

School-Based Education on Alcohol and Drugs –
What to do Now the Evidence is in?

**Sally Casswell
Sally Liggins
Pauline Dickinson**

**Centre for Social and Health Outcomes Research and
Evaluation (SHORE), Massey University,
Auckland, New Zealand**

Summary

Influential reviews of the evaluation literature have concluded that classroom based alcohol education is not an effective strategy to reduce alcohol related harm (eg. Babor et al., 2003). This has created considerable concern among both practitioners and funders of such educational efforts, which are popular in many jurisdictions.

In response to a request from a philanthropic trust in Aotearoa/New Zealand facing such concern we carried out a review of school-based alcohol and drug education programmes being delivered by people external to the schools. This review assessed the programmes against two sets of criteria: first, based on the systematic reviews of the literature, those which were the most promising approaches in terms of effective reduction of use and harm, and, second, those drawn from the literature on best practice with regard to teaching and learning. Where evaluations of these education programmes existed these were also assessed.

The findings indicated that the existing programmes varied in relation to these two sets of criteria but that most programmes were judged likely to be ineffective despite some programmes rating relatively well in terms of best practice principles for teaching and learning. The evaluations were found to be generally inadequate.

One important finding was the lack of clarity on the part of providers and funders of these programmes concerning the difference between learning outcomes and health-related outcomes. An active dissemination process was undertaken with the providers and funders of these education programmes with a view to shaping educational efforts in a more evidence based direction.

Background

Attempts to prevent alcohol and other drug related harm by educating young people in school settings have been a popular strategy in many countries (McBride et al., 2003, Perry et al., 2000). A sizeable evaluation literature exists pertaining to the possible impacts of classroom based alcohol education on subsequent drinking behaviour and alcohol-related harm. A number of reviews have been carried out and the conclusions have been very consistent: there is evidence that classroom based education has been ineffective, particularly in the medium term, in changing alcohol related behaviour (eg. Foxcroft, 2007). This research led the authors of *Alcohol: No Ordinary Commodity* (Babor et al., 2003) to conclude that compared with other available strategies (such as law enforcement initiatives, controls on retail and pricing policies) education programmes are expensive and have little effect on consumption and alcohol-related problems (Babor et al., 2003).

The dissemination of this evidence and the conclusion regarding the likely lack of value of a classroom based approach to alcohol has caused considerable concern (eg. Craplet, 2006). In many jurisdictions alcohol education has a face validity and popularity not supported by evidence. There have been a number of attempts to bolster the use of school based alcohol education either on philosophical grounds or by suggesting that refinements in approach will add effectiveness (eg. Midford et al., 2002).

School based education about illicit drugs (quite often combined with alcohol education) has also been evaluated and has been the subject of a separate systematic review recently (Faggiano et al., 2006). This suggested that life skills training has reduced early stage drug use but there is a lack of information about longer term impacts.

Given this clash between the increasing awareness of the evidence, particularly in relation to alcohol, versus the level of practitioner and political support for the school based education there is a need to develop an evidence-based response to the situation. We were approached by a philanthropic trust which was funding a number of school-based education programmes aiming to reduce alcohol and drug related problems (as well as some broader based mental health promotion programmes). They asked for our help in developing such an evidence-based response and wanted this to cover alcohol and other drug programmes and mental health programmes being taught in New Zealand schools by providers external to the school in 2006. It should be noted that, in New Zealand, Ministry of Education guidelines caution against the use of such external providers instead recommending that alcohol and other drug issues are dealt with within the Health Curriculum. However, decisions about such programmes, which are often marketed directly to the schools, are the responsibility of the Boards of Trustees and Principals of the schools.

This paper describes the research undertaken to assess the likely value of the programmes, with a focus on the alcohol and drug programmes, and the process of dissemination of the findings.

Objectives

The objectives were agreed to be:

1. Identify the key principles and approaches that underpin effective promotion of health and well being in school communities
2. Review published evaluations of alcohol and drug and mental health/suicide prevention programmes/initiatives delivered in NZ schools by external providers (including assessing their methodology, conclusions and limitations)
3. Undertake an environmental scan and review of alcohol and drug and mental health/suicide prevention programmes or initiatives currently being delivered in NZ schools by external providers
4. Analyse the effectiveness of these programmes in relation to the evidence

Methodology

Literature Search for Evidence of Effectiveness

A literature search was conducted to identify the evidence for effectiveness and best practice principles for alcohol and drug and mental health education. The focus of the review was on studies that had been assessed as methodologically sound and of high quality, and as measuring longer term health and behavioural outcomes. These studies included reviews undertaken by the Cochrane Collaboration since 2000 and systematic or robust meta-analyses. A comprehensive literature search of the following biomedical and social science databases was carried out: MEDLINE, Web of Science, SSCI, EBM Reviews, Cochrane Library, ETOH, PubMed, PsychINFO and CINAHL. The search focussed on recent research (1996 to 2006) with a particular focus on meta-analyses and review articles from 2000 onwards. Other literature reviewed included relevant international and New Zealand Ministerial guidelines and policies, as well as literature on best practice principles for effective teaching and learning, whole school approaches to student well being and effective strategies in the wider social context to reduce harm from drugs and promote mental health. International and New Zealand websites were searched, including health education provider sites and a comprehensive literature search was undertaken. International experts on drug education were also consulted. Related documentation (systematic reviews, reports, evaluations, programmes etc) were sourced and reviewed and principles for effectiveness and best practice were identified.

Environmental Scan to Identify Relevant Education Programmes

Contact was made with a range of organisations and key informants to identify any programmes that met project criteria. Those contacted included: schools and universities, colleges of education, national network of the Ministry of Health funded project: Community Action on Youth and Drugs, health education providers, Health Education Teachers Association, staff at Ministries of Health, Education, Youth Development and Social Development, NZ Drug Foundation, Health Promoting Schools Regional Co-ordinators and youth development researchers. All philanthropic organisations funding this project were also contacted for information about relevant programmes they had funded. The criteria for inclusion included programmes that weren't predominately funded by government and which were provided by an organisation external to the school.

Analysis

The literature review provided a narrative overview of the evaluation evidence on school based programmes. The categories of primary prevention (with a focus on universal classroom based education) and early intervention (focused on selected or indicated subgroups and school based) were utilised in the overview. A distinction was drawn between evaluations in which outcomes were health and social impacts (eg use of alcohol and other drugs) and the literature which dealt with teaching and learning outcomes.

Information from the environmental scan was summarised to provide a brief description of the programmes being offered to schools by external providers, including their geographic reach, target group and delivery format. Where available data permitted, analysis was undertaken to assess the degree to which external provider programmes matched against approaches that can achieve longer term behavioural and health outcomes, as well as the principles of effective teaching and learning.

The Rich Dialogue Process

A Rich Dialogue Process (RDP) is a process where stakeholders receive input on an issue, deliberate about the issue and then come together to have a joint dialogue on the issue (Parker and Duignan, 2002). Three facilitated meetings were held as part of this RDP. The first was held with the providers of the education programmes reviewed. The second was held with key government ministries and agencies (Education, Health, Youth Development) and potential funders of the programmes including the Trusts who commissioned the research. The third meeting was held jointly with all the stakeholders. The format of the meetings was that the Trust which had initiated the process presented their rationale for commissioning the research and the researchers presented an overview of the research methodology and the findings followed by questions and discussion. A brief note with a summary of the key points agreed in the first and second meetings were circulated to all stakeholders prior to the third meeting.

Results

New Zealand Programmes

The environmental scan identified seven relevant programmes being taught in New Zealand schools dealing with alcohol and drugs (a further five dealing with mental health were also assessed and reported in detail elsewhere (Dickinson et al., in preparation) . Alcohol and drug programmes included one with an integrated, comprehensive, whole school approach with an early intervention/student assistance component; one theatre production; two classroom drug education programmes; two counselling support services; and one organisation providing resources and policy support. *Ten of the twelve programmes had independent evaluations.*

Teaching and Learning Outcomes

New Zealand policy documents relating to drugs, alcohol, mental health and suicide prevention in the school context mirror international material that emphasises the need for schools to deliver health education in the context of a socio-ecological model that embraces a range of individual and environmental strategies. There is also a focus on embedding these within the principles of health promotion and positive youth development frameworks (Ministry of Youth Affairs, 2002).

Effectiveness of School-Based Programmes in Changing Behaviour and Harm

Universal, Classroom-Based

Our review of published primary prevention programme evaluations, with particular focus on systematic reviews, concluded that the weight of evidence indicates little or no effect of classroom-based, universal, drug and alcohol education programmes on longer term substance use (Babor et al., 2003, Foxcroft, 2007). Strategies that focus on shaping or changing individual behaviour through the promotion of knowledge and skills have been largely ineffective in delaying or reducing drug use. Where effects were evident, these were modest and short term and were stronger in relation to illicit drugs (Faggiano et al., 2006).

Selected Subgroups, Classroom-Based

Foxcroft's systematic review highlighted a promising result for a life skills programme in the context of a culturally specific framing with Native Americans (Schinke 2000 cited in Foxcroft, 2007).

Family Involvement

Some programmes had moved to a focus on training parents in communication with their children. It was concluded on the basis of a longer term, good quality evaluation of one programme that there was promising evidence in relation to this approach and it was worth further investigation (Spoth et al. 2001 cited in Foxcroft, 2007).

Whole-of-School

There is evidence that a change in school policies and a corresponding change in school ethos reduced alcohol and tobacco, although, surprisingly, not mental health promotion indicators of depression and connectedness (Bond et al., 2004, Bond et al., 2007).

Community Engagement

There is theoretical (Gorman and Speer, 1996) and empirical evidence supporting the immediate effectiveness of community action projects in reducing alcohol-related harm among young people (Holder et al., 1997, Wagenaar et al., 2000). School based activity, including whole school approaches to young people's well being, can be one component of a comprehensive community action strategy although, to date, one programme which has focused on the schools with some more limited community engagement has shown medium term effects on drinking but have not shown effects once the intervention was withdrawn (Perry et al., 1996).

Multi-level Activities

A theme that emerges from the literature is that school-based drug and alcohol education by itself is of limited value but a school-wide approach may be useful in the context of community action projects which aim to change the young persons' environment, and include activities which enhance parent's involvement in children's lives. The combination of involvement of families and communities were seen as promising by the authors of the systematic review on primary prevention of alcohol problems (Foxcroft et al., 2003).

Early Intervention

A systematic review of brief interventions with young people in a variety of settings, including schools, found a small effect on alcohol and a larger effect on the (small number of) participants engaged in interventions targeting multiple use (Tait and Hulse, 2003).

Assessing the New Zealand Programmes Against the Evidence

The NZ programmes identified were assessed both against the evidence for effectiveness of creating behavioural and health outcomes and on the basis of best practice principles for implementation, teaching and learning.

Nearly all programmes were rated as likely to be ineffective with regard to sustainable long term health and behavioural outcomes. However, a number of programmes rated reasonably well on nine or more of the twenty one other best practice principles for teaching. Many programmes did well in relation to processes like interactive learning and teaching, social skills focus and having realistic goals and clear aims and objectives. Programmes generally did poorly on their links to effective community level strategies, their embracing of a whole school approach and formulating programmes in light of the evidence for effectiveness of strategies in the wider social and economic contexts.

The Rich Dialogue Process

The researchers' presentation reflected the above findings. In the initial meeting, with providers, there was a varied response, in part reflecting the nature of the programmes being provided. So, for example, one provider made the statement that his organisation had moved away from a universal, classroom based approach instead providing a counselling support service for young people of secondary school age already experiencing problems. He commented that the move away from the classroom based work had reflected his awareness of the literature we reviewed. Others, however, referred to evaluations of their programmes as justification for their activity. These were, in the main, process evaluations some of which commented favourably on the way the programmes had utilised sound teaching and learning principles. Similarly one provider contrasted the evaluation findings presented with the enthusiasm of the schools who wished to purchase their programme. A major theme in the discussion, from the providers who were classroom based, was about the difficulty that working with the broader community posed.

At the second RDP meeting a number of the funders were accepting of the research findings and keen to move on to discuss alternative directions to achieve the aims sought. One, an ex teacher, was less willing initially to accept a lack of evidence for a classroom approach but the general consensus was one of acceptance and moving on. One focus of discussion was the extent of the demands put upon the school in meeting a variety of problems. A contrast was drawn between those issues in which the school could model healthy behaviour, for example, in relation to eating and exercise, as compared with the alcohol and other drug area which was seen as the provenance of outside of school.

Both of the two previous meetings had been well attended but at the third meeting the level of interest was shown by an increase in the numbers; about one third of the participants of the last RDP were new to the process (while not ideal a decision was taken to allow participation by new people). In the third meeting a brief resume of the rationale and the results were provided but most of the time was given over for discussion. Issues that were further discussed were the role of the school, particularly given the failure of the key players from the Ministry of Education to participate (this contrasted sharply with the large attendance from the Ministry of Health and of Youth Development). The primary role of the school is education not to achieve health and safety outcomes and this meant that the school was unlikely to ever be able to provide the time that would be required to achieve these behavioural changes. Despite the temptation posed by having a captive audience available, therefore, there seemed to be a consensus reached about the need to move beyond the classroom. Information was shared by the group which represented the one programme with some cross sector community wide involvement: in this programme counselling was provided by the health sector. The need for infrastructural support to enable such cross sector programmes, particularly in metropolitan contexts where linkages could be harder to make, was agreed.

Discussion

One of the issues that became clear during the course of this project was the common confusion and conflation between learning outcomes and behavioural outcomes. Much evaluation in the area, particularly local small-scale evaluations, are process evaluations which monitor issues such as the interactive nature of the teaching, the clearness of the aims and the fidelity of the teaching. Such issues are also highlighted in various policy and practice guidelines. When a programme does well in these areas there has been a tendency to assume behaviour change will follow. Accepting that the bulk of the evidence suggests this classroom based teaching will not, by itself, impact on health and safety in future years is difficult for those committed to the area who are able to use the process evaluations to bolster their position.

The international evaluation literature is complex, allowing room for uncertainty. There is a need, in reviewing the area in order to draw conclusions to clarify the nature of the programmes (often not well described in the literature), the robustness of the evaluation design (often lacking) and take into account the time frame (of programme and evaluation) and the measures used. Given this complexity the availability of systematic reviews is of great value. Similarly, setting the empirical findings in a theoretical context, which examines the nature of the known influences affecting alcohol and other drug use by young people and contrasts these influences with what is possible in a classroom setting, is useful for interpretation and dissemination of the results.

The promising directions identified in the evaluation literature were summarised by us as involving parents in communication about expectations and discipline; a whole of school approach improving the mental health promoting qualities of the school including issues of school connectedness (Bisset et al., 2006); and a cross sector community wide project affecting issues of supply and marketing. While the empirical basis for these is positive but not extensive the theoretical support is more convincing than relying on a classroom only approach. However, in our country context there were few local models to draw on illustrating these approaches and practitioners were clear that these approaches posed major challenges. The need to establish supportive infrastructure as well as develop promising local initiatives was recognised. A further promising approach identified in the literature was programmes designed to meet specific cultural needs of indigenous people. These were also not represented in the practitioners identified in this project.

There was initial concern over the findings regarding effectiveness of school based education and particularly classroom based but the process of the RDP, which allowed a full presentation of results and time to absorb and discuss the results over a period of time, seemed to contribute to the achievement of a fairly widespread consensus. There was agreement that knowledge outcomes around alcohol and other drugs were appropriately part of the health curriculum in NZ schools and were being addressed in that context (albeit with some concern over the ability of some teachers to deal with the issues). Funding which was being deployed to meet actual health and safety outcomes was better directed outside of the classroom setting and there was a commitment expressed by several of the Trusts involved in this process to continue the momentum and, by funding alternative directions, to shift the nature of alcohol and other drug education in New Zealand.

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References

- Babor, T., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K., Grube, J., Gruenevald, P. J., Hill, L., Holder, H., Homel, R., Osterberg, E., Rehm, J., Room, R., Rossow, I. (2003) *Alcohol: No Ordinary Commodity - Research and Public Policy*, Oxford: Oxford University Press.
- Bisset, S., Markham, W., Aveyard, P. (2006) School culture as an influencing factor on youth substance use. *Journal of Epidemiology and Community Health* 61 485-490.
- Bond, L., Butler, H., Thomas, L., Carlin, J., Glover, S., Bowes, G., Patton, G. (2007) Social and School Connectedness in Early Secondary School as Predictors of Late Teenage Substance Use, Mental Health, and Academic Outcomes. *Journal of Adolescent Health* 40 e9-e18.
- Bond, L., Patton, G., Glover, S., Carlin, J., Butler, H., Thomas, L., Bowes, G. (2004) The Gatehouse Project: can a multilevel school intervention affect emotional wellbeing and health risk behaviours? *Journal of Epidemiology and Community Health* 58 997-1003.
- Craplet, M. (2006) Open letter to my friends and colleagues. *Addiction* 101 450-452.
- Faggiano, F., Vigna-Taglianti, F., Versino, E., Zambon, A., Borraccino, A., Lemma, P. (2006) *School-based prevention for illicit drugs' use*, The Cochrane Database of Systematic Reviews 2006 Issue 2. The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.
- Foxcroft, D., Ireland, D., Lister-Sharp, D., Lowe, G., Breen, R. (2003) Longer-term primary prevention for alcohol misuse in young people: a systematic review. *Addiction* 98 397-412.
- Foxcroft, D., Ireland, D., Lowe, G. and Breen, R. (2007) *Primary Prevention for Alcohol Misuse in Young People (Review)*, The Cochrane Library Issue 2. The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.
- Gorman, D., Speer, P. (1996) Preventing alcohol abuse and alcohol-related problems through community interventions: a review of evaluation studies. *Psychology and Health* 11(1): 95-131.
- Holder, H., Saltz, R., Grube, J., Voas, R., Gruenewald, P., Treno, A. (1997) A community prevention trial to reduce alcohol involved accidental injury and death: Overview. *Addiction* 92(Supplement 2): S155-S171.
- McBride, N., Farrington, F., Midford, R., Meuleners, L., Phillips, M. (2003) Early unsupervised drinking - reducing the risks. The School Health and Alcohol Harm Reduction Project. *Drug and Alcohol Review* 22 263-276.
- Midford, R., Munro, G., McBride, N., Snow, P., Ladzinski, U. (2002) Principles that underpin effective school-based drug education. *Journal of Drug Education* 32(4): 363-386.
- Ministry of Youth Affairs (2002) *Youth Development Strategy Aotearoa: Action for Child and Youth Development*. Ministry of Youth Affairs, Wellington.

Parker, J., Duignan, P. (2002) *RSNZ Science & Technology Community Dialogue Process Report One: Concepts, Dialogue Processes and Recommendations for the Next Stage of the Project*. Royal Society of New Zealand, Wellington.

Perry, C., Williams, C., Komro, K., Veblen-Mortenson, S., Forster, J., Bernstein-Lachter, R., Pratt, L., Dudovitz, B., Munson, K., Farbakhsh, K., Finnegan, J., McGovern, P. (2000) Project Northland high school interventions: community action to reduce adolescent alcohol use. *Health Education and Behavior* 27(1): 29-49.

Perry, C., Williams, C., Veblen-Mortenson, S., Toomey, T., Komro, K., Anstine, P., McGovern, P., Finnegan, J., Forster, J., Wagenaar, A., Wolfson, M. (1996) Project Northland: outcomes of a community-wide alcohol use prevention during early adolescence. *American Journal of Public Health* 86 956-965.

Tait, R., Hulse, G. (2003) A systematic review of the effectiveness of brief interventions with substance using adolescents by type of drug. *Drug and Alcohol Review* 22 337-346.

Wagenaar, A., Murray, D., Toomey, T. (2000) Communities mobilizing for change on alcohol (CMCA): Effects of a randomized trial on arrests and traffic crashes. *Addiction* 95(2): 209-217.