes to take into account the needs of young people, so programme objectives should reflect needs identified by those young people where possible.

There is a tendency for decision-makers to select drug education programmes on the basis of wishful thinking. For community-based programmes, where the community determines the objectives of a programme, this may result in communities setting unrealistic objectives (such as achieving large, immediate behavioural changes with a short-term and limited programme) and subsequently becoming disillusioned about the failure of the programme to achieve those objectives. Communities need guidance from professional drug educators and evaluators about the selection of objectives. Objectives of drug education programmes also need to be relevant to communities' differing concepts of health and well-being. For Māori populations, this involves a holistic view of the person and recognition of Treaty of Waitangi principles (including the principle of partnership).

Recommendations

- The objectives of drug education programmes should be realistic, achievable and measurable, and should lead to an overall reduction in drug-related harm.
- Programmes should be established in consultation with the programme participants to ensure that their needs are reflected in the programme objectives.

Harm minimisation approach

Recognising that the risks of harm from drug use, the causes of harm and any harms themselves may vary depending on the drug (or drugs) and the social and personal circumstances of people involved, it is necessary to develop different approaches to the problem of drug-related harm. A harm minimisation approach provides the tools to achieve this, although abstinence from drug use should always be an option for young people.

Decisions about which strategies to use in any given situation should be based on an evidence-based assessment of the net harm reduction that is likely to be brought about by the strategies in that situation. This requires an understanding of the harms involved in drug use in New Zealand, their causes, local cultures, patterns of use, and the likely effects of drug education interventions.

There is a range of possible objectives for drug education within a harm minimisation approach. Drug education will usually have several objectives at once.

Recommendation

- Decisions about which drug education strategies to use in any given situation should be based on an evidence-based assessment of the net harm reduction that is likely to be brought about by the strategies in that situation, having regard to the likely harms involved in drug use, cultural issues, patterns of use, and the likely effects of drug education interventions.

In New Zealand, drug education should be developed for different cultures to ensure that it is designed and delivered in a manner relevant and acceptable to the individual communities and their young people. This will involve partnership between programme developers and the communities and young people who will be involved in the programme. Programmes for Māori should be developed and designed in a manner that gives effect to the principle of partnership and takes account of Māori concepts of health.

Who to target/what drug to target

Targeted programmes are necessary for dealing with young people who are particularly at risk, who are not likely to benefit from universal programmes (eg, because they have left school). There appears to be a special need for programmes targeted at young people who are not in school, including young people who have finished school or dropped out of school. Programmes should also be targeted at young people who are subject to a high degree of risk, including homeless young people, young offenders, those in special care or those with mental illnesses. Population-wide programmes should be adaptable to account for differences between groups participating in the programmes.

Recommendation

- Programmes should be targeted to meet the needs of particular groups. Some programmes should be targeted at young people who are subject to a high degree of risk and those who are not in school. There is also a need for programmes to be targeted to different cultures where there are linguistic, cultural or other reasons why universal programmes might not be suitable.

In the case of readily-available drugs (such as solvents) that are used by small proportions of the population, there may be good reasons to develop targeted programmes aimed at only current users.

Recommendation

- Solvents (and possibly other readily available drugs that, despite their availability, are used by small proportions of the population) should be excluded from universal or general drug education programmes. Education about these drugs should be targeted to current users.

5. Measuring effectiveness

Introduction

This section discusses possible indicators that can be used to measure the effectiveness of drug education programmes. The term “effectiveness”, when used in reference to drug education, has a number of possible meanings, depending on the objectives of a drug education programme, its setting, and the way it has been evaluated. For example, in school settings, “effectiveness” is usually understood to refer to educational outcomes such as the ability of the programme to be delivered to students. In the research literature, “effectiveness” can refer to the ability of programmes to produce sustained behaviour change in participants, or short-term changes in knowledge and attitudes.

In order to measure the effectiveness of drug education programmes, indicators need to be selected against which programmes can be evaluated. These indicators should be relevant to the objectives of the programme, should be readily measurable, and should convey sufficient information to allow an assessment of the programme to be made so that future programme development can be informed.

Measuring effectiveness

Effectiveness may be measured at different levels. A distinction needs to be made between the effectiveness of programme delivery and the effectiveness of the programme itself. A programme may be well delivered in the sense that it is, for example, implemented properly in the classroom according to the lesson plan and in accordance with any relevant guidelines and requirements. We can say that such a programme is effectively delivered. However well delivered, the programme may at the same time fail to have any beneficial impact on the knowledge, attitudes or behaviour of the students if, because of its design or the premises on which it was developed, it is an inherently ineffective programme. Naturally, the design of the programme will have an effect on the way in which it is implemented, and any assessment of the effectiveness of the programme will have to take into account the extent to which it is able to be delivered as intended.

Similarly, the acceptability, popularity or appropriateness of a drug education programme is not an indicator of whether the programme has achieved any change in knowledge about, attitude or behaviour towards drugs. Although it is important for programmes to be acceptable to and appropriate for their participants, it does not follow that an acceptable, appropriate or popular programme is necessarily effective. The Ministry of Education (2000b) has noted that programme evaluation in New Zealand tends to concentrate on market acceptability at the expense of more rigorous analysis of programme effects.

Effectiveness and harm reduction

The effectiveness of drug education programmes is usually measured in terms of whether they achieve changes in behaviour, knowledge or attitudes. Changes in knowledge of and attitudes towards drug use may have an effect on behaviour when they are delivered as part of skills-based training, but there is strong evidence that knowledge- and attitude-based programmes have little effect on sustained behaviour change (WHO 2002).

From a harm minimisation perspective, the effectiveness of a drug education programme should be measured by the extent to which it reduces the overall health, social and economic harms from drug use. This means that a programme's effectiveness depends on how it affects the way in which drugs are used, as well as whether people reduce or abstain from drug use (White and Pitts 1998). However, in evaluations of drug education programmes, behaviour change has usually been measured in terms of reduced or delayed drug use, so it is difficult to ascertain from the literature whether drug education programmes have other harm reducing effects on drug-related behaviour.

The vast bulk of literature on drug education is from the United States, where the emphasis of drug education is on achieving life-long abstinence from tobacco and illicit drug use, and postponement of alcohol use until at least age 21 (the minimum legal age for alcohol consumption in the United States). Generally, this means that the effectiveness of programmes has been measured by the extent to which young people abstain from, or delay, drug use after the programme has been completed. Over 75 percent of published programme evaluations rely on non-use as a measure of effectiveness (Farrington 2001). Much research into young people's substance use has focused on identifying which young people use particular substances as opposed to whether their pattern of use is particularly risky and whether harm or dependence are also experienced (Stockwell et. al. 2003). As a result, there have been some constraints on research into the effectiveness of drug education programmes, particularly with respect to programmes for those who are already using drugs (Paglia and Room 1999, Midford and McBride 2001).

Where programme evaluations adopt blunt indicators of effectiveness (such as abstinence), they may under-report or even fail to detect some of the programme's effects. As a consequence, programmes may be assessed as ineffective even though they do have harm-reducing effects that are not recognised by the evaluation methodology used (Uhl 1998). For example, if a programme's effectiveness is assessed only according to whether participants abstain from alcohol, the programme will be counted as ineffective "every time an adolescent accepts a glass of alcohol from their parents" (Munro 1997).

Abstinence or reduced use may be sufficient indicators of effectiveness in some cases, but with respect to licit drugs like alcohol, and some illicit drugs such as cannabis, additional indicators of effectiveness may be required. Young people are highly likely to use these drugs despite the best efforts of drug educators, but they may alter their behaviour around these drugs in positive and harm-reducing ways as a result of a drug education programme. Abstinence may not be a sufficient indicator of effectiveness for drug education programmes that attempt to broaden the ability of young people to make independent decisions based on sound knowledge about drugs (Stothard and Ashton 2000).

Developing indicators of effectiveness

There are a number of factors that can be taken into account when developing indicators to measure the effectiveness of drug education programmes.

Because it appears that drug education affects the use of different drugs in different ways, it is important to distinguish between drugs in measuring the effectiveness of drug education programmes. Some of the issues that could be used to give depth to indicators are:

- how multiple drug outcomes are dealt with in the evaluation, ie, models that:

- deal separately with each drug identified by outcome measures
- treat multiple drug-taking as “polydrug” behaviour
- use an index of total drug consumption
- the quantity and frequency of drug use
- whether the users experience any forms of drug-related harm, how much and how frequently.

Recent evaluations of a large-scale school-based drug education programmes have demonstrated the usefulness of including risk-factors as indicators (Aarø 2003). While the focus of most evaluations is on whether programmes achieve changes in behaviour towards, attitudes about, or knowledge of drugs, there is less research into the mediating mechanisms by which drug education programmes achieve their effects. A better understanding of these mechanisms would help with programme design and evaluation. Botvin (2000) has called for more research into the way in which effective programmes work, and specifically for research into:

- the extent to which prevention programmes produce an impact on hypothesised mediating variables (such as resistance skills and self-esteem, or even social policy and environmental variables)
- the extent to which changes in these variables lead to changes in drug use.

If these issues were understood more clearly, it would be possible to design and implement programmes and evaluations based on reliable assumptions about how changes in certain indicators ultimately affect drug-using behaviour without having to design the complex and expensive outcome evaluations necessary to measure the behaviour change itself.

Coggans (1998) emphasises the importance of communication in drug education, since informed decision-making is the key to harm minimisation. Young people cannot be expected to make informed decisions about whether or not to use drugs, or how to minimise the risks if they do use drugs, unless they have accurate information on which to base their decisions. Evaluators should therefore include how effectively drug education programmes have communicated accurate information.

Gerrard (1990) suggests that other indicators such as efficiency, humanity or accessibility should also be taken into account when evaluating drug education programmes. Nutbeam (1998) suggests that the reach, acceptability and integrity of

programmes should be evaluated. Issues such as cost, ethics and confidentiality are important to the success of a programme, so should be considered as potential indicators of effectiveness.

In New Zealand other measures are important indicators of a drug education programme's worth, such as compatibility with Māori or Pacific needs, or practicability of local implementation. Because of the holistic view of health in Māori and Pacific communities, indicators should be developed to take into account broader issues such as the involvement of whānau and workforce development. The Aukati Kai Paipa evaluations (Ministry of Health 2003b) recently assessed the accessibility and cultural appropriateness of smoking cessation projects in Māori communities around New Zealand. In that evaluation, indicators were developed in consultation between the communities and the evaluators.

Conclusions and recommendations

It is important to select indicators of programme effectiveness that are realistic, within the scope of the programme, relevant to the needs of the target group, and reflective of harm minimisation objectives.

In educational settings, it may only be reasonable to expect educational outcomes, such as short-term changes in knowledge and attitudes.

The process of selecting indicators will vary depending on the type of programme being developed. For example, indicators for universal school-based programmes may be developed by researchers working with focus groups or trial schools. Indicators for community-based programmes will be developed in consultation with the community, or by the community in consultation with researchers. All programmes need to take into account the requirement for partnership and consultation, particularly with Māori populations.

The choice of indicator will have to take into account the nature of the programme itself and the evaluation that is planned for the programme. It is difficult to recommend indicators without knowing what programme is being evaluated. However, the following recommendations can be taken as a starting point:

Recommendations

- Indicators of programme effectiveness should measure aspects of harm minimisation, such as reductions in risk-taking behaviour, as well as consumption of different drugs. Indicators should include appropriateness or acceptability of the programme (including cultural acceptability), but should also be designed to measure changes in knowledge, attitudes and behaviour of the programme participants.
- Indicators should take account of cultural issues, and should be developed in consultation with the relevant communities.
- Indicators of programme effectiveness should be explicitly related to the objectives of the programme and reflect the programme logic (the steps by which the drug education intervention is believed to effect change in the participants).