Three Decades of Drug Prevention Research

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ABSTRACT
Dozens of drug prevention programmes have been developed and examined in the past few decades. These interventions are aimed at tobacco, alcohol or all substances. Prevention programmes have different goals, including the following: increasing knowledge about drugs; reducing the use; delaying the onset of first use; reducing abuse; minimizing the harm caused by the use. Most research has been conducted on school-based drug prevention programmes. School-based drug prevention programmes that used interactive methods were found in research to reduce the use of drugs. All school-based drug prevention programmes (interactive and non-interactive) that have examined increase the knowledge about drugs. Although effective school-based prevention programmes are available, the dissemination at schools has not been successful for most programmes. Family-based drug prevention programmes are a promising new area of drug prevention. Most research examining the effects of mass media campaigns about drugs is flawed by major methodological problems. Results suggest that these campaigns cannot reduce the use of substances, but they may increase the effects of community-based interventions. Community interventions (a combined set of activities organized in a specific region or town, with the participation of the residents) are possibly more effective than each of the interventions alone.

Introduction
In the last three decades, dozens of interventions have been developed in Western countries to prevent the use and the abuse of tobacco, alcohol, marijuana and other illegal drugs. Most of these interventions are conducted in schools, but there are also interventions aimed at the parents of adolescents, interventions aimed at professionals working with drug users, and interventions that consist of activities aimed at school, as well as parents, and the larger community. Furthermore, in many Western countries, mass media campaigns aimed at the use and abuse of drugs are conducted regularly.

In this paper we present an overview of the goals, target groups and general contents of these interventions, as well as an overview of the scientific research examining the effects of the interventions. In the last few years we conducted several systematic reviews and meta-analyses, on the effectiveness of drug

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prevention in general (a systematic review of earlier reviews and meta-analyses has been given by Van Gageldonk & Cuijpers (1998)), on innovative preventive school programmes, family programmes, and community programmes (for a systematic review of primary studies, see Bolier & Cuijpers (2000)), on the relative effectiveness of peer-led and adult-led school-based drug prevention (a meta-analysis was made by Cuijpers (2002a)) and on the effective ingredients of school-based drug prevention programmes (systematically reviewed by Cuijpers (2002b)). In this paper we shall present a general overview of the field based on these reviews. Because the field is so large and up to several hundreds of studies and meta-analyses have been conducted, it is not possible to conduct a systematic review or meta-analysis covering the entire field. Therefore, we conduct a traditional review of the field, with all the disadvantages of these reviews (a non systematic selection of the included studies, non systematic analyses of included studies, etc.), but with the advantage that we cover the most important sections of the complete field.

In this paper, we use the word ‘drugs’ in this paper for all substances mentioned earlier (tobacco, alcohol, marihuana and other illegal drugs). Most research examining the effects of drug prevention programmes has been conducted in the USA. In our reviews of the international scientific literature, we found many studies on this topic but scarcely any about European interventions.

Classification of Preventive Intervention

Traditionally, prevention interventions have been classified into the categories of primary, secondary and tertiary prevention. Primary prevention is aimed at preventing the use of drugs altogether, or at preventing abuse and dependence disorders according to diagnostic criteria. Secondary prevention is defined as the early identification and treatment of people who use or abuse drugs. Tertiary prevention is defined as treatment of identified cases, in order to reduce the damage caused by the drug use or abuse. Tertiary prevention is now generally considered to be in fact treatment and not prevention. Tertiary prevention will not be discussed in this section.

In recent years, a new more specified framework for defining preventive interventions has been spreading rapidly among scientists working in the area of prevention of addiction and mental disorders (Mrazek & Haggerty, 1994; National Advisory Mental Health Council Workgroup on Mental Disorders Prevention Research, 1998). Three categories of preventive interventions are distinguished.

(i) Universal preventive interventions are aimed at the general population or a part of it that is not identified on the basis of individual risk factors (e.g. mass media campaigns, and school-based programmes aimed at all students).

(ii) Selective interventions are aimed at individuals or groups of people who have an increased risk of drug use problems (e.g. programmes aimed at children of alcoholics, or at high-risk inner-city youth).

(iii) Indicated prevention is aimed at subjects who do not have addiction problems according to diagnostic criteria, but who have some early characteristics of problematic use (e.g. interventions aimed at youths experimenting with drugs). Early intervention is aimed at subjects who do have addiction problems according to diagnostic criteria, but who have not yet considered
seeking help. In practice, it is often not possible to differentiate between indicated prevention and early intervention. In this paper, we shall consider them as one category of interventions.

Goals and Settings of Preventive Interventions

Preventive interventions in the three categories described above may have different goals, including the following:

(a) increasing the knowledge about drugs in adolescents;
(b) reducing the use of drugs;
(c) delaying the onset of first use;
(d) reducing abuse of drugs;
(e) minimising the harm caused by the use of drugs.

The interventions that have been developed are conducted in several settings. Most interventions are developed for schools, but there are also several interventions aimed at the families of (potential) drug users. Other interventions are aimed at the broader community and may include mass media interventions, community mobilizing committees, educational activities in bars, cafes, discos and house parties, and training of general practitioners, teachers and other professionals who work with adolescents. Most interventions are aimed at children and adolescents between 10 and 16 years of age. It is during this age span that most people start to use drugs, and preventive interventions try to intervene just before the adolescents start using drugs. In Table 1, an overview is presented of universal, selective and indicated preventive interventions in school, family and community settings.

Prevention interventions are, in ideal cases, based on scientific knowledge about the prevalence of drug use in the target population, the age of first use, determinants of drug use, patterns of drug use, mental health problems in the specific population, and a theoretical view of the intervention components that may change behaviour. However, in daily drug prevention practice, the development of prevention interventions is often not conducted systematically. In recent years, manuals, guidelines and overviews have been published to support the systematic development of complex interventions, such as drug abuse prevention programmes (e.g. the framework for development and evaluation of randomised controlled trials (RCTs) for complex interventions to improve health, from the British Medical Research Council (2000)).

In the next few paragraphs, we shall focus on the main categories of preventive interventions; namely school-based interventions, family-based interventions, mass media campaigns, and interventions in the community, and describe the research that has been conducted in these areas. In Table 2 this research and the results are briefly summarized.

School-based Interventions

Over the past 30 years, three phases can be distinguished in the development of school-based drug prevention programmes (Gorman, 1995; Moskowitz, 1989; Perry & Kelder, 1992). In the first phase (early 1960s to early 1970s), programmes largely focused on the provision of knowledge about drugs and the risks of drug use. During the second phase (early 1970s to early 1980s), so-called affective
programmes predominated. Most of these programmes were not drug specific but concentrated on broader issues of personal development such as decision making, values clarification and stress management (Gorman, 1995). In the third phase (early 1980s to date), the social influence model has dominated school-based drug prevention programmes (Hansen, 1992). In this model, resistance skills are developed, sometimes in combination with broader personal and social skills (including components of stress reduction and decision making (Botvin et al., 1990)).

During the three phases of programme development, several hundred studies investigated the effects of drug prevention programmes and several dozens have been found to be methodologically well designed (Tobler et al., 2000). In the last two decades, several meta-analyses have been conducted, to integrate the results of individual studies statistically in order to obtain a better estimate of the real effects of prevention programmes than individual studies can do. In the most comprehensive and most recent meta-analysis it was found that drug prevention programmes have large and significant effects on the knowledge of students about drug abuse (Tobler et al., 2000).

Interactive drug prevention programmes included in this meta-analysis were found to result in significant reductions in drug use (including tobacco, alcohol and illegal drugs), while non-interactive programmes do not. As these effects decrease over time, it is usually assumed that this indicates a delay of onset of drug use. In interactive programmes, the lessons are less structured; the focus is

Table 1. Examples of universal, selective and indicated preventive interventions in school, family, and community settings

<table>
<thead>
<tr>
<th>School</th>
<th>Parents/family</th>
<th>In the community</th>
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<tbody>
<tr>
<td><strong>Universal</strong></td>
<td>Lessons about drugs for all students in high schools</td>
<td>Parent training about parenting and drug use, for all interested parents</td>
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<tr>
<td></td>
<td></td>
<td>Homework assignments for parents and child, taken home from school</td>
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<tr>
<td><strong>Selective</strong></td>
<td>support groups for children of alcoholics</td>
<td>Parent training for addicted parents</td>
</tr>
<tr>
<td></td>
<td>Training programmes for high-risk youths</td>
<td>Support groups for parents of high-risk youths (inner city, minority, etc.)</td>
</tr>
<tr>
<td><strong>Indicated</strong></td>
<td>Mentor programmes for first offenders</td>
<td>Parent training for youths with beginning or early drug problems</td>
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<tr>
<td></td>
<td>Screening and early intervention programmes</td>
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<td></td>
<td>Counselling programmes</td>
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</tbody>
</table>

*Including early intervention.*
not on didactic presentations but on discussions, role playing and interaction between students. Non-interactive programmes are structured; they focus on oral presentations by the teacher and do not stimulate interaction between students. This meta-analysis also shows that effective programmes are all based on the social-influence approach to drug prevention. The social-influence approach to drug prevention is based on the idea that ‘inoculation’ in the classroom against active or indirect social pressure to use drugs will help to prevent drug use (Donaldson et al., 1996). Although the effects on drug use are significant (in

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**Table 2. Overview of major examples of studies examining the effects of drug prevention programmes**

<table>
<thead>
<tr>
<th>School-based interventions</th>
<th>Research</th>
<th>Results</th>
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<tbody>
<tr>
<td>Universal</td>
<td>Several meta-analyses (major examples are by Bruvold (1990, 1993), Rooney &amp; Murray (1996), Tobler et al. (2000), Tobler &amp; Stratton (1997) and White &amp; Pitts (1998)) (the largest includes 144 controlled studies of 207 school-based drug prevention programmes (Tobler &amp; Nicholson (2000))</td>
<td>Universal interactive school programmes have small effects on substance use; non-interactive programmes have no effect on use. All programmes increase knowledge</td>
</tr>
<tr>
<td>Targeted</td>
<td>Several primary studies (major examples are by Eggert et al. (1990, 1994, 1995), Hostetler &amp; Fisher (1997), Rentschler (1996), Valentine et al. (1998) and Weiss et al. (1998)); no meta-analyses</td>
<td>Some interventions have significant effects; for others, no effects on use are found</td>
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<table>
<thead>
<tr>
<th>Family based interventions</th>
<th>Research</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal</td>
<td>Several primary studies (major examples are by Spoth et al. (1998a, b, 1999) and Werch et al. (1991)); no meta-analyses</td>
<td>Recent approaches (e.g. Preparing for the Drug-Free Years) have promising effects</td>
</tr>
<tr>
<td>Targeted</td>
<td>Some primary studies (major examples are by DeMarsh &amp; Kumpfer (1986), Kumpfer et al. (1996) and Werch et al. (1998, 1999)); no meta-analyses</td>
<td>The few studies find promising effects (Strengthening Families)</td>
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<thead>
<tr>
<th>Mass media interventions</th>
<th>Research</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal a</td>
<td>Some primary studies (suboptimal quality) (major examples are be Flynn et al. (1997), Harrington &amp; Donohew (1997), Ramirez et al. (1997), Reis et al. (1994) and Secker-Walker et al. (1997))</td>
<td>Mass media campaigns do not change drug use, but they increase knowledge and may strengthen effects of community interventions</td>
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</table>

<table>
<thead>
<tr>
<th>Community interventions</th>
<th>Research</th>
<th>Results</th>
</tr>
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<tbody>
<tr>
<td>Combined b</td>
<td>One meta-analysis of community interventions aimed at smoking prevention (Sowden &amp; Arblaster, 2002); several primary studies on alcohol (major examples are by Hingson et al. (1996), Holder et al. (2000), Perry et al. (1996) and Wagenaar et al. (2000)); one study on illegal drugs (Pentz et al. (1989))</td>
<td>There is some limited support for the effectiveness of community interventions in helping to prevent the uptake of smoking in young people. Recent community interventions aimed at alcohol are promising</td>
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</tbody>
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a Mass media campaigns are universal.
b Community interventions are often combined interventions including universal and targeted interventions.
interactive programmes), they are also small (standardized effect sizes smaller than 0.20), but interventions with small effects in large populations do have a large impact.

Most school-based prevention programmes are universal interventions, aimed at all students regardless of their risk status. There are several studies examining the effects of selective and indicated prevention programmes on drug use. However, the number of these studies is considerably smaller than the number of studies of universal programmes. The results of the studies examining selective and indicated prevention programmes are not conclusive. Some studies find no effects on drug use (Hostetler & Fisher, 1997; Rentschler, 1996); others do indicate some positive effects (Eggert et al., 1990, 1994, 1995; Valentine et al., 1998; Weiss & Nicholson, 1998). Therefore the conclusion must be that there is no convincing evidence that selective and indicated school-based prevention programmes can reduce drug use or abuse.

Family-based Interventions

There is no doubt that parents have an important influence on the use of drugs by their children, by both genetic factors (Merinkangas, 1990) and social factors such as parental neglect or abuse (Block et al., 1988). Protective characteristics of parents reduce the chance of drug use in adolescents, such as a close relationship between parents and children and involvement of the parents in adolescent activities outside the family (Bry et al., 1997). It is assumed that the influence of parents decreases when children become adolescents and that the influence of peers increases strongly in this age (Engels et al., 1999). However, there are also indications that the parents continue to have a strong influence, for example in the selection of peers (Dusenbury et al., 1994) or by a lifestyle that has been internalized earlier. The parents can also function as role models for their child, and his or her peers and drug use by parents may make drugs easier to obtain for their children.

Several interventions have been developed for parents and families in order to prevent or reduce drug use and abuse in their children. In a recent systematic literature review, seven family based drug prevention programmes were found whose effects were examined in eight controlled studies (Bolier & Cuijpers, 2000). The goals, target populations and contents of the interventions were diverse, and the studies were of varying quality.

There is some evidence that universal family based prevention programmes may reduce drug abuse. An example of a universal family-based programme is the Preparing for the Drug-free Years programme, a five-session training programme in which any parent who is interested can learn to identify risk factors for drugs use, parenting skills and conflict management skills. In a well-designed randomized study of 667 families, it was found that adolescents whose parents participated in the programme used fewer drugs than adolescents whose parents received a minimal intervention only (Spoth et al., 1998a, b, 1999). In another universal intervention, children take home from school some homework assignments. They should work on these assignments together with their parents (the ‘Keep a clear mind’ project). In a randomized trial in which 511 students participated, no difference in drug use was found between adolescents participating in the project and students on a waiting list (Werch et al., 1991).
There is also some evidence that selective and indicated family-based interventions may reduce drug abuse and risk factors for drug use. For example, the Strengthening Families programme is a training programme for addicted parents, aimed at reducing drug use and other problem behaviour in their children. In this programme, a parallel 14-session training is delivered to parents (parenting skills, and communication skills) and to their adolescent children. In a randomized trial in which 118 families participated, positive and significant effects on drug use were found in adolescents and their parents who participated in the programme, compared with families who did not participate (DeMarsh & Kumpfer, 1986; Kumpfer et al., 1996). In another study, it was found that the Stars for families programme had positive and significant effects on drug use (Werch et al., 1998, 1999). In this programme, high-risk families receive individual health advice and skills training for parents. Another programme (DARE to Be You) is aimed at very young high-risk children (2–5 years), and effect research did indicate positive effects on the children and the education style, but the children were too young for effects on drug use to be found (Miller-Heyl et al., 1998).

Overall, we have to conclude that family-based interventions are an interesting new way of preventing drug use in children, but there is not sufficient evidence for their effectiveness to warrant dissemination of these programmes on a large scale. It is important, however, to stimulate further pilot projects and research in this promising area.

Mass Media Interventions

Mass media campaigns on drug use are conducted regularly in most Western countries. There are, however, only a few studies that have examined the effects of mass media campaigns on drug use, and the studies that have been conducted are hampered by several methodological shortcomings.

In a recent systematic literature review, only five studies (published after 1990) examining the effects of mass media campaigns aimed at drug use were found in the international literature (Spruijt-Metz & Van Gageldonk, 2000). Three of these did not include a control group (Harrington & Donohew, 1997; Ramirez et al., 1997; Reis et al., 1994). Because it is often not feasible to use proper control groups in studies examining the effects of mass media campaigns (as the total population is exposed to the intervention), it may be acceptable not to use a traditional pre-post randomized intervention-control group design, but a time series design in which several measurements are conducted before and after the intervention (see, for example, Bland et al. (2002)). The three uncontrolled studies did not use such a design either. In one of the remaining two studies that did use a control group, the effects on drug use were not measured (Freimuth et al., 1997). The other remaining study examined the effects of the Midwest Prevention Project and was relatively well designed, but this project was in fact a large community intervention consisting of several diverse components, such as school interventions, community mobilization and mass media campaigns (Chou et al., 1998; Johnson et al., 1990; Pentz et al., 1989). The effect study of this project did not permit examination of which component of the set of interventions was responsible for the effects. So, we have to conclude that there are no recent well-designed studies giving information about the effectiveness of mass media campaigns on drug use. In a much-cited review of older studies (Flay & Sobel,
1983) it is also concluded that the quality of most studies in the area of mass media campaigns on drugs use is inadequate.

In the field of health education, there is a broad consensus that mass media campaigns are not capable of changing risky behaviour in general (Spruijt-Metz & Van Gageldonk, 2000). This is supposed to be also true for mass media campaigns on drug use. However, there are indications that mass media campaigns can increase knowledge and they may strengthen the effects of local or community interventions (Pentz et al., 1989). This was confirmed in a recent study, which showed that a mass media campaign in combination with a school programme was more effective than the school programme alone in the prevention of tobacco use (Flynn et al., 1997; Secker-Walker et al., 1997).

**Community Interventions**

In recent years, researchers, practitioners and policy makers have become increasingly interested in ‘community interventions’. In these interventions, a combined set of activities is organized in a specific region or town, aimed at adolescents, as well as parents and other people and organizations. An important characteristic of such community interventions is that people living in the community play an important role in deciding which interventions are developed for whom (Bracht & Gleason, 1990). The increasing popularity of community interventions is the result of the growing consensus among scientists and practitioners that the combination of several interventions at different levels is more effective than individual interventions.

In the area of community interventions aimed at drug use, several well-designed studies have been conducted in the area of prevention of alcohol problems. For example, Holder et al. (2000) examined the effects of a five-component community intervention (including media campaigns, training and support of sellers of alcohol, and increasing traffic controls) and found that this resulted in a 49% reduction in drunk driving, a 10% reduction in nightly traffic accidents and a 43% reduction in first aid accidents. In several other community studies comparable results were found (Hingson et al., 1996; Wagenaar et al., 2000). In another community project aimed at reducing alcohol use, a 3 year school-based programme was combined with an extensive parent programme and a community task force to organize other activities to support the reduction of alcohol use by adolescents (Perry et al., 1996). In a well-designed effect study it was shown that the percentage of students that used alcohol was 29% in control students, compared with 24% in experimental students, and alcohol use in the past week was 11% in experimental students compared with 15% in control students.

In the area of community projects aimed at drug use, few studies have been conducted, the most important exception being the studies examining the effects of the Midwestern Prevention Project. In this project, the interventions include school programmes aimed at skills for resisting peer pressure to use drugs and knowledge about drugs (18 lessons), as well as mass media campaigns, several activities to stimulate the involvement of parents in drug prevention, and a coordinating committee in the local community. Two studies have examined the effects of the Midwestern Prevention Project. In the first quasi-experimental study, 42 schools were assigned to an experimental (community intervention) or control condition (only mass media campaign). Significant effects of the
community intervention were found on drug use, 1 year after the intervention. In a second randomized trial, 57 schools were included (Chou et al., 1998). The results of study were comparable but, because more follow-up measurements were taken, it could be shown that the effects of the intervention decreased over time and, $\frac{3}{2}$ years after the intervention, no effects were found any longer.

In the area of smoking prevention, several studies examining the effects of community interventions have been conducted. In a recent meta-analysis four randomized controlled trials could be included (Sowden & Arblaster, 2002). In this meta-analysis some support was found for the effectiveness of these interventions. One of the most important studies in this area was conducted by Biglan et al. (2000). They conducted a randomized trial in eight small communities comparing the effects of a school programme with the effects of a school programme plus community intervention. This community intervention consisted of media advocacy, family communication, and reduction in youth access to tobacco. They found that the effects of the school plus community programme was more effective than the school programme alone.

In summary, the evidence is increasing that community prevention interventions can reduce drug use in the community. There is also increasing evidence that combined sets of interventions in a specified community may be more effective than each of the interventions alone.

**Dissemination**

Dissemination of effective interventions is an important issue in drug prevention. There is sufficient evidence that drug prevention. There is sufficient evidence that drug prevention at school is potentially effective in reducing drug use. However, many of the more effective prevention programmes have been developed in research settings and do not fit easily within the school system, because of the large number of sessions and the requirements of scientific research. Other programmes are disseminated widely in schools but are not effective in reducing drug abuse. The most well-known example in the international literature is the DARE programme. This is the most widely used drug prevention programme in the USA, but many well-designed studies have shown that it has no significant effects on drug abuse (Clayton et al., 1996; Ennet et al., 1994; Lynam, 1999). Although the DARE programme has proven to be ineffective, the programme is now being implemented on a large scale in several other Western countries, including the UK and The Netherlands. This is clear example that successful dissemination is possible even though the programme has no effect on drug use.

One of the next major steps in drug abuse prevention has to be the dissemination of effective prevention programmes and the results of the scientific knowledge base that has been built up in recent decades. That it is possible to disseminate widely drug prevention programmes that have been proven to be effective is shown by the Dutch Healthy School and Drugs project. This is now used in 64–73% of the Dutch secondary schools (Cuijpers et al., 2002).

A major concern in the dissemination of effective programmes is implementation fidelity. Many teachers and other professionals working in daily practice are not easily convinced to work with a standard protocol developed in research. They need to be able to use the protocols and manuals in their own way. Here is a challenge for both researchers and professionals working: to develop methods
that meet scientific criteria and at the same time to meet the requirements of daily practice.

What Determines the Effectiveness of Drug Prevention Programmes?

It is not clear which characteristics make prevention programmes effective. A major problem is that the preventive interventions that have been examined in research differ strongly in goals, target population, theoretical framework, content and research methods. Therefore, it is very difficult to determine what makes prevention programmes work.

In the area of universal school-based drug prevention, we recently conducted a systematic literature review examining the current scientific knowledge the characteristics of effective drug prevention programmes (Cuijpers, 2002b). We reviewed three types of study: meta-analyses (three studies were included); studies examining mediating variables of interventions (six studies); studies directly comparing prevention programmes with or without specific characteristics (four studies on boosters; 12 on peer-led versus adult-led programmes and five on adding community interventions to school programmes).

Seven evidence-based quality criteria could be formulated on the basis of this research.

(i) The effects of a programme should have been proven.
(ii) Interactive delivery methods are superior.
(iii) The ‘social influence model’ is the best that we have.
(iv) Focus should be on norms, commitment not to use and intentions not to use.
(v) Adding community interventions increases effects.
(vi) The use of peer leaders is better.
(vii) Adding life skills to programmes may strengthen effects.

These quality criteria match well with other overviews and studies examining the opinions of experts (Dusenbury, 2000; Dusenbury & Falco, 1995; National Institute of Drug Abuse, 1997).

Discussion

In this study we found that many universal, selective and indicated interventions have been developed for use in schools, in the family and in the community for preventing the use and abuse of drugs. Most effect research has been conducted in the area of school-based drug prevention and this research indicates that school programmes are effective in the reduction of drug use, if they use interactive methods. However, the effects of school programmes are small, and it should be a major challenge for researchers in the next decades to increase the effect sizes of school programmes. This could be realized by better examining the causal factors of drug use and abuse, and by examining the effective ingredients of school-based interventions. Other drug prevention programmes in the family or in the community have not been subjected to sufficient research in order to conclude whether they do reduce the use or abuse of drugs. However, several of these interventions, such as parent training programmes and community interventions, are promising and may reduce drug use and abuse.

The majority of drug prevention programmes are aimed at children and adolescents aged 10–20 years. Very few preventive interventions have been
developed for other age groups. It is known that, in most cases, drug problems disappear spontaneously when young people grow up. There is only a very small proportion of people with continuing drug problems after the age of about 24. It is very useful to examine the characteristics of those with continuing problems and to develop more intense prevention programmes for subjects with a high risk of ongoing problems.

At the beginning of this paper, several goals of drug prevention programmes were presented, such as increasing the knowledge about drugs in adolescents, delaying the onset of first use, reducing use and abuse of drugs, and minimizing the harm caused by the use of drugs. Most research has concentrated on the effects of prevention programmes on knowledge, and the use of drugs. Some studies have examined the effects of prevention programmes on the delay of the first use, but few studies have examined whether it is possible to reduce the number of new cases of problematic drug use. Accordingly, it is not known whether the number of subjects with serious drug problems (according to the diagnostic criteria of the DSM-IV) is significantly reduced by drug prevention programmes while this is in fact one of the most important issues from a public health perspective.

In the last few decades, major advances have been made in the field of prevention of use and abuse of drugs. This includes the development of school-based programmes that are capable of reducing the use of drugs. It also includes the development of many new interventions, such as parent training, mass media campaigns, and community interventions that have promising effects. However, many questions remain unanswered as yet. Can we reduce major drug problems with prevention programmes? Can we prevent drug problems with a chronic nature? How should the dissemination of effective programmes be conducted? It is these and other questions that should be addressed in the decades ahead.

References


