

Effective Interventions Unit

Drug treatment services for young people: A systematic review of effectiveness and the legal framework

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OVERVIEW

This report presents the findings of two reviews. Part one contains the findings of a systematic review of published research into the effectiveness of treatment and care services for drug using young people up to the age of 16 years. It describes the services that have been assessed using moderately strong research studies and their effectiveness in five key areas:

- Reducing drug use.
- Reducing the physical harms associated with drug use.
- Improving the psychological well being of young drug users
- Improving family and social relations of young drug users.
- Improving the uptake of other health and social services among young drug users.

The findings are followed by an outline of the factors associated with success of the interventions. The conclusion and discussion section at the end highlights the key issues and the applicability of the findings to service provision in the UK.

Part two contains the findings of a separate literature review of the current statutory framework that might affect the provision or take up of drug treatment services for young people under the age of 16 years in Scotland.

The possible impact on drug service provision and uptake in Scotland is discussed.

The work presented in this report forms one element of research to review existing knowledge about, and service provision for, the treatment and care of young people with developing or existing problems with drug misuse. The findings of this research are presented in the EIU report 'Drug Treatment services for young people: a research review' of which a summary of the key findings from the above reviews forms part.

EXECUTIVE SUMMARY

Review of the effectiveness of treatment and care services for drug using young people

- The small number of papers included in the review (7 reviews and 11 primary papers) indicates that there is a lack of good quality studies on the effectiveness of drug interventions for young people up to the age of 16 years. Nevertheless, they provide useful insights into the types of interventions that have been evaluated using moderately strong research designs. As such the review provides the best available evidence for the effectiveness of these interventions for this population. The interventions range from in-patient treatments to school-based programmes and are aimed at reducing drug use and the problems associated with drug use. The review focuses on secondary prevention rather than primary prevention. Practically all of the studies are conducted in North America or Canada.

How effective are drugs services in reducing drug use among young drug users?

- There is fairly strong evidence that the following interventions reduce drug use:
Behaviour therapy;
Culturally sensitive counselling;
Family therapy;
12-step Minnesota programmes.
- Interventions also effective in reducing drug use, although less successful are:
General drug treatment programmes;
Therapeutic community and residential care;
School based programmes that use life skills development and are targeted at high risk groups.
- Purely educational programmes are generally ineffective in reducing drug use and there is an indication that some life skills interventions for school children might increase drug use among males.

How effective are drugs services in reducing the physical harms associated with drug use among young drug users?

- There were no studies identified that assessed the effectiveness of interventions in reducing the physical harms associated with drug use among young people.

How effective are drugs services in improving the psychological wellbeing of young drug users?

- There is fairly strong evidence that family therapy is effective in reducing psychological problems of young drug users.
- Other interventions although successful have a weaker effect and include:
Behaviour therapy;
General drug treatment services;
Family problem solving for young people with low levels of depression who have harmed themselves or overdosed;
Therapeutic community offering coping and skills development;
School based interventions that provide life skill development.

- Family problem solving for young people with high levels of depression who have harmed themselves, or taken an overdose, is ineffective in reducing suicide ideation. Similarly school based counselling and support is not effective in reducing depression or suicide ideation. There is also an indication that older school children exposed to life skills training are more receptive to the idea of using drugs.

How effective are drugs services in improving the family and social relations of young drug users?

- There is fairly strong evidence that the following interventions are effective in improving family or social relations:
 - Family therapy;
 - Family teaching;
 - Non-hospital day programmes;
 - Residential care services;
 - School life skills interventions.
- Interventions also effective in improving family and social relations, although less successful are:
 - Behaviour therapy;
 - Community based psycho-education;
 - Family therapy in relation to drug arrests and improving school grades;
 - School-based interventions such as counselling, academic support and life skills.
- Interventions shown to be ineffective in improving family or social relations are:
 - Hospital in-patient programmes;
 - Family problem solving for young people who have deliberately harmed themselves or taken an overdose;
 - Some school based programmes that did not take account of negative peer or family pressure.

How effective are drugs services in encouraging the up-take of other health and social services?

- Only two primary studies address this question. One study indicates that family therapy reduces the length of stay in prison or residential treatment. However there was no effect on the use of medical services, which were contacted by approximately 33% those exposed to the intervention. The second study demonstrated that parents and young people exposed to a specialist drug treatment service that offers counselling and residential care actually increased their use of medical services.

The factors contributing to the success of interventions for young drug users and might enhance future service development are:

- Low pre-treatment substance abuse;
- Reduced psychopathology;
- Peer and parental support (including peer-led support);
- Self-motivation and completing the programme;
- Having better coping and relapse skills;
- Better school attendance and school performance;
- Comprehensive interventions i.e. not just concentrating on drug use but tackling the wider cultural issues including life skills training, stress and coping;
- Carefully planned interventions with clear aims, objectives and target audience;
- Well-funded interventions; long term with booster sessions;
- Having school facilities for high-risk groups or targeting high risk groups e.g. dropouts;
- Using experienced and well trained staff with low turn over;
- Multi-agency working.

Study limitations

- There may be interventions that are not yet the subject of research and therefore not included in the review e.g., motivational counselling;
- The review contains studies that are of moderately strong designs and as such research using weaker designs is excluded. These studies may contain valuable information about the context or limitations of some interventions and thus the findings may be missed;
- It was evident in reading some reviews that the original studies may have measured outcomes that are of relevance to the present review, but these were not reported;
- Finally, almost all of the studies included in the review were conducted in the USA or Canada. This means that the results may not automatically transfer to Scotland.

Study strengths

- The scope of the review is extremely wide. It includes a broad range of interventions and settings and is therefore comprehensive in its coverage of services that have been the subject of research;
- It employs a comprehensive search strategy which encompasses electronic libraries, databases, expert opinion and a hand search of journals all of which resulted in uncovering a large number abstracts (approximately 6000). It is therefore unlikely that a substantial amount of relevant literature was missed;
- The assessment and appraisal of papers was conducted, at least in part, by two independent reviewers who used appraisal tools adopted in previous reviews. The aim of doing so is to minimise selection bias;
- Only well designed primary research studies and reviews were accepted. For primary papers this meant including only experimental, quasi-experimental or controlled observational studies. For reviews this meant including only systematic reviews that contained good quality studies. We are therefore confident that the

review provides the best available evidence for the effectiveness interventions for young drug users.

Recommendations for research

- Given the small number of studies included in the review the most obvious recommendation is to encourage good quality research that establishes the effectiveness of health and social services for young people up to 16 years.
- Given the context in which most research is conducted i.e., North America, is imperative that research is conducted in other countries.
- Other services that should be the subject of research might include those currently provided for adults such as needle exchange substitute prescribing and other social care services.
- Consideration should also be given to assessing the economic impact and the impact on other services of providing interventions to young drug users.
- Drug use should not be identified as the only outcome measure. Research should include other psychological and social outcomes for example communication skills, schooling, employment, and family relations.

Review of the legal framework

The review provides an outline of the current statutory framework that might affect the provision or take up of drug treatment services for young people under the age of 16 years in Scotland. A systematic search of the literature was undertaken to identify publications, for the years 1990-2001, which provide authoritative guidance on the legal framework. Initially 698 publications were identified, of these 87 were selected for further assessment. Following independent assessment by two reviewers, 22 publications were finally identified for inclusion in the review.

The publications are presented in the results section under two broad sub-headings: the legal framework for caring for children in general, and the legal framework for drug treatment services for young people. Each sub-heading is divided into three broad headings: a) official government publications, b) drug organisation publications and b) expert commentaries.

The literature clearly establishes the Children (Scotland) Act 1995 as the key legislation in relation to the care and welfare of Scottish children, which in turn is supported by articles of the United Nations Convention on the Rights of the Child 1989. Expert commentators suggest potential difficulties in implementing the statutory framework in four key areas:

- Upholding children's right to health and health care
- Upholding children's right to participate in decisions
- Upholding children's right to consent to medical treatment

- Sharing of information.

The possible impact on drug service provision and uptake in Scotland is discussed.

PART 1

**A SYSTEMATIC REVIEW OF THE EFFECTIVENESS OF TREATMENT AND CARE
SERVICES FOR DRUG USING YOUNG PEOPLE**

AIMS

Identify, assess, critically appraise and synthesise the existing evidence from the international research literature concerning the effectiveness of treatment and care services for drug using young people.

Key questions to be addressed

- 1) How effective are drugs services in reducing drug use among young drug users?
- 2) How effective are drugs services in reducing the physical harms associated with drug use among young drug users?
- 3) How effective are drugs services in improving the psychological well being of young drug users?
- 4) How effective are drugs services in improving the family and social relations of young drug users?
- 5) How effective are drug services in encouraging the up-take of other health and social services?

METHODS

Scope of the Review

The population

The review focuses on studies that are conducted with young people who are 16 years or under. Often researchers use the terms 'young people', 'adolescents' or school children and do not provide statistical data that fully describes their sample. By default these papers are accepted in the review. Other studies involve young people up to the age of 16 years as well as older age groups. In these cases a paper is accepted if; a) the measure of central tendency is ≤ 16 yrs, or b) a large proportion of the sample are ≤ 16 yrs, or c) analyses are conducted on a sub-group ≤ 16 years or d) is likely to contain a high number of ≤ 16 yrs (11-19 yrs).

Type of intervention

The review focuses on a broad range of settings including hospital in-patient, rehabilitation, prison, outpatient, community drug treatment services and schools. It includes interventions such as behaviour therapy, family therapy, general drug treatment facilities, Minnesota 12-step programmes, school programmes, and therapeutic communities.

Intervention effects

Studies are included if they focus on secondary prevention i.e., those aimed at reducing drug use or drug harms among young people. The questions set by the review are intent on addressing this aim. Thus studies that focus solely on primary prevention are excluded e.g., drug awareness campaigns, drug education programmes, mass media campaigns, government legislation, socio-economic interventions.

Problematic drug use

The definition of problematic drug use varies across studies. Some do not offer a definition whilst others adopt any number of those defined in formal assessments such as the Diagnostic and Statistical Manual of Mental Disorders. There are authors (particularly in the USA) who regard illicit drug use in itself as problematic. A substantial number of secondary prevention interventions aim to reduce drug use. These often take the form of school interventions. The techniques used in many comprise of skills, support and family involvement and are often targeted at high-risk groups. Studies that reduce drug use and those that reduce problem drug use are included in the review.

Search Strategy

Time period, publication type, language and countries
English language research published between 1990 and 2001 from any country is included. Primary and secondary research (systematic reviews) is included.

Publication Sources

- The following electronic libraries were searched for relevant publications. The search terms and search strategy are given in Appendix 1.

MIMAS Web of Science (Science and Social Science indexes)

Medline

Cochrane Library (including reviews and primary papers)

Caredata

BIDS

ASSI

- The following databases were also searched.

Health Technology Assessment (UK).

NHS R&D Data base (UK).

NHS Centre for Reviews and Dissemination (UK)

The Health Development Agency (UK).

Health Education Board for Scotland.

National Institute on Drug Abuse (NI DA) (USA).

Drug Findings (UK).

Centres for Evidence Based Findings (UK)

- Research Experts

A number of research experts were identified from the electronic and data base searches. Sixty three, from countries throughout the world, were contacted by letter and asked to provide a list of published and unpublished studies (1990-2001) they considered to be the most important in the topic area. 39 (62%) replied and the names of those who agreed to be mentioned appear in Appendix 2.

- Two reputable international academic addiction journals were hand searched for relevant publications in 2000/2001; ADDICTION and Addiction Research and Theory.

Assessing and appraising the evidence

The initial search for papers produced 5874 abstracts. All the abstracts were assessed using the following criteria:

- relevant to young drug users;
- relevant to the services that are subject of review;
- the abstract indicated that the study included a control or comparison group design.

If a paper met these criteria it was selected for retrieval. On the basis of this assessment 694 full papers were retrieved. Appendix 3 presents the number of papers retrieved by year of publication. Each paper was subject to a more detailed assessment to determine whether it focussed on the appropriate age group and whether it involved secondary prevention. After this assessment 104 papers, including 34 reviews, were accepted for detailed appraisal.

Primary papers were appraised four broad areas of enquiry a) whether patients were randomly assigned, c) whether comparisons between groups were justified b) whether data were adequately collected and analysed d) and whether the findings were interpreted correctly. Review articles were also appraised in four broad areas of enquiry a) whether a comprehensive literature search was carried out b) whether an assessment of the primary paper was conducted adequately c) whether good quality papers were accepted d) whether the results of studies were corrected synthesised. On the basis of these criteria each paper was judged as good, moderate, or if the paper failed to perform these steps adequately it was graded as poor and then rejected. Most papers that were rejected failed in 3 out of 4 areas. Primary papers were also rejected if they appeared in reviews that were of acceptable quality. Primary papers and reviews that were rejected appear at the end of the reference list with the reason for rejection. The appraisal forms for primary papers and reviews appear in Appendix 4.

The review included studies that provide the strongest evidence. Only the following designs were considered for inclusion and graded according to the following hierarchy:

- 1) High quality experimental study of good or moderate quality
- 2) Low quality experimental study of good or moderate quality
- 3) High quality controlled observational study of good or moderate quality

30% of the primary papers and 30% of the reviews were selected and appraised by an independent reviewer. There was 87% agreement between reviewers on primary papers and 13% resolved through further discussion. There was 90% agreement between reviewers on the reviews and 10% resolved through further discussion. At the end of the appraisal 11 primary papers and 7 reviews were included in the review. This represents 10% of the 70 primary papers and 20% of the 34 reviews accepted for the initial appraisal.

Synthesising the evidence and writing the final report

It was not feasible to conduct a meta-analysis of the 11 primary papers. This small number of papers represents studies that are conducted on a wide range of interventions and different populations. Further more, there are differences in the way the primary outcomes are measured. For example, drug use is measured at different time points and with varying frequency.

The data from the papers are collated and described using a qualitative method. A standard data extraction sheet was used which allowed a full summary of each paper to be made. The completed data extraction sheets appear as tables in the review. These tables contain information about the authors; year of publication; the sample characteristics; the study design; the setting in which the study took place; the type of intervention studies; and the outcomes that were measured. The tables also provide a summary of the evidence for the effectiveness of the intervention and how the authors report the evidence. The evidence is graded and is presented on a scale of 1-5 where 1 represents a strong beneficial effect, 2 a weak effect, 3 no effect, 4 harmful effect and 5 indicates insufficient evidence to support the effectiveness of an intervention. The quality of the research is also given where 1 represents a good quality study and 2 a study of moderate quality. The lead author of the present review (LE) carried out the data extraction and grading.

The discussion of results comprises seven sections. The first section describes the interventions that have been the subject of research. Sections two to six are devoted to answering the key questions outlined at the beginning of this report. Each section begins with an overview of the interventions that have been subject to review and a summary of the findings and the strength of those findings. The details of the relevant papers appear in tables in each section. The tables are divided into reviews and primary papers and are arranged alphabetically by author. The seventh section describes the factors associated with the general success of interventions. A conclusion and discussion section completes the report.

RESULTS

SECTION 1

THE INTERVENTIONS THAT ARE THE SUBJECT OF RESEARCH

All 18 publications make specific mention of the design of the interventions. Journal articles restrict the amount of space available to authors, particularly published reviews. Thus, not every article provides similar details about the crucial elements of the service including, the content of the intervention, who delivered it and the setting in which it was provided. Even when more space is provided, such as in primary papers, the level of detail varies according to the author's preference. Thus, the intervention details that appear in this report are based on papers that allow some description, but are likely to provide only partial coverage. More complete analyses would require careful assessment of the relevant primary papers cited in published reviews and, where primary papers fail to provide sufficient detail, direct contact would have to be established with the original author. This is out with the scope of the current review.

Behaviour therapy

Behaviour therapy is described by Williams and Chang (2000) in their review as outpatient programs including group therapy of no set length. Azrin, McMahon et al (1994) describe behaviour therapy in more detail as, 'a typical format of therapist modelling, behaviour rehearsal, specific therapy assignments, self-recording between sessions, review of self-recordings and assignment records, and extensive praise for progress'. The major foci in this particular study are, stimulus control, urge control and social control. Therapy is delivered on a one-to-one basis by a therapist.

Counselling

Counselling is extremely varied. It encourages the expression of feelings, the initiation of comments, reactions to comments, self-described drug use, discussion of drug use experiences, praise, and abstinence desires (Azrin, McMahon et al. 1994). It may be delivered on a one-to-one basis or in groups (Morehouse and Tobler 2000; Williams and Chang 2000). In one study highly trained counsellors delivered culturally sensitive counselling consisting of drug prevention, wellness and drug freedom sessions to high-risk youths (Morehouse and Tobler 2000). It included the discussion and role-play of drug experiences, family problems, and stress, and aimed to change attitudes, culture and norms. Small interactive health education groups may also involve counselling. In Magura et al's (1994) study, for example, emphasis is placed on problem solving around HIV/AIDS, the factors leading to the initiation and continuation of drug use, and problems associated with drug use. Interestingly motivational counselling was not evaluated in any of the studies included in the review.

Family therapy and other family interventions

Family therapy is diverse. Stanton and Shadish (1997) distinguish it from other family interventions in that it involves all relevant family members in a group (co-joint) or individual basis and includes any of the following elements.

- Structural therapy which aims to alter family structure (Stanton and Shadish 1997);
- Strategic approaches which focus on family interactions out with therapy sessions (Stanton and Shadish 1997);
- Multisystemic interventions which incorporate external systems such as courts and schools (Stanton and Shadish 1997; Schoenwald, Ward et al. 1996);
- Contextual approaches which are described as 'a psycho-dynamical-oriented and multigenerational'. (Stanton and Shadish 1997);
- Bowden Systems Therapy which is an intergenerational approach using family and individual sessions (Stanton and Shadish 1997);
- Functional approach which combines strategic therapy with behavioural tasks (Stanton and Shadish 1997);
- Behavioural approach which emphasises social learning principles (Stanton and Shadish 1997).

Other family or peer interventions that do not include family therapy are:

- Individual counselling (Stanton and Shadish 1997);
- Family counselling which encourages the discussion of health problems, family relations and problem solving (Harrington, Kerfoot et al. 1998);
- Peer group therapy involving non-family members (Stanton and Shadish 1997);
- Family psychoeducation which usually involves education on drugs and family dynamics (Stanton and Shadish 1997; Weir 1998);
- Parenting groups which aim to improve parenting skills (Stanton and Shadish 1997);
- Other interventions such as probation officer visits, court orders (Stanton and Shadish 1997).

General drug treatment facilities

Some authors refer to general drug treatment facilities (Maisto, Pollock et al. 2001) or out patient facilities (Williams and Chang 2000), but offer little else by way of description. Maisto, Pollock et al (2001) suggest that this form of treatment should improve coping skills, and decrease stress. In their study, participants were recruited from psychiatric hospitals, a free standing chemical dependence programme, and an outpatient substance abuse programme. Williams and Chang (2000) describe the outpatient programmes as consisting of counselling, and occasionally family therapy. Treatment tends to be longer in duration (1-2 sessions per week), but may vary from one session to 6 months.

Minnesota 12-step programmes

Minnesota 12-step interventions are described by Williams and Chang (2000) as 'a short 4-6 week hospital inpatient programs typically offering a comprehensive range of treatment consisting of individual counselling, group therapy, medication for co-morbid conditions, family therapy, schooling and recreational programming. It often has an Alcoholic Anonymous/Narcotics Anonymous 12-step orientation and is followed-up with out-patient treatment' (Williams and Chang 2000). Chemical dependency is treated as a disease and abstinence is advocated (Winters, Stinchfield et al. 2000). Winters, Stinchfield et al's (2000) clients were treated on an inpatient bases for 4 weeks and an outpatient bases for 6 weeks. Treatment components include group therapy, individual counselling, family therapy, lectures, reading and writing assignments, schooling and occupational and recreational therapy. It focused on five elements of recovery 1) admitting the problem, 2) believing in hope for

change, 3) learning from others, 4) taking stock of life, 5) discussing problems with peers. Families were encouraged to attend. A six-month programme was advocated with meetings 2/3 times per week.

School-based programmes

These are diverse and include combinations of the following:

- Classroom teaching and skills development sessions. Teaching includes drug, risk and well-being awareness classes. Skills training includes developing, drugs resistance skills; social skills; listening skills; decision making skills; reducing hazardous behaviours such as drink driving; peer leadership and influence skills; stress management; and managing human relations (Lister-sharp, Chapman et al 1999; Nicholas and Broadstock 1999; White and Pitts 1997; LoSciuto, Freeman et al 1997; Botvin, Epstein et al 1997; Tobler 1992). Other affect based programmes involve building self-esteem, self awareness, expressing feelings and value clarification (Tobler 1992; White and Pitts 1997);
- School-based health centres or consultations with a doctor or nurse (Nicholas and Broadstock 1999);
- Academic support including basic reading skills and job skills (Nicholas and Broadstock 1999; Tobler 1992);
- Cognitive or behavioural and other counselling approaches (Nicholas and Broadstock 1999);
- Combining school sessions with after-school facilities e.g., community youth centres, drama work shops, psychosocial education (Stead, MacKintosh et al. 2001; Nicholas and Broadstock 1999; Tobler 1992; LoSciuto, Freeman et al 1997);
- Involving parents (Stead, MacKintosh et al. 2001; Lister-sharp, Chapman et al 1999; Nicholas and Broadstock 1999; LoSciuto, Freeman et al 1997; White and Pitts 1997);
- Involving peers (Stead, MacKintosh et al. 2001; Nicholas and Broadstock 1999; Tobler 1992; LoSciuto, Freeman et al 1997);
- Involves professional mental health counsellors (Stead, MacKintosh et al. 2001; White and Pitts 1997; Tobler 1992);
- Involves teachers (Botvin, Epstein et al 1997; White and Pitts 1997; Tobler 1992).

Therapeutic community and residential care

This has been described as a specialist treatment facility consisting of between 6months to 2 years stay (Williams and Chang 2000). These interventions tend to be highly regimented residential settings with treatment facilitated by paraprofessionals and often run by residents (Freebom, et al. 1995). Older traditional therapeutic communities for young people are rare. Some offer day programmes where recovering patients live at home with their parents (Weir 1998; Freebom, et al. 1995). Therapeutic communities can offer assistance in enhancing coping skills, refusal skills, problem solving, personal responsibility and social network development, and many offer counselling (Weir 1998; White and Pitts 1997). Community based group-homes for offenders are also included in this category (Weir 1998).

SECTION 2 HOW EFFECTIVE ARE DRUGS SERVICES IN REDUCING DRUG USE AMONG YOUNG DRUG USERS?

A total of six reviews and eight primary papers addressed this question, the details of which appear in the tables in this section.

Interventions

Behaviour therapy.
Counselling.
Family therapy.
Minnesota 12-step programmes.
Therapeutic community and residential treatment programmes.

Schools programmes including:

Life skills training. Psychological interventions to improve confidence and self-esteem. Drug resistance skills. School health centres. Multi-faceted interventions including drama, classroom support, community youth worker projects.

Evidence of effectiveness

Interventions shown to be effective

Williams et al in their review present fairly strong evidence that the Minnesota 12 step programme is effective in reducing drug use among young people (Williams and Chang 2000) (Table 2.6). This is also supported by one primary paper suggesting that 53% of those receiving a 12 step programme reported reduced or no drug use at 12 months compared with 28% of controls (Winters, Stinchfield et al. 2000) (Table 2.14). There is also fairly strong evidence that behaviour therapy is more effective in reducing drug use compared with non-behavioural support (Azrin, McMahon et al. 1994) (Table 2.7) and that behaviour therapy and cognitive behaviour therapy is more effective than counselling in reducing drug use (Williams and Chang 2000) (Table 2.6). In one study young people exposed to behaviour therapy for 12 months achieved 8.9 drug free months compared with 0.6 of the non-intervention group (Azrin, McMahon et al. 1994) (Table 2.7). Young people also respond more positively to behaviour therapy compared with adults (Azrin, McMahon et al. 1994). Another study reported by Williams et al demonstrates that 73% of those exposed to behaviour therapy achieve abstinence at discharge compared with 9% receiving counselling (Williams and Chang 2000) (Table 2.6). Culturally sensitive counselling is more effective than non-intervention controls in reducing drug use. One quasi-experimental study suggests that up to 36% of those exposed to counselling will reduce their drug use (Morehouse and Tobler 2000) (Table 2.12).

Williams et al suggest that residential treatment and general out patient treatments are equally effective in reducing drug use (Williams and Chang 2000) (Table 2.6). Involving parents in the therapeutic process is extremely important. There is fairly strong evidence that family therapy is effective in reducing drug use. The upper limit of reduction is approximately 54% of those exposed (Williams and Chang 2000; Stanton and Shadish 1997) (Table 2.6, Table 2.3). There is fairly strong evidence that family therapy is more effective in reducing drug use than probation officer visits, drug education and peer education, teacher based therapy, family education individual counselling, adolescent group therapy (Williams and Chang 2000; Stanton

and Shadish 1997). Family therapy is equally effective in reducing drug use as parenting groups (Stanton and Shadish 1997) (Table 2.3).

There are other interventions effective in reducing drug use, although perhaps less so than those mentioned thus far. Therapeutic communities that offer coping and problem solving are weakly beneficial in reducing drug use (White and Pitts 1997) (Table 2.5). General drug treatment facilities are also weakly effective in reducing drug use (Maisto, Pollock et al. 2001) (Table 2.11). There is weak evidence that school based programmes reduce drug use compared with controls (Lister-Sharp, Chapman et al 1999 (Table 2.1); LoSciuto Nicholas and Broadstock 1999 (Table 2.2); Botvin, Epstein et al 1997 (Table 2.8); LoSciuto, Freeman et al 1997 (Table 2.9); White and Pitts 1997 (Table 2.5); Tobler 1992 (Table 2.4)). It is also clear from school studies that certain aspects of these programmes are more beneficial than others. These include skills development, self-esteem and confidence building, targeting high risk groups, using health professionals and peers, booster sessions, and involving parents (Lister-sharp, Chapman et al 1999 (Table 2.1); Nicholas and Broadstock 1999 (Table 2.2); Botvin, Epstein et al 1997 (Table 2.8); LoSciuto, Freeman et al 1997 (Table 2.9); White and Pitts 1997 (Table 2.5) Tobler 1992 (Table 2.4)).

Interventions shown to be ineffective

Purely education programmes are generally ineffective in reducing drug use. These include family education (Williams and Chang 2000) (Table 2.6), HIV/AIDS discussion groups (Magura, Kang et al. 1994) (Table 2.10), education based school programmes (Nicholas and Broadstock 1999) (Table 2.2) and general multifaceted school based programmes that include drama, class support and drug awareness classes for parents (Stead, MacKintosh et al. 2001) (Table 2.13).

Interventions shown to be harmful

Counter to the findings of other studies cited above there was an increase in drug use (cannabis) among those exposed to a life skills programme and a teacher based support programme in the USA, particularly among boys (Lister-sharp, Chapman et al 1999; Nicholas and Broadstock 1999) (Table 2.2, Table 2.2). This was thought to be related to the boys' experience of drug use or social support for drug use from friends or family.

Insufficient evidence to demonstrate an effect

There is insufficient evidence to demonstrate that school-based health centres have an effect on drug use (Nicholas and Broadstock 1999) (Table 2.2).

DRUG USE: REVIEWS

TABLE 2.1 THE EFFECTIVENESS OF INTERVENTIONS IN REDUCING DRUG USE

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Lister-Sharp, Chapman et al. 1999)	1	Schools mainly in the USA, or Canada Ages up to 12 years Sex not specified. Mainly cannabis use.	Skills development: life skills, drugs refusal skills, competence skills, social skills.	2 reviews about drug use.	This review includes 9 drug and alcohol reviews of which 2 present findings on drug use and another 2 comment further on non-drug outcomes. Reviews are allocated a score from 0-16 by the authors. The quality scores of the 2 drug use reviews are 8 and 11.
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
2 Generally weak effect of education and skills training using peers in reducing drug use in the short-term (usually controlled trials).					
2 Weak evidence of education and skills training in reducing drug use (usually controlled trials)					
4 Some evidence that teacher education might increase drug use among boys.					
Comments					
Most studies are conducted in the USA, thus the extent to which they can be translated to the UK is debatable. Parents are rarely involved in school interventions. The most successful programmes are those based on theory. There was a general tendency to focus on drug use rather than health outcomes, including mental well being. How data are presented: Data are presented in descriptive form with very few statistics.					

TABLE 2.2 THE EFFECTIVENESS OF INTERVENTIONS IN REDUCING DRUG USE

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Nicholas and Broadstock 1999)	2 moderate	100% USA studies Secondary School Children White middle class students; Latino, Mexican- Americans, Asian Americans, Native Americans, African Americans, Hispanic Americans. Suburban and rural. Age 11-19 years 38% male. Some of whom use drugs (mainly cannabis)	Life skills education School based Health Centres or health consultations. School based health secondary prevention programmes. School and community secondary prevention programmes together for at risk groups	11	This review reports on 16 studies including 3 reviews. Of the three reviews only one is relevant and is included in the present review (White and Pitts 1997). Only controlled studies that involve interventions and aim to reduce drug use are reported in the present review.
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
2 Weak evidence that skills based education reduces drug use compared with controls (2 RCTs)					
2 Weak evidence that school and community programmes (combined) for at risk groups, reduce drug use (Controlled study).					
3 No effect of interactive teaching on drug use (Controlled study)					
4 Evidence that school based life skills programme increases drug use (RCT)					
4 Evidence of an increase in drug use (cannabis) of teacher based support programme in school (Controlled study)					
5 Insufficient evidence of school based health centres in reducing drug use (Comparison group study).					
Comments					
These programs are aimed primarily at young people in non-clinical settings. However many target high-risk populations who may be more likely to use drugs. The techniques used in the intervention are fairly intensive and include life skills development and making safer choices. Programmes use different methods and research designs. Dropouts are treated differently in the analyses. These factors undoubtedly account for the heterogeneity of the findings. How data are presented: the review authors did not give study effect sizes and thus it was not feasible to demonstrate effects using statistical data.					

TABLE 2.3 THE EFFECTIVENESS OF INTERVENTIONS IN REDUCING DRUG USE

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Stanton and Shadish 1997)	2 moderate	100% studies from USA Family therapy settings. White Americans, African Americans, Latino Americans, Asian Americans and Hispanic-Americans. Age not specified i.e., adolescents 31% female. Drug use where specified: opiates, cocaine, cannabis (main drug).	Parents and adolescents together or adolescents and parents involved separately in family therapy.	9	15 studies are included in this review. 6 concern adults and 9 adolescents. The 9 adolescent studies are reported in the present review. Studies were only included if they randomised to interventions. All compared family interventions with other treatment. Average design quality score given to the 9 studies by the authors = 23.8 (0-14 = poor; 14.5-19.00=fair; 19.5-24.0=good; 24.5-30.0 very good).
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
1-2 Fairly strong evidence that family therapy is equally effective in reducing drug use compared with parenting groups (Controlled study) 1-2 Fairly strong evidence that family therapy is more effective than probation officer visits in reducing drug use (Controlled study) 1-2 Fairly strong evidence that family therapy is more effective (54% drug free) in reducing drug use compared with drug education (28%) and peer group education (16%) (Controlled study) 1-2 Fairly strong evidence that school based family therapy is more effective in reducing drug abuse compared with teacher based therapy (Controlled study) 1-2 Fairly strong evidence that family therapy and individual therapy are more effective than family education in reducing drug use. (Controlled Study) 1-2 Fairly strong evidence that different types of family therapy are equally effective in reducing drug use. (Controlled study)					
Comments					
There is fairly strong evidence that family therapy is superior over individual therapy in reducing drug use among adolescents. Family therapy also has an edge over family education in reducing drug use. There is a lack of evidence to establish the effectiveness of one family therapy over another. Retention in treatment is also good, but caution is advocated when interpreting the results because of the failure in some studies to include dropouts. Drug use was mainly cannabis. Many of the studies here appear in other reviews (Williams and Chang 2000). How data are reported: Drug use was reported in most studies, but different measures are used i.e. drug rating scale, percentage improved, mean days of use. Over all effect size for the reduction of drug use for family therapy compared with alternative interventions was 0.39 (p<0.001)					

TABLE 2.4 THE EFFECTIVENESS OF INTERVENTIONS IN REDUCING DRUG USE

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Tobler 1992)	2 moderate	Mainly USA studies. Mainly schools although the review lacks detail. Only information on top 10 peer programmes: Population mainly male, mixed ethnic background. Age not specified Sex not specified Includes drug users and non-drug users. Mainly cannabis users, but studies also include alcohol and tobacco.	a) Knowledge only (didactic teaching aimed at reducing drug use. b) Affect only (changing attitudes and self esteem) c) Knowledge and affect (knowledge and problem solving) d) Peer programmes (refusal skills and life skills) e) Other programmes include job schemes and general education. Therapists include mental health professionals, teachers, peers, health educationalists, and students.	143	49% of studies had an experimental design and 51% had a quasi-experimental design. Main outcome measure expressed as effect size (ES) = $(X_c - X_e) / SD_c$ where X_c & X_e refer to the means of the experimental and control group and SD_c = control group standard deviation.
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
1-2 Fairly strong evidence of peer interventions in reducing drug use (mean ES=0.4) (Those studies where cannabis is measured separately (n=4) mean ES = 0.45 and hard drugs (n=15 mean ES = 0.47). This equates to a 16% difference between experimental and controls and 12% difference compared with other programmes). 2 Extremely weak evidence of knowledge programmes in reducing drug use (mean ES = 0.03) 2 Extremely weak evidence of affect only programmes in reducing drug use (mean ES = 0.07) 2 Weak evidence of knowledge and affect programmes in reducing drug use (mean ES = 0.15)					
Comments					
Generally across all programmes the mean effect size for knowledge was 0.52; skills 0.26; drug use 0.24 and attitudes 0.18. No significant difference in SE found between experimental and quasi-experimental designs. Mental health professionals and professional counsellors had a greater impact than teachers, peer leaders and students. Please note drugs include tobacco, cannabis and alcohol. No differences were found between urban and rural schools and junior to high schools. It should also be noted that the greater impact of health professionals might indicate more morbid and possibly more motivated group of young people selecting themselves for these interventions. General conclusions are that knowledge only programmes are weakly effective in reducing drug use. Peer interventions that combine knowledge with skills seem to be more effective in reducing drug use, particularly if these are led by skilled professionals. Skills include refusal skills and broad based skills such as, assertiveness, problem solving, conversation skills.					

TABLE 2.5 THE EFFECTIVENESS OF INTERVENTIONS IN REDUCING DRUG USE

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(White and Pitts 1997)	1 good	Mainly USA School/college based One non-school based intervention is also included (therapeutic community). This study is described by the author as 'relapse prevention'. African-American, Hispanic and other cultural groups. Approximate age 11-15yrs Sex not specified Drugs used: cannabis (mainly), opiates, cocaine, inhalants, stimulants.	Various health promotion interventions which either educate or develop skills. All of the Schools and the non-school programme provided education and skills training. Difficult to distinguish those aimed at primary prevention from those aimed at secondary prevention.	14	There are 62 studies in the review of which 14 are regarded as methodologically superior. These studies considered refusal and attrition rates in the analyses, compared baseline and follow-up data and compared different conditions. The 14 studies are reported in the present review.
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
2 Weak evidence that school-based refusal and peer pressure skills reduces cannabis use in the short –term (up to 12 months). 2 Weak evidence that school-based information, refusal and peer pressure skills with booster sessions reduces drug use compared with controls. 2 Weak evidence that school-based refusal skills, peer resistance skills, and parent education reduces drug use compared with controls (up to one year) 2 Weak evidence that therapeutic community programme with coping, problem solving and refusal skills reduces cannabis and amphetamine use at 6 months compared with controls.					
Comments					
School-based skills interventions are effective up to 12 months particularly those with booster sessions. School based studies drugs often include tobacco and alcohol and it is difficult to distinguish the effects on illicit drugs. When a distinction is made the effect is usually marginal. More intense programmes have marginally better long-term effects i.e., those using booster sessions. The most common drug used is cannabis although some studies include the use of cocaine, amphetamine, inhalants, opiates and hallucinogens. Evaluations should be carried out with different populations (drug experimenters) and ethnic groups and more should be done to reduce the harm from drugs. Greater follow-up is required. How data are presented: The results are mainly presented in descriptive form with no or little use of statistics.					

TABLE 2.6 THE EFFECTIVENESS OF INTERVENTIONS IN REDUCING DRUG USE

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Williams and Chang 2000)	1 good	<p>90% studies USA, 7%Canada and 3% Norway.</p> <p>In and outpatient facilities.</p> <p>Includes: juvenile offenders, those suspended from school, those with mental illness/psychological problems, and those from Hispanic American community, and diverse social classes.</p> <p>Age range: 11yrs to 19yrs. (mean age 15.9yrs.)</p> <p>Majority are males.</p> <p>Poly-drug users; alcohol and cannabis most common.</p>	<p>Highly varied in location, intensity, duration, theory based.</p> <p>Main types: a) Minnesota model (in-patient) and represents the most common type. b) Counselling and family therapy (outpatient) c) Therapeutic community (residential)</p>	14	53 studies were reported in this review. 14 studies have control groups. These methodologically stronger studies are reported in the present review.
<p>General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)</p>					
<p>1 Strong evidence in one RCT comparing Minnesota model with no treatment comparison. 66% at 9 month follow-up not using drugs compared with 20% among controls.</p> <p>1-2 Fairly strong evidence that residential treatment and outpatient treatment have a similar effect in reducing substance abuse (control study)</p> <p>1-2 Fairly strong evidence that family therapy decreases drug use (among 54%) compared with: probation officer visits; individual counselling; adolescent group therapy; and family education (approximately 28%) at discharge (controlled studies).</p> <p>1-2 Fairly strong evidence that intensive inpatient treatment achieves 85% abstinence compared with 61% among controls at 5.5 years follow-up (control study).</p> <p>1-2 Fairly strong evidence that behavioural treatment achieves 73% abstinence at end of treatment compared with 9% with counselling at discharge (controlled study)</p> <p>1-2 Fairly strong evidence that cognitive behavioural therapy achieves greater reductions in drug use compared with counselling (controlled study)</p> <p>1-2 Fairly strong evidence that family therapy is equally effective in reducing drug use (among 50%-52%) as one to one family therapy and parent support groups at discharge and 6-12 months follow-up(controlled studies)</p> <p>3 Evidence of no effect of home teaching family groups compared with non-treatment group in reducing drug use at discharge or 3 months follow-up (RCT).</p>					

Comments

There is no mention of drug treatment apart from that for co-morbid psychiatric conditions. Overall there are only two studies that compare an intervention with non-treatment controls. There is some evidence that behavioural or cognitive therapy may be superior to counselling in reducing drug use. There is fairly strong evidence that family therapy is superior to other outpatient treatments particularly those involved in only individual treatment either to the family or young person. However, there is no evidence that one type of family therapy is superior to others. The variables associated with success are: less serious pre-treatment drug use, peer and parental support (particularly non-use of substances), better school attendance, less serious conduct disorder, being employed, greater motivation for treatment, fewer treatment episodes. The variable most associated with success is treatment completion. General reduction in drug use achieved by all studies is an average of 38% subjects (range 30%-55%) at 6 months post treatment and 32% at 12 months post-treatment (range 14%-47%). Recommendation that more RCT are required. Corroboration of drug use required e.g. drugs testing, better description of treatment required. Common follow-up periods. Services should provide treatment that has been shown to work including family therapy. Encourage family and peer support. Minimise dropout and maximise treatment completion. Provide other services such as schooling and vocational courses. **How data are reported:** % change between groups and other measures of central tendency are reported for some studies but not for all. Sometimes this is because the primary paper does not present these clearly or multi-variate analyses are used.

DRUG USE: PRIMARY PAPERS

TABLE 2.7 THE EFFECTIVENESS OF INTERVENTIONS IN REDUCING DRUG USE

Primary Paper					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
<p>(Azrin, McMahon et al. 1994)</p> <p>Level 2 experimental study of moderate quality</p> <p>How data are reported (drug use): Urine analyses to measure the presence of drugs once per month for the duration of the intervention. Outcome is calculated on the number of months drug free.</p>	82	<p>USA Drug users recruited from agencies and newspapers</p> <p>9% Afro-American, Hispanic American, Native American.</p> <p>(17%) of sample were under 19years (mean age = 16yrs).</p> <p>56% male</p> <p>Drugs used mainly cannabis and cocaine.</p>	<p>Behavioural therapy, includes urge control and asking for family support.</p> <p>19 sessions over 12 months.</p> <p>Aim Reduce drug use</p>	<p>Subjects randomly assigned to behavioural therapy or non-behavioural treatment.</p> <p>Analyses includes separate analyses for youths (< 19years).</p> <p>Follow-up at 12 months post-treatment</p>	<p>1-2 Young people in the behavioural therapy had a mean of 8.9 months drug free compared with 0.6 in the non-behavioural therapy group (p<0.005)</p> <p>1-2 Young people receiving behavioural therapy had a mean of 8.9 months drug free compared with 5.7 among adults receiving behavioural therapy (p<0.02)</p> <p>2 Weak evidence that school attendance also improved family relations.</p> <p>No figures are given for initial sample and follow-up. The 82 are completers only. Thus difficult to generalise. Also low sample size.</p> <p>Factors associated with success Parental involvement which have improved family relationships. Either that or reduced drug use improved family relationships.</p>

TABLE 2.8 THE EFFECTIVENESS OF INTERVENTIONS IN REDUCING DRUG USE

Primary Paper					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
(Botvin, Epstein et al 1997) Level 2 experimental study of moderate quality How data are reported (drug use): Two drug measures; a) ever used b) current use. Current use was divided into i) less than once a month ii) one a month or more. Adjusted post-test means given.	833	USA school children Minority groups. African-American Hispanic American, White American, Asian American, Native American. Aged 11-15 years. 53% male. Drugs used mainly cannabis, alcohol and tobacco.	Cognitive behavioural intervention: Drug resistance skills and social skills and self-esteem. 15 sessions. Aim Reduce drug use and poly drug use.	Not clear whether schools are randomly assigned to intervention and non-intervention conditions. Follow-up at post intervention and three months. 83% follow-up.	2 Weak evidence that intervention reduces drug use (cannabis) and poly-drug use (smoking, drinking and cannabis use). 3 No effect on some skills i.e. decision making, communication. Factors associated with success. The experimental group had lower expectations for drug use and more likely to refuse drugs at follow-up compared with controls.

TABLE 2.9 THE EFFECTIVENESS OF INTERVENTIONS IN REDUCING DRUG USE

Primary Paper					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
<p>(LoSciuto, Freeman et al. 1997)</p> <p>Level 2 experimental study of moderate quality</p> <p>How data are reported (drug use): Whether used drugs in past year. Drug, alcohol and tobacco use combined in one variable.</p>	453	<p>USA school children</p> <p>Latino, White, African-American, Asian-American, American Indian.</p> <p>Aged 6-14 years (mean age 10).</p> <p>47% female.</p> <p>Drug use not specified but (probably) mainly cannabis.</p>	<p>Multi-component:</p> <p>Life skills and self esteem classes. Peer mentoring. After-school clubs. Outdoor activities</p> <p>Parents also involved.</p> <p>Delivered by youth advocates and professions.</p> <p>Aim To reduce alcohol, tobacco and drug use.</p>	<p>Randomised by class to intervention or non-intervention control.</p> <p>Analyses conducted separately for 6-9 years and 10-14yrs.</p> <p>Follow-up period unclear</p> <p>Follow-up rate 81%</p>	<p>2 Weak evidence of intervention in reducing all drug use and improved racial perceptions among younger aged group (6-9yrs) exposed to the intervention compared with control.</p> <p>3 However no effect on self-esteem.</p> <p>2 Weak evidence of intervention reducing all drug use among older age group (10-14yrs) exposed to the intervention compared with control.</p> <p>3 However no effect on self-esteem or racism.</p> <p>4 More unhealthy attitudes towards drugs in the older exposed group relative to controls. This is thought to be related to experience of or influences of others on drug use.</p> <p>Difficult to distinguish alcohol use from alcohol and tobacco use. Thus, caution should be shown when interpreting the results.</p> <p>Results may be biased because older age groups drop out more. Also more dropped out of the older experimental group.</p> <p>Factors associated with success Being younger. Less negatively influential social peers or family.</p>

TABLE 2.10 THE EFFECTIVENESS OF INTERVENTIONS IN REDUCING DRUG USE

Primary Paper					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
(Magura, Kang et al. 1994) Level 3 controlled observational study of moderate quality How data are reported (drug use): Drug use in the last 30 days before arrest. Whether using drugs or not.	157	USA youths in a detention centre. 64% 'black' 33% 'Hispanic' Aged 16-19 25% of sample 16 years; 26% of sample 17 years. Sex not stated, but probably male. 71% drug users, mainly cannabis (other drugs include cocaine, crack and heroin.)	HIV/AIDS education. Small discussion groups using problem solving. Aim Reduce HIV risk behaviours. Delivered by male counsellor	Non-random allocation to intervention and a waiting list control. Follow-up 5 months after release (10 months after baseline) Follow-up rate 66%	2 Very weak evidence that those in the education group reported greater use of condoms compared with the non-intervention group. 3 No effect on drug use. Representativeness of sample should be questioned. 411 baseline interviews were conducted, but only 110 received the AIDS education. No indication as to why only 58 received the intervention.

TABLE 2.11 THE EFFECTIVENESS OF INTERVENTIONS IN REDUCING DRUG USE

Primary Paper					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
<p>(Maisto, Pollock et al. 2001)</p> <p>Level 3 controlled observational study of moderate quality</p> <p>How data are reported (drug use): Frequency of use in last year (days per month).</p>	166	<p>USA adolescents from a variety of drug and alcohol treatment settings.</p> <p>83% 'Caucasian'</p> <p>Aged 12-18 years (mean 16yrs)</p> <p>75% male.</p> <p>Main drug used is cannabis.</p>	<p>Varied and ranged from inpatients to outpatient drug and alcohol facilities. No details given as to content or delivery although some programmes provided skills training.</p> <p>Aim Reduce drug use</p>	<p>Non-random (i.e. self-selected) allocation of participants to various treatment programmes .</p> <p>Analyses of outcomes controlled for those with an alcohol problem.</p> <p>Follow-up at one year 96%.</p>	<p>2 Extremely weak evidence that those completing an episode of alcohol and other drug treatment showed an improvement in alcohol use (although not drug use).</p> <p>2 Skills training may improve coping.</p> <p>75% of those asked to participate refused.</p> <p>Main problem with this study is its lack of control over the allocation and course of treatment and therefore its ability to determine treatment effects.</p> <p>Factors associated with success. Reduced alcohol consumption Stress and coping interventions.</p>

TABLE 2.12 THE EFFECTIVENESS OF INTERVENTIONS IN REDUCING DRUG USE

Primary Paper					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
<p>(Morehouse and Tobler 2000)</p> <p>Level 2 quasi-experimental study of moderate quality</p> <p>How data are reported (drug use): Effect size calculated and presented for drug use in last 30 days.</p>	280	<p>USA 'High risk' adolescents in residential homes: Foster care homes, young offenders, psychiatric facility. 'High risk' = those more likely to become heavy drug users.</p> <p>Mainly African-American and Latino American.</p> <p>Age 13-19 years. (over 50% <16 years)</p> <p>Sex approximately 80% male</p> <p>Main drugs used: Cannabis, alcohol and tobacco.</p>	<p>Culturally sensitive drug and alcohol intervention services.</p> <p>Small group work or individual counselling.</p> <p>Aim Decrease drug use</p> <p>Provided by trained counsellors.</p>	<p>Quasi-experimental However allocation to treatment groups was not random.</p> <p>Those in homes were compared with a community sample. Of the 280, 132 (47%) completed the programme.</p> <p>Follow-up period not clear.</p>	<p>1-2 Fairly strong evidence that the intervention achieved a was successful in reducing drug use (22%-25%) compared with controls. Optimal = 36% reduction for 5-11 hour input. Overall effect size = .046 to .51.</p> <p>Two main problems were self-selection on to programme and comparison sample consisted of two cross-section samples (one at baseline and the other at follow-up)</p> <p>Only 47% completed the programme.</p> <p>Factors associated with success.</p> <p>Access to adolescents Experienced counsellors Low staff turn-over 5-11 hours of input (compared with low or greater times)</p>

TABLE 2.13 THE EFFECTIVENESS OF INTERVENTIONS IN REDUCING DRUG USE

Primary Papers					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
<p>(Stead, MacKintosh et al. 2001)</p> <p>Level 2 Quasi-experimental study of moderate quality.</p> <p>How data are reported (drug use): % Use and frequency of use in last six months measured in days over the six month period.</p>	1036	<p>UK school children</p> <p>Aged 13-16years. 44%male 56% female.</p> <p>Approximately 24% used drugs, mainly cannabis and solvents.</p>	<p>Multi-faceted: Drama workshops Classroom support Youth work projects Outdoor activities Drug awareness sessions for parents.</p> <p>Aims Reduce drug use or the frequency of drug use, and multiple drug use.</p> <p>Delivered by, professional actors, teachers, youth workers, video, community workers.</p>	<p>Quasi-experimental with annual follow-up at 1,2and three years.</p> <p>Randomised by school to a) Intense b) Less intense programme c) Non-intervention control.</p> <p>The 1036 represent a cohort of the original (54%) 1936 taking part in the study.</p>	<p>3 No impact on reducing drug use. General increase of drug use in all 3 study groups (24% baseline to 36% at three years).</p> <p>3 Only 2% de-escalated drug use from harder drugs (unspecified) to cannabis and solvents.</p> <p>3 No effect on multiple drug use</p> <p>Authors argue that the intervention may not have been intensive enough. Implementation difficulties may account for results.</p> <p>Possible reluctance to disclose drug use.</p> <p>Attrition led to underrepresentation of drug users at baseline; thus those dropping out were higher risk. This might mean less impact i.e. de-escalation from hard to soft drugs.</p>

TABLE 2.14 THE EFFECTIVENESS OF INTERVENTIONS IN REDUCING DRUG USE

Primary Paper					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
<p>(Winters, Stinchfield et al. 2000)</p> <p>Level 3 controlled observational study of moderate quality</p> <p>How data are reported (drug use): % Abstinent from drugs or lapsed back into use in last 12 months.</p>	245	<p>USA adolescents receiving Minnesota Model treatment.</p> <p>85% 'white'.</p> <p>Aged 12-18years.</p> <p>Sex: males 56%.</p> <p>Drugs used mainly cannabis and alcohol.</p>	<p>12 step Minnesota Model.</p> <p>Emphasises life-style change organised around the Alcoholic Anonymous philosophy.</p> <p>Aims Reduce drug use, particularly among those who complete the course.</p> <p>Delivered by trained staff over 6 weeks.</p> <p>Also involved family members.</p>	<p>Non-random allocation of three groups; a) treatment completers b) treatment dropouts c) waiting list controls.</p> <p>No significant differences at baseline in drug use or addiction between the groups.</p> <p>Follow-up at 6 and 12 months post treatment.</p> <p>Follow-up rate 90%</p>	<p>1-2 53%of those receiving the intervention reported reduced or no drug use at 12 months compared with 15% and 28% of non-completers and waiting list groups respectively. Drugs include in order of frequency cannabis, alcohol and amphetamines.</p> <p>No difference between sex and age groups.</p> <p>Greatest weakness is the non-random allocation of subjects to treatment.</p> <p>Those dropping out have lower levels of mental health, school problems and parents who use drugs. Thus it is unlikely that the results are biased.</p> <p>Factors associated with success Completing the programme and may be related to motivation or meeting needs.</p>

SECTION 3 HOW EFFECTIVE ARE DRUGS SERVICES IN REDUCING THE PHYSICAL HARMS ASSOCIATED WITH DRUG USE AMONG YOUNG DRUG USERS?

There were no studies retrieved that addressed this question.

SECTION 4 HOW EFFECTIVE ARE DRUGS SERVICES IN IMPROVING THE PSYCHOLOGICAL WELL BEING OF YOUNG DRUG USERS?

A total of six reviews and four primary papers addressed this question, the details of which are given in the tables in this section.

Interventions

Behaviour therapy.
Counselling.
Family therapy.
Family problem solving for young people who have harmed themselves or have taken an overdose.
General drug treatment services.
Therapeutic community.

Schools programmes:

Life skills training. Psychological interventions to improve confidence and self-esteem. Counselling and support. Peer support. Drug resistance skills.

Evidence of effectiveness

Interventions shown to be effective

There is fairly strong evidence that family therapy reduces psychological problems, including suicide ideation in young drug users compared with controls (Williams and Chang 2000) (Table 4.6). This includes non-hospital-based family therapy and the effect can last up to 14.6 months. 12 family therapy sessions are equally effective as family therapy combined with other inputs (e.g. school) in improving psychiatric conditions. Co-joint family therapy that involves the family and client in the same treatment sessions is more effective in improving psychological status and psychiatric functioning compared with family therapy that is targeted at individuals. This includes distress and impulse control problems (Williams and Chang 2000; Stanton and Shadish 1997) (Table 4.6, Table 4.3).

There is weak evidence that other interventions are effective in improving the psychological well being among young drug users. These include, behaviour therapy (Williams and Chang 2000) (Table 4.6), general drug treatment services (Maisto, Pollock et al. 2001) (Table 4.10), family problem solving for young people with low levels of depression who deliberately self-harm or overdose (Harrington, Kerfoot et al. 1998) (Table 4.8), and therapeutic community offering coping and problem solving skills (White and Pitts 1997) (Table 4.5). School-based interventions are also weakly effective in improving psychological wellbeing. These include, joint school and community skill development programmes (Nicholas and Broadstock 1999) (Table 4.2); teen-leader compared with teacher led resistance interventions; and self-efficacy and life skills programmes (Lister-Sharp, Chapman et al 1999 (Table 4.1); Botvin, Epstein et al 1997 (Table 4.7); White and Pitts 1997 (Table 4.5).

Interventions shown to be ineffective

Family problem solving for young people who have higher levels of depression and have harmed themselves or taken an overdose is ineffective in reducing suicide

ideation (Harrington, Kerfoot et al. 1998) (Table 4.8). Counter to the findings of research detailed above, many school-based programmes were found to be ineffective in improving the psychological well-being of young people including, joint community support (Nicholas and Broadstock 1999) (Table 4.2); those that focus solely on psychological problems (Tobler 1992) (Table 4.4); and some skills programmes (Botvin, Epstein et al 1997; LoSciuto, Freeman et al. 1997) (Table 4.7, Table 4.9). The school counselling and support intervention described by Nicholas and Broadstock (1999) was not effective in reducing depression or suicide ideation (Table 4.2). School interventions that focus solely on psychological problems do not have an effect on the psychological factors that place young people at risk of drug use (Tobler 1992) (Table 4.4). The multi-component intervention described by LoSciuto, Freeman et al (1997) and designed to improve life skills and self-esteem failed to do so. This may have been due to negative peer or family pressure (Table 4.9). The intervention described by Botvin, Epstein et al (1997) based on life skills and self-esteem failed to improve decision-making skills. This may have been due to the lower baseline level of intentional drug use among the experimental group (Table 4.7).

Interventions shown to be harmful

Older school children exposed to a life skills intervention in the USA demonstrated more unhealthy attitudes (acceptance) towards drug. This was thought to be related to either their experience of drugs or influences of other drug users (LoSciuto, Freeman et al. 1997) (Table 4.9).

Insufficient evidence to demonstrate an effect

There were no studies in this category.

PSYCHOLOGICAL WELLBEING: REVIEWS

TABLE 4.1 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING PSYCHOLOGICAL WELLBEING

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Lister-Sharp, Chapman et al. 1999)	1	Schools mainly in the USA, or Canada Ages up to 12 years Sex not specified. Mainly cannabis use.	Skills development: life skills, drugs refusal skills, competence skills, social skills.	4 reviews	This review includes 9 drug and alcohol reviews of which 2 present findings on drug use and another 2 comment further on non-drug outcomes. Reviews are allocated a score from 0-16 by the authors. The quality scores of the 4 reviews are 8,8,8 and 11.
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
2 Weak evidence of school based skills and drug resistance programmes in increasing self-esteem and assertiveness.					
2 Weak effect of one drug resistance training programme (Drug Abuse Resistance Education (DARE)) on self-esteem. Effect size ranges from 0.15 to 0.0.					
Comments					
Some reviews included in this review contain programmes that are designed to improve affect. However effects of these programmes in changing affect are not presented by the authors. How data are presented: Data are presented in descriptive form (3/4th of reviews) with very few statistics. The effect sizes were calculated on one programme and therefore do not reflect all drug resistance training programmes.					

TABLE 4.2 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING PSYCHOLOGICAL WELLBEING

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Nicholas and Broadstock 1999)	2 moderate	100% USA studies Secondary School Children White middle class students; Latino Americans, Mexican-Americans, Asian Americans, Native Americans, African Americans, Hispanic Americans. Suburban and rural. Age 11-19 years 38% male. Some of whom use drugs (mainly cannabis)	Life skills education. School based Health Centres or health consultations. School based health secondary prevention programmes. School and community secondary prevention programmes together for at risk groups.	11	This review reports on 16 studies including 3 reviews. Of the three reviews only one is relevant and is included in the present review (White and Pitts 1997). Only controlled and comparative studies that involve interventions that aim to reduce drug use are reported in the present review.
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
2 Weak evidence of joint school and community skills programme improving cognitive coping skills (at three years follow-up) compared with non intervention controls. This study is aimed at young people who are defined as ‘at risk’ of depression and drug use. 3 No effect of a comprehensive school intervention compared with non-intervention controls on depression and suicide ideation. Programme consisted of counselling, mentoring and academic support. This study also reported greater cannabis use among the intervention group post intervention (follow-up time not specified)					
Comments					
The author does not present data on the psychological impact of these studies apart from two. It is possible that the psychological impact was measured in others, but the review authors do not report these. How data are presented: Study effect sizes were not given by the review authors and thus it was not feasible to demonstrate effects using measures of central tendency.					

TABLE 4.3 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING PSYCHOLOGICAL WELLBEING

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Stanton and Shadish 1997)	2 moderate	100% studies from USA Family therapy settings. White Americans, African Americans, Latino Americans, Asian Americans and Hispanic Americans. Age not specified i.e., adolescents 31% female. Drug use where specified: opiates, cocaine, cannabis (mainly cannabis)	Parents and adolescents together or adolescents and parents involved separately in family therapy.	9	15 studies are included in this review. 6 concern adults and 9 adolescents. The 9 adolescent studies are reported in the present review. Studies were only included if they randomised to interventions. All compared family interventions with other treatment. Average design quality score given to the 9 studies by the authors = 23.8 (0-14 = poor; 14.5-19.00=fair; 19.5-24.0=good; 24.5-30.0 very good).
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
1-2 Fairly strong evidence reported in one study (already reported in Williams 2000) of structured co-joint family therapy and family therapy with input from other sources e.g. schools, in producing equal reductions in psychological problems i.e., distress and impulse control problems post-treatment. Hispanic/Cuban immigrant families.					
Comments					
The author gives psychological outcomes for only 1/9 studies. Perhaps unsurprising since the 'symptom of primary interest was the use, abuse of, or addiction to one or more illicit drugs.'					

TABLE 4.4 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING PSYCHOLOGICAL WELLBEING

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Tobler 1992)	2 moderate	Mainly USA studies. Mainly schools although the review lacks detail. Only information on top 10 peer programmes: Population mainly male, mixed ethnic background Age not specified Sex not specified Includes drug users and non-drug users. Mainly cannabis users, but studies also include alcohol and tobacco.	a) Knowledge only (didactic teaching aimed at reducing drug use. b) Affect only (changing attitudes and self esteem) c) Knowledge and affect (knowledge and problem solving) d) Peer programmes (refusal skills and life skills) e) Other programmes include job schemes and general education. Therapists include mental health professionals, teachers, peers, health educationalists, and students.	143	49% of studies had an experimental design and 51% had a quasi-experimental design. Main outcome measure expressed as effect size (ES) = $\frac{X_c - X_c}{SD_c}$ where X_c & X_c refer to the means of the experimental and control group and SD_c = control group standard deviation.
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
3 Programmes that concentrate solely on affect do not have an impact on the psychological factors that place certain persons at risk of drug use.					
Comments					
Many studies included in this review undoubtedly measure the impact on affect (self-esteem, self-awareness, feelings values), however the results are reported in such a way that it is to determine how different types of programme affect the participants' psychological state (knowledge, social skills etc).					

TABLE 4.5 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING PSYCHOLOGICAL WELLBEING

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(White and Pitts 1997)	1 good	Mainly USA School/college based One non-school based intervention is also included (therapeutic community). This study is described by the author as 'relapse prevention'. African-American, Hispanic Americans and other cultural groups. Approximate age 11-15yrs Sex not specified Drugs used: cannabis (mainly), opiates, cocaine, inhalants, stimulants.	Various health promotion interventions which either educate or develop skills. All of the Schools and the non-schools programmes provided education and skills training. Difficult to distinguish those aimed at primary prevention from those aimed at secondary prevention.	14	There are 62 studies in the review of which 14 are regarded by the authors as methodologically superior. These studies considered refusal and attrition rates in the analyses, compared baseline and follow-up data and compared different conditions. Only the 14 studies are reported in the present review.
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
2 Weak evidence of impact of teen-leader compared with teacher-led on resistance self-efficacy. No details of follow-up period given (control study)					
2 Weak evidence of greater self esteem among those exposed to skills based school programme at one year follow-up compared to non-intervention group (control study).					
2 Weak evidence that therapeutic community (coping, problem solving and refusal skills) improves refusal skills at end of programme, and 12 month follow-up					
Comments					
The author states that skills training when combined with other interventions is more effective. How data are presented: The results are mainly presented in descriptive form with no or little use of statistics.					

TABLE 4.6 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING PSYCHOLOGICAL WELLBEING

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Williams and Chang 2000)	1 good	<p>90% studies USA, 7%Canada and 3% Norway.</p> <p>In and outpatient facilities. Includes: juvenile offenders, those suspended from school, those with mental illness/ psychological problems, and those from Hispanic American community, and diverse social classes.</p> <p>Age range: 11yrs to 19yrs. (mean age 15.9yrs.)</p> <p>Majority is males.</p> <p>Poly-drug users; alcohol and cannabis most common.</p>	<p>Highly varied in: location, intensity, duration, theory based.</p> <p>Main types: a) Minnesota model (in-patient) and represents the most common type. b) Counselling and family therapy (outpatient) c) Therapeutic community (residential)</p>	14	53 studies were reported in this review. 14 studies have control groups. These methodologically stronger studies are reported in the present review.
<p>General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)</p>					
<p>1-2 Fairly strong evidence of family therapy in reducing psychological problems in young drug users compared with controls at 9 months follow-up (comparison study)</p> <p>1-2 Fairly strong evidence of family therapy (non-hospital day programme) in improving suicide ideation among young drug users at 14.6 months(comparison study)</p> <p>1-2 Fairly strong evidence of equal improvement of psychiatric conditions (non-specified) with a mean of 12 family therapy sessions compared with family therapy and other inputs i.e., school at discharge (comparison study).</p> <p>1-2 Fairly strong evidence that co-joint family therapy improves psychological status of young people compared with single one to one family therapy at discharge and at 6-12 months follow-up (comparison study)</p> <p>1-2 Fairly strong evidence that co-joint family therapy improves psychiatric functioning of young people compared with single one to one family therapy at discharge and at 6-12 months follow-up (comparison study).</p> <p>2 Weak effect of behaviour control sessions compared with supportive counselling in improving mood at discharge.</p>					
<p>Comments</p>					
<p>None of these studies are RCTs. How data are reported: % change between groups and other measures of central tendency are reported for some studies but not for all. Sometimes this is because the primary paper does not present these clearly or multi-variate analyses are used</p>					

PSYCHOLOGICAL WELLBEING: PRIMARY PAPERS

TABLE 4.7 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING PSYCHOLOGICAL WELLBEING

Primary Paper					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
(Botvin, Epstein et al 1997) Level 2 experimental study of moderate quality How data are reported (drug use): Two drug measures; a) ever used b) current use. Current use was divided into i) less than once a month ii) once a month or more. Adjusted post-test means given.	833	USA school children Minority groups. African American Hispanic American, White American, Asian American, Native American. Aged 11-15 years. 53% male. Drugs used mainly cannabis, alcohol and tobacco.	Cognitive behavioural intervention: Drug resistance skills and social skills and self-esteem. 15 sessions. Aim Reduce drug use and poly drug use.	Not clear whether schools are randomly assigned to intervention and non-intervention conditions. Follow-up at post intervention and three months. 83% follow-up.	2 Weak evidence that intervention reduces drug use (cannabis) and poly-drug use (smoking, drinking and cannabis use). 3 No effect on some skills i.e. decision making, communication. Factors associated with success. The experimental group had lower expectations of drug use and more likely to refuse drugs at follow-up compared with controls.

TABLE 4.8 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING PSYCHOLOGICAL WELLBEING

Primary Paper					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
(Harrington, Kerfoot et al. 1998) Level 2 experimental study of good quality How data are reported (drug use): Drug use not measured. Main outcome, suicide ideation.	162	UK children referred to mental health teams after deliberate self-harm or overdose. Mainly manual social class. Age 16 or younger. Sex female 90% NB not clear how many had drug problem. The only drug mentioned is paracetamol.	Family problem solving intervention. Assessment visit plus 4 home visits. Aim Improve family functioning and reducing suicidality. Delivered by trained psychiatric social workers	Randomised to intervention or care as usual (non-home care). Follow-up at 2 and six months post-treatment. Follow-up at 12 months 92%	2 Weak effect of intervention in reducing suicide ideation among those who were less depressed at baseline. 3 No effect on family functioning or suicide ideation among general group. Author indicates that the intervention might be too short and not specific to the diversity of family problems. 25% refused to participate in the study. Possible insufficient sample to detect differences. Heterogeneous study group might also explain results.

TABLE 4.9 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING PSYCHOLOGICAL WELLBEING

Primary Paper					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
<p>(LoSciuto, Freeman et al. 1997)</p> <p>Level 2 experimental study of moderate quality</p> <p>How data are reported (drug use): Whether used drugs in past year. Drug, alcohol and tobacco use combined in one variable.</p>	453	<p>USA school children</p> <p>Latino American, White American, African-American, Asian-American, American Indian.</p> <p>Aged 6-14 years (mean age 10).</p> <p>47% female.</p> <p>Drug use not specified but (probably) mainly cannabis.</p>	<p>Multi-component:</p> <p>Life skills and self esteem classes. Peer mentoring. After-school clubs. Outdoor activities</p> <p>Parents also involved.</p> <p>Delivered by youth advocates and professions.</p> <p>Aim To reduce alcohol, tobacco and drug use.</p>	<p>Randomised by class to intervention or non-intervention control.</p> <p>Analyses conducted separately for 6-9 years and 10-14yrs.</p> <p>Follow-up period unclear</p> <p>Follow-up rate 81%</p>	<p>2 Weak evidence of intervention in reducing all drug use and improved racial perceptions among younger aged group (6-9yrs) exposed to the intervention compared with control.</p> <p>3 However no effect on self-esteem.</p> <p>2 Weak evidence of intervention reducing all drug use among older age group (10-14yrs) exposed to the intervention compared with control.</p> <p>3 However no effect on self-esteem or racism.</p> <p>4 More unhealthy attitudes towards drugs in the older exposed group relative to controls. This is thought to related to experience of or influences of others on drug use.</p> <p>Difficult to distinguish alcohol use from alcohol and tobacco use. Thus, caution should be shown when interpreting the results.</p> <p>Results may be biased because older age groups drop out more. Also more dropped out of the older experimental group.</p> <p>Factors associated with success Being younger. Less negatively influential social peers or family.</p>

TABLE 4.10 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING PSYCHOLOGICAL WELLBEING

Primary Paper					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
(Maisto, Pollock et al. 2001) Level 3 controlled observational study of moderate quality How data are reported (drug use): Frequency of use in last year (days per month).	166	USA adolescents from a variety of drug and alcohol treatment settings. 83% 'Caucasian' Aged 12-18 years (mean 16yrs) 75% male. Main drug used is cannabis.	Varied and ranged from inpatients to outpatient drug and alcohol facilities. No details given as to content or delivery although some programmes provided skills training. Aim Reduce drug use	Non-random (i.e. self-selected) allocation of participants to various treatment programmes . Analyses of outcomes controlled for those with an alcohol problem. Follow-up at one year 96%.	2 Extremely weak evidence that those completing an episode of alcohol and other drug treatment showed an improvement in alcohol use (although not drug use). 2 Skills training may improve coping. 75% of those asked to participate refused. Main problem with this study is its lack of control over the allocation and course of treatment and therefore its ability to determine treatment effects. Factors associated with success. Reduced alcohol consumption Stress and coping interventions.

SECTION 5 HOW EFFECTIVE ARE DRUGS SERVICES IN IMPROVING THE FAMILY AND SOCIAL RELATIONS OF YOUNG DRUG USERS?

All seven reviews and four of the primary papers addressed this question, the details of which appear in the tables in this section.

Interventions

Behaviour therapy.
Family therapy.
Family teaching sessions and psycho-education with families.
Family solving problem sessions for young people who have harmed themselves or taken an overdose.
General drug treatment facilities.
Residential Care.

Schools programmes:

School counselling, mentoring and support. School and community support combined. Life skills development. Drug resistance training. Multi-component input including life skills training, peer mentoring, after school club.

Evidence of effectiveness

Interventions shown to be effective

There is fairly strong evidence that residential care reduces school disturbance and anti-social behaviour compared with probation (Williams and Chang 2000) (Table 5.7). There is also evidence that non-hospital day programmes reduce arrests and violence compared with a community integration interventions (Williams and Chang 2000). Family therapy is also effective in reducing family problems compared with parent support groups. Co-joint family therapy is equally effective as one-to-one family therapy in improving family functioning (Williams and Chang 2000). Linking co-joint family therapy with schools is also effective in improving family functioning (Stanton and Shadish 1997) (Table 5.3). Family teaching in the community can reduce anti-social behaviour (Weir 1998) (Table 5.5). There is also fairly strong evidence that school life skills interventions improve school grades and school attendance (Tobler 1992) (Table 5.4).

There are a number of interventions that demonstrate a weak effect on family and social relations. Behaviour therapy has a weak effect on improving schoolwork, school attendance, and family relations (Williams and Chang 2000; Azrin, McMahon et al. 1994) (Table 5.7, Table 5.8). Family therapy has a weak effect in reducing drug arrests and improving school grades (Stanton and Shadish 1997) (Table 5.3). There is weak evidence that community-based psycho-education improves school grades and decreases absenteeism (Weir 1998) (Table 5.5). There is also weak evidence that school interventions improve family and social relations. School based counselling, mentoring and academic support can increase school involvement (Nicholas and Broadstock 1999) (Table 5.2). Joint school and community skills intervention is successful in reducing delinquency among young people at risk of drug use (Nicholas and Broadstock 1999). Community based psycho-education improves school grades and decreases absenteeism (Weir 1998) (Table 5.5). School

life skills interventions can improve interpersonal and communication skills (Lister-Sharp, Chapman et al 1999; White and Pitts 1997) (Table 5.1, Table 5.6). School drug resistance skills improves general social skills (Lister-Sharp, Chapman et al. 1999) (Table 5.1).

Interventions shown to be ineffective

General hospital in-patient sessions do not improve anti-social behaviour (Williams and Chang 2000) (Table 5.7). Family problem solving sessions for young people who have deliberately harmed themselves or overdosed has no effect on family functioning (Harrington, Kerfoot et al. 1998) (Table 5.10). Surprisingly and somewhat contradictory to other studies some research demonstrates that skills based school interventions have no effect on self-esteem, communication skills and racist thoughts (Botvin, Epstein et al 1997; LoSciuto, Freeman et al. 1997) (Table 5.9, Table 5.11). School counselling, mentoring and academic support in school also have no effect on social coping (Nicholas and Broadstock 1999) (Table 5.2). The school counselling and support intervention described by Nicholas and Broadstock (1999) was unsuccessful in improving social coping skills (Table 5.2). The author offers little explanation as to why this outcome was demonstrated, especially since the same intervention was successful in increasing school involvement and reducing delinquency (Nicholas and Broadstock 1999). The multi-component intervention described by LoSciuto, Freeman et al (1997) and designed to improve life skills and self-esteem failed to reduce racist attitudes (Table 5.11). This may have been due to negative peer or family pressure. The intervention described by Botvin, Epstein et al (1997) based on life skills and self-esteem failed to improve communication skills. This may have been due to improved baseline skills of the experimental group (Table 5.9).

Interventions shown to be harmful

No studies demonstrated this.

Insufficient evidence to demonstrate an effect

No studies demonstrated this.

FAMILY AND SOCIAL RELATIONS: REVIEWS

TABLE 5.1 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING THE FAMILY AND SOCIAL RELATIONS

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Lister-Sharp, Chapman et al. 1999)	1	Schools mainly in the USA, or Canada Ages up to 12 years Sex not specified. Mainly cannabis use.	Skills development: life skills, drugs refusal skills, competence skills, social skills.	4 reviews	This review includes 9 drug and alcohol reviews of which 2 present findings on drug use and another 2 comment further on non-drug outcomes. Reviews are allocated a score from 0-16 by the authors. The quality scores of the 4 reviews are 8,8,8 and 11.
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
2 Weak evidence that life training skills is effective (White and Pitts 1997).					
2 Weak effect of one drug resistance training programme (Drug Abuse Resistance Education (DARE)) on social skills. Effect size ranges from 0.34 to 0.10.					
Comments These studies comment on school interventions and thus may not be suited entirely to young people attending drug abuse clinics. How data are presented: Data are presented in descriptive form (3/4th of reviews) with very few statistics.					

TABLE 5.2 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING THE FAMILY AND SOCIAL RELATIONS

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Nicholas and Broadstock 1999)	2 moderate	100% USA studies Secondary School Children White middle class students; Latino Americans, Mexican-Americans, Asian Americans, Native Americans, African Americans, Hispanic Americans. Suburban and rural. Age 11-19 years 38% male. Some of whom use drugs (mainly cannabis)	Life skills education. School based Health Centres or health consultations. School based health secondary prevention programmes. School and community secondary prevention programmes together for at risk groups.	11	This review reports on 16 studies including 3 reviews. Of the three reviews only one is relevant and is included in the present review (White and Pitts 1997). Only controlled and comparative studies that involve interventions that aim to reduce drug use are reported in the present review.
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
1 Weak effect in one study of a comprehensive school programme (counselling, mentoring and academic support) in increasing school involvement compared with non-intervention control.					
2 Weak evidence of joint school and community skills programme in reducing serious and minor delinquency at three years follow-up compared with non intervention controls. This study is aimed at young people who are defined as 'at risk' of depression and drug use.					
2 No effect in the same study of a comprehensive school programme (counselling, mentoring and academic support) in improving social coping compared with non-intervention control.					
Comments					
Author reports difficulty in determining why one there are differences in outcomes, but could be due to intensity or study method. How data are presented: the review authors did not give study effect sizes and thus it was not feasible to demonstrate effects using measures of central tendency.					

TABLE 5.3 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING THE FAMILY AND SOCIAL RELATIONS

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Stanton and Shadish 1997)	2 moderate	100% studies from USA Family therapy settings. White Americans, African Americans, Latino Americans, Asian Americans and Hispanic Americans. Age not specified i.e., adolescents 31% female. Drug use where specified: opiates, cocaine, cannabis (mainly cannabis).	Parents and adolescents together or adolescents and parents involved separately in family therapy.	9	15 studies are included in this review. 6 concern adults and 9 adolescents. The 9 adolescent studies are reported in the present review. Studies were only included if they randomised to interventions. All compared family interventions with other treatment. Average design quality score given to the 9 studies by the authors = 23.8 (0-14 = poor; 14.5-19.00=fair; 19.5-24.0=good; 24.5-30.0 very good).
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
1-2 Fairly strong evidence that structured co-joint family therapy and family therapy with input from other sources e.g. schools, improves family functioning in Hispanic/Cuban immigrant families. 2 Weak evidence of family therapy compared to individual counselling in reducing the number of drug arrests at 4-year follow-up. 2 Weak effect of family therapy compared with school intervention in improving school grades up to 12 months.					
Comments					
Some studies measured psychosocial variables, but the review authors do not always report these. Family therapy is associated with improved outcomes compared with other types of therapy. However the evidence for the relative effectiveness of different family therapy approaches is not conclusive. How data are reported: These appear in a table with the original studies and usually given as statements unsupported by statistics.					

TABLE 5.4 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING THE FAMILY AND SOCIAL RELATIONS

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Tobler 1992)	2 moderate	<p>Mainly USA studies.</p> <p>Mainly schools although the review lacks detail.</p> <p>Only information on top 10 peer programmes: Population mainly male, mixed ethnic background.</p> <p>Age not specified Sex not specified</p> <p>Includes drug users and non-drug users. Mainly cannabis users, but studies also include alcohol and tobacco.</p>	<p>a) Knowledge only (didactic teaching aimed at reducing drug use.</p> <p>b) Affect only (changing attitudes and self esteem)</p> <p>c) Knowledge and affect (knowledge and problem solving)</p> <p>d) Peer programmes (refusal skills and life skills)</p> <p>e) Other programmes include job schemes and general education.</p> <p>Therapists include mental health professionals, teachers, peers, health educationalists, and students.</p>	143	<p>49% of studies had an experimental design and 51% had a quasi-experimental design.</p> <p>Main outcome measure expressed as effect size (ES) = $\frac{X_c - X_c}{SD_c}$ where X_c & X_c refer to the means of the experimental and control group and SD_c = control group standard deviation.</p>
<p>General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)</p>					
<p>1-2 Fairly strong evidence of skills programmes improving behaviour such as school grades and school attendance. Effect size = 0.56.</p>					
<p>Comments Many studies included in this review undoubtedly measure the impact social relations, however the results are reported in such a way that the effect of different types of programmes on social well-being is difficult to determine.</p>					

TABLE 5.5 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING THE FAMILY AND SOCIAL RELATIONS

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Weir 1998)	2 although just acceptable	USA studies. 11-17 year olds who had committed a non-violent crime. Adolescents with impaired social academic and psychological functioning associated with addiction.	Family teaching in community based group homes. Community-based psycho-education programme with emphasis on family involvement.	2	This review assesses 16 of which 2 are of an acceptable standard for inclusion in the present review i.e. comparative studies with follow-up.
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
1-2 Fairly strong evidence form one highly controlled study that family teaching in community based group homes decreases anti-social behaviour compared with other teaching methods (not described). 2 Weak evidence that community-based psycho-education improves school grades and decreases absenteeism compared with non-intervention controls at discharge.					
Comments					
This review includes many low quality studies. Only 2 of 16 studies are described here. It is therefore difficult to draw general conclusions from the review. It also represent the poorest quality review of the 7 appearing in the present report. How data are reported: varied according to study.					

TABLE 5.6 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING THE FAMILY AND SOCIAL RELATIONS

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(White and Pitts 1997)	1 good	Mainly USA School/college based One non-school based intervention is also included (therapeutic community). This study is described by the author as 'relapse prevention'. African-American, Hispanic American and other cultural groups. Approximate age 11-15yrs Sex not specified Drugs used: cannabis (mainly), opiates, cocaine, inhalants, stimulants.	Various health promotion interventions which either educate or develop skills. All of the Schools and the non-schools programmes provided education and skills training. Difficult to distinguish those aimed at primary prevention from those aimed at secondary prevention.	14	There are 62 studies in the review of which 14 are regarded as methodologically superior. These studies considered refusal and attrition rates in the analyses, compared baseline and follow-up data and compared different conditions. Only the 14 studies are reported in the present review.
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
2 Weak evidence that like skills training compared with teacher programme improves interpersonal and communication skills at 3 years follow-up.					
2 Weak evidence of skills programme compared with non-intervention programme in reducing tolerance of friends' drug use at one year follow-up.					
Comments Only two studies made comment on this topic. How data are presented: The results are presented in descriptive form with no or little use of statistics.					

TABLE 5.7 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING THE FAMILY AND SOCIAL RELATIONS

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Williams and Chang 2000)	1 good	90% studies USA, 7%Canada and 3% Norway. In and outpatient facilities. Includes: juvenile offenders, those suspended from school, those with mental illness/ psychological problems, and those from Hispanic American community, and diverse social classes. Age range: 11yrs to 19yrs. (mean age 15.9yrs.) Majority is males. Poly-drug users; alcohol and cannabis most common.	Highly varied in: location, intensity, duration, theory based. Main types: a) Minnesota model (in-patient) and represents the most common type. b) Counselling and family therapy (outpatient) c) Therapeutic community (residential)	14	53 studies were reported in this review. 14 studies have control groups. These methodologically stronger studies are reported in the present review.
General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)					
1-2 Fairly strong effect of residential in decreasing school disturbance and antisocial behaviour at six months follow-up compared with probation programme. 1-2 Fairly strong effect of family therapy compared with parent support groups in reducing family problems at 9 months follow-up. 1-2 Fairly strong effect of non-hospital day programme compared with community integration programme in reducing arrests and violence at 14.6 months follow-up. 1-2 Equal effect of co-joint family therapy and one-to-one family therapy in improving family functioning at discharge and 6-12 months follow-up. 2 Weak effect of behaviour control sessions compared with supportive counselling in improving school work, school attendance, family relations at discharge. 3 No effect of hospital in patient programme in improving antisocial behaviour compared with controls (RCT). 3 No effect of family teaching sessions or non-intervention controls on pro-social behaviours at 3 months follow-up (RCT)					
Comments					
Note that teaching sessions alone have relatively little impact on pro-social behaviour compared with more skills based programmes. RCTs appear to demonstrate less effect compared to the other comparative studies. How data are reported: % change between groups and other measures of central tendency are reported for some studies but not for all. Sometimes this is because the primary paper does not present these clearly or multi-variate analyses are used					

FAMILY AND SOCIAL RELATIONS: PRIMARY PAPERS

TABLE 5.8 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING THE FAMILY AND SOCIAL RELATIONS

Primary Paper					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
<p>(Azrin, McMahon et al. 1994)</p> <p>Level 2 experimental study of moderate quality</p> <p>How data are reported (drug use): Urine analyses to measure the presence of drugs once per month for the duration of the intervention. Outcome is calculated on the number of months drug free.</p>	82	<p>USA Drug users recruited from agencies and newspapers</p> <p>9% Afro American, Hispanic American, Native American.</p> <p>14 (17%) of sample were under 19years (mean age = 16yrs).</p> <p>56% male</p> <p>Drugs used mainly cannabis and cocaine.</p>	<p>Behavioural therapy, includes urge control and asking for family support.</p> <p>19 sessions over 12 months.</p> <p>Aim Reduce drug use</p>	<p>Subjects randomly assigned to behavioural therapy or non-behavioural treatment.</p> <p>Analyses includes separate analyses for youths (< 19years).</p> <p>Follow-up at 12 months post-treatment</p>	<p>1-2 Young people in the behavioural therapy had a mean of 8.9 months drug free compared with 0.6 in the non-behavioural therapy group (p<0.005)</p> <p>1-2 Young people receiving behavioural therapy had a mean of 8.9 months drug free compared with 5.7 among adults receiving behavioural therapy (p<0.02)</p> <p>2 Weak evidence that school attendance also improved family relations.</p> <p>No figures are given for initial sample and follow-up. The 82 are completers only. Thus difficult to generalise. Also low sample size.</p> <p>Factors associated with success Parental involvement may have improved family relationships. Either that or reduced drug use improved family relationships.</p>

TABLE 5.9 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING THE FAMILY AND SOCIAL RELATIONS

Primary Paper					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
(Botvin, Epstein et al 1997) Level 2 experimental study of moderate quality How data are reported (drug use): Two drug measures; a) ever used b) current use. Current use was divided into i) less than once a month ii) once a month or more. Adjusted post-test means given.	833	USA school children Minority groups. African American Hispanic Americans, White Americans, Asian Americans, Native Americans. Aged 11-15 years. 53% male. Drugs used mainly cannabis, alcohol and tobacco.	Cognitive behavioural intervention: Drug resistance skills and social skills and self-esteem. 15 sessions. Aim Reduce drug use and poly drug use.	Not clear whether schools are randomly assigned to intervention and non-intervention conditions. Follow-up at post intervention and three months. 83% follow-up.	2 Weak evidence that intervention reduces drug use (cannabis) and poly-drug use (smoking, drinking and cannabis use). 3 No effect on some skills i.e. decision making, communication. Factors associated with success. The experimental group had lower expectations of drug use and more likely to refuse drugs at follow-up compared with controls.

TABLE 5.10 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING THE FAMILY AND SOCIAL RELATIONS

Primary Paper					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
(Harrington, Kerfoot et al. 1998) Level 2 experimental study of good quality How data are reported (drug use): Drug use not measured. Main outcome, suicide ideation.	162	UK children referred to mental health teams after deliberate self-harm or overdose. Mainly manual social class. Age 16 or younger. Sex female 90% NB not clear how many had drug problem. The only drug mentioned is paracetamol.	Family problem solving intervention. Assessment visit plus 4 home visits. Aim Improve family functioning and reduce suicidality. Delivered by trained psychiatric social workers	Randomised to intervention or care as usual (non-home care). Follow-up at 2 and six months post-treatment. Follow-up at 12 months 92%	2 Weak effect of intervention in reducing suicide ideation among those who were less depressed at baseline. 3 No effect on family functioning or suicide ideation among general group. Author indicates that the intervention might be too short and not specific to the diversity of family problems. 25% refused to participate in the study. Possible insufficient sample to detect differences. Heterogeneous study group might also explain results.

TABLE 5.11 THE EFFECTIVENESS OF INTERVENTIONS IN IMPROVING THE FAMILY AND SOCIAL RELATIONS

Primary Paper					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
<p>(LoSciuto, Freeman et al. 1997)</p> <p>Level 2 experimental study of moderate quality</p> <p>How data are reported (drug use): Whether used drugs in past year. Drug, alcohol and tobacco use combined in one variable.</p>	453	<p>USA school children</p> <p>Latino, White, African-American, Asian-American, American Indian.</p> <p>Aged 6-14 years (mean age 10).</p> <p>47% female.</p> <p>Drug use not specified but (probably) mainly cannabis.</p>	<p>Multi-component:</p> <p>Life skills and self esteem classes. Peer mentoring. After-school clubs. Outdoor activities</p> <p>Parents also involved.</p> <p>Delivered by youth advocates and professions.</p> <p>Aim To reduce alcohol, tobacco and drug use.</p>	<p>Randomised by class to intervention or non-intervention control.</p> <p>Analyses conducted separately for 6-9 years and 10-14yrs.</p> <p>Follow-up period unclear</p> <p>Follow-up rate 81%</p>	<p>2 Weak evidence of intervention in reducing all drug use and improved racial perceptions among younger aged group (6-9yrs) exposed to the intervention compared with control. However no effect on self-esteem.</p> <p>3</p> <p>2 Weak evidence of intervention reducing all drug use among older age group (10-14yrs) exposed to the intervention compared with control. However no effect on self-esteem or racism.</p> <p>3</p> <p>4 More unhealthy attitudes towards drugs in the older exposed group relative to controls. This is thought to be related to experience of or influences of others on drug use.</p> <p>Difficult to distinguish alcohol use from alcohol and tobacco use. Thus, caution should be shown when interpreting the results.</p> <p>Results may be biased because older age groups drop out more. Also more dropped out of the older experimental group.</p> <p>Factors associated with success Being younger. Less negatively influential social peers or family.</p>

SECTION 6 HOW EFFECTIVE ARE DRUG SERVICES IN ENCOURAGING THE UP-TAKE OF OTHER HEALTH AND SOCIAL SERVICES?

Only two primary papers investigated this question (Schoenwald, Ward et al. 1996; Freeborn, et al. 1995)

Interventions

Multi-systematic family therapy. A comprehensive community based family therapy that works with families to tackle systemic problems in family interactions, peer relations and school problems.

Specialist drug treatment service offering counselling and residential services. Family also involved.

Evidence of effectiveness

Interventions shown to be effective

There is weak evidence that those attending a specialist drug treatment service that offers counselling and residential care use more medical services during a 1.5 year follow-up compared with the comparison group (Freeborn, et al. 1995) (Table 6.1). Medical services contacted include those for chronic disease, microorganism disease, undiagnosed disease, pregnancy complications and trauma. The intervention group also made more use of services that focus on emotional problems and acute problems. There is also evidence that parents increased their contact with medical services. There were no differences between the intervention and comparison groups in the number of hospitalisations. The authors conclude that service use may be determined by familiarity with health services and past positive experience of health services (Table 6.1).

Weak evidence that multi-systematic therapy (MST) reduces the length of stay in prison or residential treatment, but only in 8% of sample. The costs of MST are offset by those associated with lower incarceration. There was no effect on the use of medical services, including mental health services, which were used by approximately 33% of the treatment and control groups (Schoenwald, Ward et al. 1996) (Table 6.2).

TABLE 6.1 USE OF OTHER SERVICES: PRIMARY PAPER

Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
<p>(Freeborn et al. 1995)</p> <p>level 3 controlled observational study of moderate quality</p> <p>How data are reported (drug use): No drug use data presented.</p>	561	<p>Canadian young people attending a drug treatment service.</p> <p>93% European Americans</p> <p>Age 12-18 years (mean age = 16yrs)</p> <p>60% male</p> <p>Mainly alcohol and cannabis.</p>	<p>Specialist drug treatment offering counselling and residential services for adolescent drug users. Family also involved.</p> <p>The use of medical services by a young person and their family following initial contact with the drugs service is measured.</p> <p>Hypothesis Contact with drug services should reduce medical service use.</p>	<p>Non random allocation to follow-up samples. The medical records of :</p> <p>a) drug treatment compilers</p> <p>b) drug treatment non-compilers,</p> <p>c) adolescents known not to have drug problems.</p> <p>Secondary analyses included parental contact with services in the same groups.</p> <p>Follow-up 1.5 years.</p>	<p>2 Weak evidence that drug treatment compilers use medical services more than drug treatment non-compilers and not addicted group. Relative mean contacts between pre and post assessment are 3.3, 3.2, and 2.6 respectively. Mainly contacts for chronic disease, micro-organism disease, non-micro-organism disease, undiagnosed disease, pregnancy complications and trauma.</p> <p>2 Weak evidence that treatment compilers also used services more for emotional problems, acute problems and undiagnosed diseases.</p> <p>2 Weak evidence that parents of those treated also increased their contact with services.</p> <p>3 No difference between the groups in hospitalisations.</p> <p>Absence of randomisation suggests that the results should be interpreted with caution i.e. the treatment sample may suffer more illness. Difficult to interpret findings but those in treatment may be more familiar with services and thus use them more. Good experience of services may increase service use. This type of studies is rare among adolescent drug users.</p>

TABLE 6.2 USE OF OTHER SERVICES: PRIMARY PAPER

Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Results and comments (including attrition, confounders, and factors associated with outcomes) General strength of the evidence (1=strong 2 = weak 3 =no effect 4= harmful 5= insufficient evidence)
<p>(Schoenwald, Ward et al. 1996)</p> <p>level 2 experimental study of moderate quality</p> <p>How data are reported (drug use): No drug use presented</p>	118	<p>USA juvenile offenders.</p> <p>72% diagnosed with clinical drug abuse problems.</p> <p>African-American, Caucasian, Asian, Hispanic, Native American.</p> <p>Age 12-17 years Sex not specified, but probably male.</p> <p>Drugs not specified.</p>	<p>Multisystemic therapy: Comprehensive family community based treatment.</p> <p>Work with families to tackle systemic problems with family interactions, peer relations, school problems.</p> <p>Duration is 130 days with 40 contact hours.</p> <p>Aim Reducing incarceration.</p> <p>Delivered by trained counsellors.</p>	<p>Subjects randomly allocated to either intervention or service as usual (12-step programme)</p> <p>Follow-up 6 months.</p>	<p>2 Weak evidence that MST reduces the length of stay in prison or residential treatment service, but only in small number of sample incarcerated (8%).</p> <p>3 No effect on the subsequent use of services. Both groups used a vast array of mental health, substance abuse services. These were used by approximately one third of each group.</p> <p>2 Costs of service use with MST \$67,000 compared with \$199,00 with services as usual.</p> <p>2 The costs of MST are offset by those of lower incarceration .</p> <p>The author recommends that costs and use of alternative services should be included in future evaluations.</p>

SECTION 7 FACTORS CONTRIBUTING TO THE SUCCESS OF INTERVENTIONS

13 of the 18 papers included in the review made mention of the factors contributing to the success of specific interventions. Extreme caution is advocated when interpreting the following summary. Not every article provides sufficient detail of the factors associated with success. Thus, the following analyses are based on papers that provide some detail and are likely to provide only partial coverage.

Factors cited by authors as contributing to the success of interventions.

- **Low pre-treatment substance abuse**
(Maisto, Pollock et al. 2001 (Table 7.5); Williams and Chang 2000 (Table 7.3))
- **Reduced psychopathology**
(Williams and Chang 2000 (Table 7.3); Botvin 1997 (Table 7.4))
- **Peer and parental support (including peer-led support)**
(Williams and Chang 2000 (Table 7.3); Lister-Sharp, Chapman et al. 1999 (Table 7.1);
Weir 1998 (Table 7.2); LoSciuto, Freeman et al. 1997 (Table 7.4); Stanton and Shadish 1997
(Table 7.2); Azrin, McMahon et al. 1994 (Table 7.4); Tobler 1992 (Table 7.2))
- **Self-motivation and completing the programme**
(Williams and Chang 2000 (Table 7.3); Winters, Stinchfield et al. 2000 (Table 7.5))
- **Having better coping and relapse skills**
(Maisto, Pollock et al. 2001 (Table 7.5); Williams and Chang 2000 (Table 7.3);
Lister-Sharp, Chapman et al. 1999 (Table 7.1); Nicholas and Broadstock 1999 (Table 7.1))
- **Better school attendance and school performance.**
(Williams and Chang 2000 (Table 7.3)).
- **Comprehensive interventions i.e. not just concentrating on drug use but tackling wider cultural issues including life skills training, stress and coping.**
(Maisto, Pollock et al. 2001 (Table 7.5); Williams and Chang 2000 (Table 7.3);
Lister-Sharp, Chapman et al. 1999 (Table 7.1); Nicholas and Broadstock 1999 (Table 7.1);
White and Pitts 1997 (Table 7.3); Tobler 1992 (Table 7.2))
- **Carefully planned interventions with clear aims, objectives and target audience.** (Nicholas and Broadstock 1999 (Table 7.1))
- **Well funded interventions; long term with booster sessions**
(Williams and Chang 2000 (Table 7.3); Nicholas and Broadstock 1999 (Table 7.1));

White and Pitts 1997 (Table 7.3; Weir 1998 (Table 7.2))

- **Having school facilities for high-risk groups or targeting high risk groups e.g. dropouts.**

(Weir 1998 (Table 7.2); White and Pitts 1997 (Table 7.3); Tobler 1992 (Table 7.2))

- **Using experienced and well trained staff with low turn over**

(Morehouse and Tobler 2000 (Table 7.5); Weir 1998 (Table 7.2); Tobler 1992 (Table 7.2))

- **Multi-agency working** (Nicholas and Broadstock 1999 (Table 7.1)).

TABLE 7.1 FACTORS CONTRIBUTING TO THE SUCCESS OF INTERVENTIONS: REVIEWS

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Lister-Sharp, Chapman et al. 1999)	1 good	Schools mainly in the USA, or Canada Ages up to 12 years	Skills development: life skills, drugs refusal skills, competence skills, social skills.	4 reviews	Mixed study designs some weak.
Factors associated with successful outcome Peer education Skills training General well-being interventions i.e. mental health, self esteem Parental involvement					
(Nicholas and Broadstock 1999)	2 moderate	USA secondary school children (11-19 years).	Life skills education. In schools and community	11	Minimum = comparative studies.
Factors associated with successful outcome Skills rather than didactic teaching Carefully planned interventions with clear aims and objectives and relevant to the target audience. Long-term Community-based interventions might address wider cultural issues e.g. at home. Multi-agency working i.e. schools and youth clubs					

TABLE 7.2 FACTORS CONTRIBUTING TO THE SUCCESS OF INTERVENTIONS: REVIEWS

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(Stanton and Shadish 1997)	2 moderate	USA adolescents from a range of ethnic backgrounds. Age not specified	Family Therapy	9	Randomised or comparative studies.
Factors associated with successful outcome Family therapy compared with non family involvement Family therapy is also associated with improved retention.					
(Tobler 1992)	2 moderate	Mainly USA Mainly schools Age not specified	Education and skills programmes	143	Experimental design and quasi-experimental design.
Factors associated with successful outcome Using mental health professionals or counsellors Using peer educators Refusal skills Broad-spectrum skills i.e. communication skills, assertiveness, goal setting, coping. Targeting at risk groups.					
(Weir 1998)	2 although just acceptable	USA studies. 11-17 year olds and adolescents	Family teaching and community-based psycho-education.	2	Minimum = comparative studies.
Factors associated with successful outcome Having special facilities for school-drop outs Well resourced interventions Using experienced staff Family therapy may reduce drop out rate (from 64%-44%) Slightly older clients and drug abuse at older age. Parental concern.					

TABLE 7.3 FACTORS CONTRIBUTING TO THE SUCCESS OF INTERVENTIONS: REVIEWS

Review	Quality of review 1 good 2 moderate	Population and Setting	Interventions	Number of studies	Quality of studies as assessed by reviewer.
(White and Pitts 1997)	1 good	Mainly USA. School/college Age 11-15yrs	Various health promotion interventions which either educate or develop skills.	14	Minimum = comparative studies
Factors associated with successful outcome Skills and assertiveness training Targeting specific 'at risk' populations and age specific. More intensive long-term programmes Using booster sessions					
(Williams and Chang 2000)	1 good	USA 11-19 year olds.	Treatment services	14	Minimum = comparative studies
Factors associated with successful outcome Pretreatment: Lower pre-treatment substance use; peer and parental support particularly in their non-use of drugs; better school attendance and functioning; less conduct disorder; greater motivation for treatment; less psychopathology. During treatment: Treatment completion (48% of all studies have follow-up rates of < 75%) ; larger programmes with larger budgets; more comprehensive (schooling with recreational activities). Post-treatment: Having non-using parents or peers; having better relapse skills; better coping skills.					

TABLE 7.4 FACTORS CONTRIBUTING TO THE SUCCESS OF INTERVENTIONS: PRIMARY PAPERS

Primary Papers					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Factors associated with success
(Azrin, McMahon et al. 1994) Level 2 experimental study of moderate quality	82	USA Drug users recruited from agencies and newspapers (17%) of sample were under 19years (mean age = 16yrs).	Behavioural therapy, includes urge control and asking for family support.	Subjects randomly assigned to behavioural therapy or non-behavioural treatment.	Parental involvement may have improved family relationships. Either that or reduced drug use improved family relationships.
(Botvin, Epstein et al 1997) Level 2 experimental study of moderate quality	833	USA school children Aged 11-15 years.	Cognitive behavioural intervention: Drug resistance skills and social skills and self-esteem. 15 sessions.	Not clear whether schools are randomly assigned to intervention and non-intervention conditions.	The experimental group had lower expectations of drug use and more likely to refuse drugs at follow-up compared with controls.
(LoSciuto, Freeman et al. 1997) Level 2 experimental study of moderate quality	453	USA school children Aged 6-14 years (mean age 10).	Multi-component: Life skills and self esteem classes. Peer mentoring. After-school clubs. Outdoor activities Parents also involved.	Randomised by class to intervention or non-intervention control.	Being younger. Less negatively influential social peers or family.

TABLE 7.5 FACTORS CONTRIBUTING TO THE SUCCESS OF INTERVENTIONS: PRIMARY PAPERS

Primary Papers					
Study and study quality	n	Client Characteristics	Programme Characteristics	Method	Factors associated with success
(Maisto, Pollock et al. 2001) Level 3 controlled observational study of moderate quality	166	USA adolescents from a variety of drug and alcohol treatment settings. Aged 12-18 years (mean 16yrs)	Varied and ranged from inpatients to outpatient drug and alcohol facilities. No details given as to content or delivery although some programmes provided skills training.	Non-random (i.e. self-selected) allocation of participants to various treatment programmes	Reduced alcohol consumption Stress and coping interventions.
(Morehouse and Tobler 2000) Level 2 quasi-experimental study of moderate quality	280	USA 'High risk adolescents in residential homes: Foster care homes, young offenders, psychiatric facility. Age 13-19 years. (over 50% <16 years)	Culturally sensitive drug and alcohol intervention services. Small group work or individual counselling.	Quasi-experiment. However allocation to treatment groups was not random.	Access to adolescents Experienced counsellors Low staff turn-over 5-11 hours of input (compared with low or greater times)
(Winters, Stinchfield et al. 2000) Level 3 controlled observational study of moderate quality	245	USA adolescents receiving Minnesota Model treatment. Aged 12-18years.	12 step Minnesota Model. Emphasises life-style change organised around the Alcoholic Anonymous philosophy.	Non-random allocation of three groups.	Completing the programme and may be related to motivation or meeting needs.

DISCUSSION AND CONCLUSIONS

The review clearly demonstrates that some interventions are effective reducing drug use and the problems associated with drug use whilst others are either weakly effective or have no impact on these outcomes.

Interventions that are fairly effective in reducing drug use include; behaviour therapy, culturally sensitive counselling, family therapy, Minnesota 12-step programmes and therapeutic community and residential care. The one intervention that tends to have a fairly strong effect in reducing psychological problems is family therapy. Those with a particularly strong effect in reducing social problems are, family therapy, family teaching, non-hospital day programmes, therapeutic community and residential care, and some life skills programmes in schools.

Generally, interventions with either a weak or no effect on drug use are; health education counselling, general drug treatment facilities and school based programmes. Those with either a weak or no effect on psychological problems are; behaviour therapy, family problem solving, school based skills programmes, therapeutic communities and residential treatments. Interventions with either a weak or no effect on social problems are; behaviour therapy, family therapy that aims to reduce drug arrests and improve school grades, family problem solving, and the majority of school based programmes.

There is also weak evidence that therapeutic and residential treatments may also lead to an increase in the use of medical services by young people and their parents. There is weak evidence that family therapy reduces the length of stay in prison or residential treatment.

A small number of interventions may have a potentially harmful effect. These are mainly school based life skills programmes that demonstrate an increase in cannabis use and drug acceptance attitudes among those exposed to the intervention. This may be related to the influence of drug using peers or support for drug use among the family.

There are no studies included in the review that demonstrate the effectiveness of interventions in reducing the physical harms related to drug use. Two possible explanations for this are that good quality research studies have yet to be conducted in this area (Gilvarry 2000) or, that despite the potential risk, extensive physical morbidity has not been established in young drug users (Bauman and Phongsavan 1999; Weinberg, Rahdert et al 1998, Gilvarry 2000). There are also no studies that demonstrated the effects of substitute prescribing for young drug users, such as methadone. This may be explained by the reluctance of medical practitioners to prescribe potentially addictive substances to young people (Gilvarry 2000, Kaminer 1995), other potential hazards such as uncertain long-term effects (Kaminer 1995) or restrictions in prescribing (Kaminer 1995; Crome 1999)

The review also provides evidence of the factors associated with the success of interventions. These include, well funded, carefully planned, long-term interventions that target specific groups. Providing separate services for 'low risk' and 'high risk' groups may be particularly beneficial. Low risk groups might include those with low pre-treatment levels of substance abuse, reduced psychopathology, are well motivated, and have better coping and relapse skills. Young people experimenting

with drugs and still in contact with school are a typical example. Other programmes could be provided for those considered to be 'high risk' i.e., those who drop out of school, exhibit greater levels of substance abuse, psychopathology and reduced coping and relapse skills. It is also important not to focus solely on drug use as a principal outcome, but also on the problems associated with drug use including psychological and social problems. Involving parents and peers may enhance the effects of interventions which aim to tackle these problems, and may explain why family therapy is particularly effective. However, some caution should be shown when involving families, especially where there is negative family or peer pressure. The use of experienced well-trained staff is also important and multi-agency working in some instances is successful e.g., using mental health professionals in schools programmes and linking family therapy with school interventions.

There is some degree of heterogeneity in the findings contained in the review. The variation in results can be explained by four main factors namely, extraneous factors such as peer influences (LoSciuto, Freeman et al 1997), the type of people targeted by an intervention (Harrington, Kerfoot et al 1997), the type of intervention (Tobler, 1992), and the study design (Williams and Chang 2000).

Peers or significant others, such as family, may have a potentially negative effect on young people and can influence their attitudes towards drugs (LoSciuto, Freeman et al 1997). These influences may be such that they override the potential effects of an intervention that aims to encourage resistance towards drugs (LoSciuto, Freeman et al 1997). Another closely related factor is the characteristics of those targeted by an intervention. This is demonstrated in Harrington, Kerfoot et al (1997) study in which family problem solving is effective in improving the psychological well being of young people with low levels of depression who self-harm or overdose, but is ineffective among those with higher levels of depression.

Type of intervention is also important. Tobler (1992) in her review of school interventions demonstrates that programmes which concentrate solely on affect have no impact on psychological risk factors of drug use. Other studies conducted on school interventions suggest that purely education based programmes are generally less effective in reducing drug use than those incorporating the following elements: skills development, self-esteem and confidence building, targeting high risk groups, using health professionals and peers, booster sessions, and involving parents (Nicholas and Broadstock 1999; Lister-sharp, Chapman et al 1999; Botvin, Epstein et al 1997; LoSciuto, Freeman et al 1997; White and Pitts 1997; Tobler 1992).

The degree of rigour in each study undoubtedly affects study outcomes. Although only well designed studies were included in the review these ranged in quality from experimental studies to controlled observational studies. Williams and Chang (2000) suggest that RCTs conducted on family therapy appear to demonstrate less effect compared with other studies. However, it is difficult to consistently support this notion. In Tobler's (1992) review, for example, there were no statistically significant differences in effect size between experimental and quasi-experimental studies. A more feasible explanation for the variation results may be the methodological problems encountered whilst conducting the study rather than the basic design. In Botvin, Epstein et al (1997) quasi-experimental study into the effects of a skills intervention for school children, the reduction in drug use among the experimental group may have resulted from their lower baseline expectations of drug use compared with controls. LoSciuto, Freeman et al's (1997) experimental study demonstrated the effectiveness of a skills based school intervention in reducing drug

use among older children. Generally older children use drugs, but older children were also more likely to drop out of the experimental group.

There are some limitations to the present review. The first is that there may be interventions that are not yet the subject of research. Motivational counselling is an example. The second limitation is that the review contains studies that are moderately strong in design and as such research using weaker designs is excluded. These studies may contain valuable information about the context or limitations of some interventions and thus the findings may be missed. Bias may also result from the overlap between reviews. Studies may appear in more than one review and this might result in an overreporting of a substantial sub-set. It certainly explains the agreement between reviewers concerning some interventions e.g., Williams and Chang (2000) and Stanton and Shadish (1997) on family therapy, and Tobler 1992, Lister-Sharp, Chapman et al (1999) and White and Pitts (1997) on school interventions. Third, it was evident in reading some reviews that the original studies may have measured outcomes that are of relevance to the present review, but these were not reported (Tobler 1992). Finally, almost all of the studies included in the review were conducted in the USA or Canada. This means that the results may not automatically transfer to Scotland. US drugs policy is based predominately on abstinence rather than tackling problems associated with drug use. In addition, many of the interventions studied were targeted at high risk populations, many of which include culturally diverse groups not found in the UK i.e. African, Asian and Latino Americans.

Nevertheless, there are particular strengths of the review. First, the scope of the review is extremely wide. It includes a broad range of secondary prevention interventions and settings and as such it is comprehensive in its coverage of services that have been the subject of research. Second it employs a comprehensive search strategy which encompasses electronic libraries, databases, expert opinion and a hand search of journals, all of which and resulted in uncovering a large number of abstracts (approximately 6,000). It is therefore unlikely that a substantial amount of relevant literature was missed. Third, the assessment and appraisal of papers was conducted, at least in part, by two independent reviewers who used appraisal tools adopted in previous reviews. The aim of doing so is to minimise selection bias. Finally, only well designed primary research studies and reviews were accepted. For primary papers this meant including only experimental, quasi-experimental or controlled observational studies. For reviews this meant including only systematic reviews that contained good quality studies. We are therefore confident that the review provides the best available evidence for the effectiveness of interventions for young drug users.

Finally recommendations for research. Given the small number of studies included in the review the most obvious recommendation is to encourage good quality research that establishes the effectiveness of health and social services for young people up to 16 years. This includes randomised controlled studies and studies that reduce drop-out (Maisto et al 2001; Stead, MacKintosh et al 2001; Williams and Chang 2000; Moorhouse and Tobler 2000; Winters, Stinchfield et al 2000; Botvin, Epstein et al 1997; LoSciuto, Freeman et al 1997; Azrin, McMahon et al 1994).

Other services that should be the subject of research might include those currently provided for adults such as needle exchange, substitute prescribing and other social care services. Research should be conducted on selected target groups i.e., young people at high or low risk of developing a drug problem (White and Pitts 1997).

Consideration should also be given to assessing the economic impact and the impact on other services of providing interventions to young drug users. Given the context in which most research is conducted i.e., North America, is imperative that more research is conducted in other countries (Lister-Sharp, Chapman et al 1999).

Drug use should not be identified as the only outcome measure. Research should include other psychological and social outcomes for example communication skills, schooling, employment, and family relations. Consistency in outcome measures, their presentation, and follow-up period, might make meta analyses in future reviews more feasible. Researchers should also be encouraged to describe the interventions in more detail or make these details more available (Williams and Chang 2000).

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PART 2

A REVIEW OF THE LEGAL FRAMEWORK

AIM

Outline the current statutory framework that might affect the provision or take up of drug treatment services for young people under the age of 16 years in Scotland.

METHODS

Scope

Interpretation of statutes or case law requires legal expertise and is beyond the scope of this review. The review will, therefore, concentrate on identifying and summarising literature that provides authoritative guidance to the existing legal framework in Scotland and may apply to clinical situations involving young people. Legislation relating to drugs and law enforcement is also out with the remit of this review.

For the purpose of this review 'drug' refers to prescribed and illegal substances used illicitly by young people and excludes tobacco and alcohol. A broad definition of 'treatment services' is accepted and encompasses interventions such as advice, counselling, substitute prescribing, detoxification, rehabilitation and community programmes.

Identifying the literature

A systematic search was undertaken to identify literature relating to the current statutory framework that might affect drug treatment services for young people in Scotland under the age of 16 years for the years 1990-2001.

The following sources were searched:

- Computerised databases: Caredata, CINAHL, Medline, Web of Science, Westlaw.
- Publication lists on the websites of drug, child and health organisations.
- References provided by subject experts (from the fields of law, health, social care)
- References provided by representatives from drugs organisations (national and local, and from statutory and voluntary sectors).
- Hand search of journals for 2001 as recommended by subject experts (Addiction, Addiction Research, Journal of Substance Use, Druglink, Solicitors Journal)
- Citation lists in articles reviewed
- References provided by colleagues.

Details of the search strategies appear in Appendix 5, and details of websites and number of experts contacted appear in Appendix 6. All types of publications, including reports, research papers, commentaries and books, were considered.

Assessing Publications

A two-stage screening procedure was used to identify publications for inclusion in the review. The abstract of each publication, where one was available, was assessed to ascertain whether it was relevant to the review. Where the abstract indicated that the publication was relevant only to legislation in other countries, to non-illicit drug use or to adult populations, then it was rejected. When it was unclear from the

abstract whether or not the publication was relevant, or where an abstract was unavailable, the full publication was obtained for further assessment. From 698 publications initially identified, 87 (12%) were selected for further assessment.

The second stage involved a more detailed assessment of these 87 publications to establish whether they met the inclusion criteria. Approximately 86% of the publications were selected and assessed by two independent reviewers. Initial agreement between the reviewers was 84% and agreement was reached on the remaining 16% after discussion. Of the publications reaching second stage assessment, 22 (24%) were included in the review. The 22 publications referred to the legal status of young people under the age of 16 years or to drug service provision for young people under the age of 16 years. Publications that were excluded made no reference to young people under the age of 16 years or did not relate to treatment services. Publications that do not apply to UK legislation were also excluded.

Summarising the literature

The publications are presented in the results section under two broad sub-headings:

- 1) Legal framework for caring for children in general
- 2) Legal framework for drug treatment services for young people

RESULTS

SECTION 1 LEGAL FRAMEWORK FOR CARING FOR CHILDREN IN GENERAL

The review identified 11 publications relating to the legal framework in which care should be provided to children. Three of these publications are issued by the UK Government and contain guidance on the legal framework that applies to Scotland. The remaining 8 publications offer expert comment on the legal framework.

Government publications

The review identified three UK government documents that clearly establish the Children (Scotland) Act 1995 as the key legislative framework in relation to the care and welfare of children in Scotland (The Scottish Office 1997 (a); The Scottish Office 1998; Scottish Executive 2000). There is general agreement that ratification of the Act simplified public and private law in relation to children by condensing a mass of legislation into one coherent structure. The three government documents emphasise the significant contribution the Act makes to integrating the rights and responsibilities of parents, the welfare of children and the role of local authorities and agencies in meeting the needs of children and families. All three documents offer guidance to health and social care staff in implementing the Children (Scotland) Act 1995.

The principles of the Children (Scotland) Act 1995 are derived from the Articles of the United Nations Convention on the Rights of the Child 1989. The essential principles of the Act are that:

- Each child has right to be treated as an individual;
- Each child who can form a view on matters affecting himself or herself has the right to express those views if he or she so wishes;
- Parents should normally be responsible for the upbringing of their children and should share that responsibility;
- Each child has the right to protection from all forms of abuse, neglect or exploitation;
- So far as is consistent with safeguarding and promoting the child's welfare, the public authority should promote the upbringing of children by their families;
- Any intervention by a public authority in the life of a child must be properly justified and should be supported by services from all relevant agencies working in collaboration.

Three main themes are evident in the Children (Scotland) Act 1995 in support of these principles:

- The welfare of the child is the paramount consideration when his or her needs are considered by courts and children's hearings;
- No court should make an order relating to a child and no children's hearing should make a supervision requirement unless the court or hearing considers that to do so would be better for the child than making no order or supervision requirement;
- The child's views should be taken into account where major decisions are to be made about his or her future (The Scottish Office 1997 (a); The Scottish Office 1998).

UK Government Guidance on the Children (Scotland) Act 1995

Scotland's Children: Children (Scotland) Act 1995 Regulation and Guidance, Volume 1 – support and protection for children and their families (1997) is targeted at those working primarily within local authorities (The Scottish Office 1997 (a)). The relevance of the document to health boards and trusts, police, education, and voluntary organisations is also evident.

In listing groups of children likely to be in need of support and protection, the document specifically mentions children and young people who misuse substances or alcohol (The Scottish Office 1997 (a)). The document is supplemented by two other publications that offer additional guidance in specific circumstances involving children. That is, *Scotland's Children: Children (Scotland) Act 1995 Regulation and Guidance, Volume 2 – Children looked after by local authorities* (1997) and *Scotland's Children: Children (Scotland) Act 1995 Regulation and Guidance, Volume 3 – Adoption and parental responsibilities orders* (1997) (The Scottish Office 1997 (b); The Scottish Office 1997 (c)). In general these documents offer broad guidance and do not make detailed interpretation of the law.

Protecting Children: A Shared Responsibility. Guidance on Inter-Agency Co-operation (1998), offers guidance to agencies working together to promote child welfare and to tackle child abuse and neglect, including children who may be at risk of significant harm from drugs or the consequences of drugs (The Scottish Office 1998). Children may receive protection through the action of local child protection procedures, Children's Hearings or courts. The document outlines the roles and tasks of different professionals and agencies, including local Child Protection Committees, and offers guidance in the management of local child protection procedures:

- Making referrals to social work services, police or reporter;
- Initial inquiries;
- Action to protect a child in an emergency;
- Inter-agency case conference;
- Assessment and the inter-agency child protection plan;
- Monitoring and review (The Scottish Office 1998).

Child Protection Committees bring together representatives from the main agencies responsible for providing protection to children (local authorities, health boards, police, criminal justice services and Scottish Children's Reporter Administration) with the remit of developing, promoting, monitoring and reviewing local policy.

The Scottish Children's Reporter Administration is responsible for the Children's Hearing System, which is central to the Scottish legal framework for child welfare. It was introduced by the Social Work (Scotland) Act 1968 and the underlying philosophy of the system remains unchanged. The Reporter is the official responsible for impartially examining the case of a child referred to the system and deciding whether a hearing is appropriate. Any person with concerns about a child's welfare can refer to the Reporter, although referrals are usually made via local authority social work services.

A children's hearing involves a case being brought for discussion before a panel of specially trained volunteers consisting of a chairman and two other members (appointed via the Children's Panel Advisory Committee by the Secretary of State).

The panel discuss difficulties experienced by the child, with the child and their family, and determine how the child's needs are best met. The procedures and possible outcomes of children's hearings are the same whether a child is referred owing to concerns about their need for protection or to their participation in criminal offences.

Protecting Children: A Shared Responsibility. Guidance for Health Professionals in Scotland (2000) offers comprehensive guidance to health professionals who may become involved in child protection issues. The document outlines the roles and tasks of different health professionals and promotes multi-agency collaboration. It also sets out the parameters for the provision of services and highlights policy and legislation for staff selection, supervision, support and training (Scottish Executive 2000).

All three documents give guidance on four new provisions introduced by the Children (Scotland) Act 1995. These aim to protect children from harm or establish whether a child should be protected from harm:

- The Child Assessment Order
- The Child Protection Order
- The Exclusion Order
- Emergency child protection measures (The Scottish Office 1997 (a); The Scottish Office 1998; Scottish Executive 2000).

Local authorities, or occasionally other public authorities or private individuals, can apply to a Sheriff or Justice of the Peace for one of these orders if significant harm is suspected or the risk is present. Significant harm is not actually defined in the Children (Scotland) Act 1995. Therefore, judgement must be made in light of the evidence provided to the Sheriff concerning degree of harm, or suspected harm, that the child has been exposed to, or may be exposed to in the future.

All three documents clarify the circumstances, presented in the Age of Legal Capacity (Scotland) Act 1991 and reinforced in the Children (Scotland) Act 1995, in which those under the age of 16 have the legal capacity to consent or withhold consent to medical, psychological or psychiatric examination or treatment. That is, the child has the right to consent if, in the opinion of the attending medical practitioner, they are deemed capable of understanding the nature and possible consequences of an examination or treatment.

Expert commentaries

The review identified eight commentaries relating to the legal framework. The commentaries raise potential problems in implementing the framework in four key areas:

- Upholding children's right to health and health care
- Upholding children's right to participate in decisions
- Upholding children's right to consent to medical treatment
- The sharing of information

Upholding children's right to health and health care

Children have a well-established right to health and health care under legislation regulating the provision of the National Health Service in Scotland. Ensuring services are provided within an appropriately lawful context is not just a national issue. Southall et al (2000) describe an international pilot project that aims to establish minimum standards of health care for children in hospitals and other institutions. The project is grounded in the principles of the United Nations Convention on the Rights of the Child 1989, and involves Child Advocacy International (CAI), World Health Organisation (WHO), United Nations Children's Fund (UNICEF), and governments and health professionals from six countries, including United Kingdom (Southall, Burr et al. 2000).

For some children, attaining or maintaining health necessitates access to social and other care services. The Children (Leaving Care) Act 2001 offers additional personal and practical support when young people reach 16 years of age and have the option to leave care. Even so, it is difficult to determine whether young people will use this legislation to secure the services they require (Howard 2001).

A collection of conference papers edited by McKellar (1995) provides an interesting overview of the Children (Scotland) Act 1995 and appears to support Howard's concerns about the realities of implementing this legislation (McKellar 1995). For example, Asquith (1995) compares the politically radical nature of United Nations Convention on the Rights of the Child 1989 with the more conservative approach of the Children (Scotland) Act 1995. The author comments that, whilst the Children (Scotland) Act 1995 benefits some children, the Act does not address the 'social and political context' in which many Scottish children live – that is, one of troubled family relationships, financial dependence, poverty and high unemployment (Asquith 1995). Waterhouse (1995) expresses concern that cost containment may limit service provision to children deemed most in need (Waterhouse 1995).

Upholding children's rights to participate in decisions

Although children may have the right to participate in decisions, their right to protection and welfare thwart their rights as autonomous individuals (Cleland and Sutherland 2001). Under the Children (Scotland) Act 1995, courts make decisions based on what has become known as the 'welfare principle'. That is, decisions are based on what is deemed to be in the best interests of the child. Norrie (1995) questions the equity and wisdom of a legal system that, in contrast, allows parents the freedom to base their decisions on family autonomy rather than on the welfare of their child (Norrie 1995). The author suggests that, whilst the Children (Scotland) Act 1995 aims to bring Scottish legislation in line with United Nations Convention on the Rights of the Child 1989, the Act gives more weight to parental responsibilities and rights to the extent that it stifles children's rights.

The Children (Scotland) Act 1995 should present more opportunities for children to participate in decisions about their future. But Cleland (1995) expresses concern that children's rights will instead be regarded as 'taken care of' and that opportunities for children to share their experiences and concerns within the legal system will remain limited. Etchegoyen and Adams (1998) question whether complex and highly emotional situations involving the care of children can usefully be resolved within an

adversarial legal system (Etchegoyen and Adams 1998). Upholding children's rights to participate in these decisions may be overlooked as extended family members clamber to legally clarify their rights and responsibilities in relation to children (Craig 2001).

Upholding children's right to consent to medical treatment

Two publications, both written by lawyers, assess Scottish law in relation to medical treatment for young people and highlight some practical difficulties (Wilkinson and Norrie 1999; Cleland and Sutherland 2001). Both publications comment on consent to and refusal of medical treatment under the Children (Scotland) Act 1995, the legal situation in relation to children in care and young people with mental health difficulties, access to information, and the issues of privacy and confidentiality.

In the UK a 'qualified medical practitioner' determines whether a child under 16 years of age has the capacity to provide consent, however the professional boundaries to which this definition applies is not explicitly stated (Wilkinson and Norrie 1999). In general young people have the right to confidentiality, but in certain circumstances this right may be revoked, for example, if a child is deemed incapable of giving consent. This may result in services contacting the child's parents even though the child has explicitly stated this should not happen. Whilst acknowledging that disclosure without a child's consent may be an essential option, this raises some difficult issues for those working with young people (Cleland and Sutherland 2001).

Although the right to give consent should align with the right to refuse consent, rejecting medical advice may bring a young person's competence to make the decision into question. Under the Children (Scotland) Act 1995 paternalistic decisions can be made (often based on advice of the medical practitioner) and justified because these decisions are being made in the best interests of the child's health (Cleland and Sutherland 2001). However, it is questionable whether in such circumstances the medical practitioner will necessarily be correct about what is in a young person's best interest and whether treatment without their consent will still be of benefit to them (Devereux, Jones et al. 1993).

The sharing of information

Sharing of information is a potential source of tension between parents and health and social care professionals – although agencies share information on a 'need to know' basis, parents may be refused access to this information on the grounds of maintaining a child's confidentiality (Cleland and Sutherland 2001). The Children (Scotland) Act 1995 gives parent's responsibility for their child's welfare, but not necessarily the legal right to access confidential health information about their child. Only if workers involved in the child's care consider it necessary to inform parents, in order for them to carry out their caring responsibilities, will information be shared against a child's wishes. Furthermore, since complex legal relationships exist within many extended families, ascertaining who can consent and who has the right to information may not be straightforward.

SECTION 2 LEGAL FRAMEWORK FOR DRUG TREATMENT SERVICES FOR YOUNG DRUG USERS

The review uncovered 11 publications that referred to the legal framework affecting drug services for young people. Four of these publications are issued by the UK government and contain guidance relating to the provision of drug services, two of which relate specifically to Scotland. Three publications are issued by UK drug organisations and contain guidance relating to drug treatment services for young people, one of which relates specifically to Scotland. The remaining 4 publications offer expert comment about the legislation and provision of drug services to young people.

Government publications

Getting Our Priorities Right: Policy and Practice Guidelines for Working With Children and Families Affected by Problem Drug Use (2001), is underpinned by the key principles of the Children (Scotland) Act 1995 (Scottish Executive 2001). Guidance is aimed at workers involved in providing support to families affected by problem drug use, including Drug Action Teams and local Child Protection Committees. The main legal considerations relate to sharing information, confidentiality, ascertaining when to intervene and improving inter-agency working. This document comments on perceived inconsistencies between legislation and professional guidance, and directs workers to other guidance documents issued by the Government relating to the care of children in general (The Scottish Office 1997 (a); The Scottish Office 1998).

Drug Misuse and Dependence – Guidelines on Clinical Management (1999) offers guidance to medical practitioners throughout the United Kingdom, particularly those working in general practice (Department of Health, Scottish Office Department of Health et al. 1999). The key principle underlying these guidelines is that services provided by medical practitioners should meet both general health needs and drug-related problems. Specific guidance about young people and drugs is included, and covers issues such as consent, prescribing medication, data collection and monitoring. Principles of good practice in caring for young drug users are outlined:

- All interventions should be undertaken in accordance with the guiding principle of the Children Act 1989 (or the Children (Scotland) Act 1995), that the welfare of the child is paramount;
- The practitioner should adhere to local policies and procedures that are agreed with the relevant local Child Protection Committee;
- The practitioner should involve other children's and young people's services and substance misuse services;
- Family involvement should be seen as good practice;
- Interventions should follow a comprehensive assessment of need, developmental maturity, family factors and the risk of substance-related harm;
- The provision of advice and treatment services separate to those from adults – that are both appropriate to and sensitive to the specific needs of children and young people in an environment appropriate to their age;
- If practitioners have concerns about issues of confidentiality, legal advice should be sought.

These guidelines have no defined legal position. However, in providing a consensus view of good clinical practice, the guidelines provide a significant reference point for the General Medical Council and are therefore relevant where allegations of poor service provision are made (Department of Health, Scottish Office Department of Health et al. 1999).

The document makes specific recommendations in relation to prescribing for young drug users. That is, since a young person under 16 is unlikely to fully understand the implications of being prescribed controlled drugs, this treatment option is not recommended unless parental consent is obtained. Even with parental consent, it is recommended that controlled drugs should only be prescribed to a young person following a full assessment and with specialist supervision. The need for more comprehensive data collection and monitoring in relation to the young person, compared with that required for an adult, is also noted (Department of Health, Scottish Office Department of Health et al. 1999).

Two other Government publications offer guidance in relation to drug treatment services and although more directly applicable to England and Wales are clearly relevant to Scotland.

Drugs and Young Offenders – Guidance for Drug Action Teams and Youth Offending Teams (1999) aims to raise awareness of the co-existence of drug misuse and offending behaviour and outlines opportunities to intervene through multi-agency approaches. Evidently providing services for young offenders raises many of the same legal challenges as providing services for non-offenders in relation to access to treatment, inter-agency collaboration, consent, confidentiality and sharing information (Drugs Prevention Advisory Service and Standing Conference on Drug Abuse 1999).

The Substance of Young Needs (2001) presents a review of the changes in policy and practice in relation to the misuse of drugs by young people up to the age of 19 years. The Children Act 1989 and the United Nations Convention on the Rights of the Child 1989 are acknowledged as the underpinning legal framework. One of the key issues identified in this document is that provision of services should 'operate within the fact of the law but also within the spirit and the intentions of the law' (Health Advisory Service 2001). The publication gives guidance about training staff for working with young substance users and highlights areas in which staff must acquire competence to work within the law:

- Knowledge of children act, education act, relevant law regarding race relations, gender, disability, equality and mental health and other relevant law commensurate with the interventions that are to be adopted;
- Young person's ability to give or refuse consent to treatment to health and social care;
- Confidentiality and communication with other agencies and parents;
- All guidance and procedures to be agreed with local Child Protection Committee;
- Guidance on recruitment, checking and appointing staff;
- Availability of complaints procedure;
- Training on maintenance of adequate case records (Health Advisory Service 2001).

Publications from drug-related organisations

The Scottish Drugs Forum offers comprehensive guidance on the legal framework for young drug users. The aim of *Working with Young Drug Users: Guidelines to Developing Policy (1999)* is 'to meet the need of agencies and individuals working in the drugs field for clarification on legal and professional boundaries in respect of working with young drug users.' The document effectively brings together relevant policies, key legislation and professional frameworks to inform service provision. The Children (Scotland) Act 1995, United Nations Convention on the Rights of the Child 1989 and Age of Legal Capacity (Scotland) Act 1991 are identified as key legislation (Scottish Drugs Forum 1999).

The document highlights Sections of Children (Scotland) Act 1995 that are particularly relevant to those working with young drug users:

- The welfare of child being paramount;
- The rights of child to be heard and to have their views taken into account;
- No Order principle stating that courts and children's hearings must be convinced that making an order is better than not making one;
- Consent to medical treatment;
- Applications for Child Assessment Orders and Child Protection Orders.

The document highlights Articles of United Nations Convention on the Rights of the Child 1989 that are important in developing policies for working with young drug users:

- The best interests of the child shall be the primary consideration;
- The child's opinion should be given due weight in accordance with the age and maturity of the child;
- The right of the child to health and health services, for treatment of illness and rehabilitation of health.

In terms of the statutory framework, the authors highlight the breadth of knowledge required by those working with young drug users and comment that at times existing legislation appears to be inconsistent with professional guidelines. There is a specific focus on the young person's competence to consent to treatment, and the issues of disclosure, confidentiality and privacy. However, the authors do not provide definitive answers and are careful to stress the need for agencies, owing to diversity in roles and responsibilities, to address their own specific policy needs. The Scottish Drugs Forum suggests that current legislation presents opportunities for proactive service development in that it respects the 'privacy and dignity of young people, their right to make certain decisions for themselves and the right to a say in who should and should not be involved in their care' (Scottish Drugs Forum 1999).

A further two publications commenting on legislation relating to drug treatment services are issued by drug-related organisations in England. Whilst not wholly applicable to Scotland, the information offered is of interest to those working with young people in Scotland.

Making Harm Reduction Work (2000) offers specific guidance in relation to the provision of needle exchange services to young people and highlights measures to maximise professional protection from litigation. That is, by involving parents whenever possible, by adopting a holistic approach to assessment and by giving due consideration to child protection issues (Drugscope and Department of Health 2000).

Although the legal guidance offered by *Young People and Drugs: policy guidance for drug interventions (1999)* is not necessarily appropriate under Scottish law, the document raises many of the same issues in relation to implementing the UK law. That is, the potential legal difficulties inherent in young people accessing treatment, providing consent and securing confidentiality (The Children's Legal Centre and Standing Conference on Drug Abuse 1999).

Expert commentaries

The review identified four publications that comment on legislation and provision of drug services to young people. These commentaries identify potential problems in implementing the legal framework in four key areas:

- Upholding children's right to health and health care
- Upholding children's right to participate in decisions.
- Upholding children's right to consent to medical treatment.
- The sharing of information.

Upholding children's right to health and health care

The right of young drug users to access a comprehensive range of drug treatment services should be encompassed in their rights to health and health care. However, in reality fulfilling this right presents difficulties for service providers and young people.

Many professionals lack experience and confidence in dealing with young drug users. Difficult decisions are often made using information and rationale applicable to adult drug users. Goodsir (1991) advises health professionals to adopt a consensus approach to drug treatment services and thereby minimise the risks of legal action being taken against them (Goodsir 1991). Professionals may feel vulnerable and inadequate when intervening in more severe cases of drug misuse:

'Then we enter territory where the legal and ethical ice is thin indeed, such as prescribing dangerous drugs to children, enabling them to do risky things such as injecting rather more safely, and taking a degree of responsibility as an adult for the life of a young person clearly at risk of losing it. Fear of failure and the instinct to cover your back may be as strong and understandable as the urge to help' (Marlow and Pearson 1999).

The illegal status of drugs and fear of reprisal may in itself prevent young people seeking help from treatment services. Within guidance documents established adult responses to drug use, such as exclusion from school and informing authority figures (parents, school or police), may seem wholly appropriate. However, such responses have the potentially harmful effect of adding to a young person's problems, and may ultimately deter other young people from seeking help. An alternative approach in which the positive as well as the negative aspects of drug use are acknowledged by drug treatment services may be more easily accepted by young people (Marlow and Pearson 1999).

Upholding children's rights to participate in decisions

Harding-Price (1993) describes the dilemma faced by nurses when parents' have expectations that they will be informed and involved in treatment decisions about their child. The author stresses that it is incumbent upon health professionals to check with a child, on an ongoing basis, whether sharing information with their parents is an option (Harding-Price 1993). Those working in this field face professional dilemmas on a regular basis: '*Legally playing safe may not be the same as ensuring the young person's safety*' (Marlow and Pearson 1999).

Although drug use and potential for harm is widespread among young people, those at greatest risk of harm are concentrated in certain groups. For example, young offenders, young people in-care or those who are homeless, those whose parents who are using drugs and those who have troubled family backgrounds (Health Advisory Service 2001). The multiplicity of problems facing these young people complicates the legal framework in which services must be provided, and necessitates a pragmatic approach to ensure that their rights to participate in decisions are upheld.

These vulnerable young people do not access services readily and when they do they are often only prepared to co-operate on their own terms. This may be at odds with the legal context in which services are provided, when professional guidance highlights the need to adhere to principles of good practice, such as maintaining contact and monitoring change. This creates a tension between professional protection and upholding children's rights to participate in treatment decisions (Marlow and Pearson 1999).

Upholding children's rights to consent to medical treatment

Several commentaries refer to an extremely influential piece of English case law in 1986 known as the 'Gillick Case'. Although not strictly applicable to Scottish law, further explanation is appropriate. According to the outcome of this case, a child is deemed legally capable, having acquired sufficient intellectual and emotional maturity, of consenting to medical treatment without parental consent. This case represented a huge turning point in legislative history and was quickly followed by legislative changes to incorporate these principles, which in Scotland is provided for in the Age of Legal Capacity Act 1991 (Section 2(4)) and Children (Scotland) Act 1995. Subsequently a series of cases presented in court have challenged and overruled Gillick based decisions, with the welfare principle being given priority over children's rights.

It is suggested that under the principles applied to the 'Gillick Case', treatment without parental consent might be justified where health professionals are satisfied that:

- The young person, although under 16 years of age, will understand the advice;
- The young person cannot be persuaded to inform parents or to allow someone else to inform their parents that the young person is seeking drugs advice;
- The young person is likely to begin or continue using drugs with or without drugs treatment;
- Unless the young person receives drugs advice or treatment the young persons physical or mental health or both are likely to suffer;

- The young persons best interests require health professionals to give the young person drug advice or treatment or both without parental consent (Goodsir 1991; Harding-Price 1993).

The rights of young drug users to consent to medical treatments may be blocked by professional guidance, backed by legal imperatives, in relation to service provision. For example, since low threshold clinics and outreach services are not conducive to full assessment of competency to consent, needle exchange services should not be provided to those under 16 years of age (Marlow and Pearson 1999).

The sharing of information

Although misuse of drugs is grounds for referral to the Children's Hearing system, Harding-Price (1993) emphasises the need for service providers to consider the full consequences of whatever actions are being taken (Harding-Price 1993). Referral to a hearing may not be necessary in every case of drug use by a young person. Early supportive measures to minimise risk may obviate the need for action within the hearing system.

This view is supported within the principles of the Children (Scotland) Act 1995, which states that the welfare of the child is paramount and that any intervention should be made in the child's best interest. Parker (2001) asserts that most adolescent drug use is recreational and that many otherwise law-abiding young people become stigmatised for drugs offences unnecessarily. In this respect the sharing of information between agencies merits careful consideration (Parker 2001).

DISCUSSION AND CONCLUSIONS

The current statutory framework in which services for young people in Scotland are delivered is derived from key legislation; essentially the Children (Scotland) Act 1995 and the United Nations Convention on the Rights of the Child 1989, and is incorporated in professional and organisational policy documents. Expert commentaries suggest difficulties in implementing the statutory framework in four key areas:

- Upholding children's right to health and health care;
- Upholding children's right to participate in decisions;
- Upholding children's right to consent to medical treatment;
- Sharing of information.

Whilst provision of a comprehensive range of drug treatment services for young people may be advocated, in practical terms it may be difficult for young people to exercise their right to these services. Children's knowledge of the current statutory framework is likely to be limited. Organisations such as the Scottish Child Law Centre, which provides independent, free legal advice to children, and Who Cares? (Scotland), which provides independent advocacy for children cared for by local authorities, offer potentially useful resources. However, it is unclear how best to inform the majority of Scottish children of their rights, including young drug users.

Key stakeholders such as health and social care professionals may also be unaware of children's rights and as a result may not fully recognise or uphold these rights (Home Office Drugs Prevention Initiative 1998). In addition many parents will have limited understanding of the current statutory framework in which services are provided and may miss valuable opportunities to work with professionals in upholding their children's rights (Drakeford 1996; Etchegoyen and Adams 1998). It is important to address these gaps when planning future service provision.

Some authors also report a degree of professional reluctance to become involved in providing health and health care to young people (Seivewright and Greenwood 1996; Drugs Prevention Advisory Service, Newburn et al. 1999; Parker 2001). This may be due to lack of professional knowledge and experience, or uncertainty of the legal boundaries within which services should be provided. Medical reluctance to prescribe substitute drugs for young drug users under the age of 16 years may highlight professional fear of litigation. Since drug safety and efficacy in adults can rarely be extrapolated to children, it is understandable that prescribing raises concerns about liability litigation. Although professional guidelines offer some reassurance, substantive research evidence from studies involving young people is required to establish its efficacy among young drug users (Vitiello and Jensen 1997).

Upholding children's right to participate in decisions about their treatment also raises some difficulties, particularly in relation to parental involvement and deciding what is in a young person's best interests. For example, when parent's views about care decisions differ from those of the young person, professionals face the dilemma of deciding whose wishes have precedence. The current statutory framework provides guidance but the practicalities are such that it is extremely difficult to provide a clear ruling.

Dealing with the practicalities of real-life situations may also challenge professionals' ability to uphold children's rights to medical treatment. If, for example, a young person is prescribed methadone, it may be advisable to inform their parents of the possible side effects. Clearly, in this instance, it is important to establish the ground rules in which therapeutic relationships are managed and give clear guidance to all young people about the circumstances in which confidentiality may be breached (Scottish Drugs Forum 1999). However, this may deter young people from taking up drug treatment and as such inadvertently restrict their right to that treatment.

The sharing of patient information between agencies is also important. Although the circumstances in which information should be shared within and between agencies may be fully explained to young people, it may not be until a young person is more fully involved with a service that the reality of this requirement becomes clear. Then professionals may face the dilemma of deciding whether to disclose information against the wishes of a young person. Whilst guidance documents can ensure that procedures are followed appropriately, therapeutic relationships between young people and service providers may be threatened.

In conclusion, the current statutory framework in which services for young people in Scotland are delivered is derived from key legislation, essentially the Children (Scotland) Act 1995 and the United Nations Convention on the Rights of the Child 1989, and related professional and organisational policy documents. This is the overarching framework in which drug treatment services for young people should be provided and the management of risk in relation to service provision should be reduced. Although the current statutory framework is intended to facilitate care decisions, at times legislation and professional guidance may appear to conflict. Legally the welfare of the child should be given paramount consideration but in reality professional guidelines may trigger responses that are not in keeping with a young person's wishes or immediate needs. As such, potential difficulties arise when implementing the framework.

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APPENDIX 1

THE EFFECTIVENESS OF TREATMENT AND CARE SERVICES REVIEW: SEARCH TERMS AND SEARCH STRATEGY

The search terms used to interrogate these resources were derived from the following:

Population: adolescent, young person, young people, 16 years or under.

Interventions: counselling, interviewing, substitute prescribing, rehabilitation, probation or prison service needle exchange, other harm reduction services;

Outcomes: not specified;

Type of study design: not specified.

The electronic search strategy:

Search #	Search Criteria
1	kw: drug and (kw: use or kw: abuse or kw: misuse)
2	kw: adolesce* or (kw: young and (kw: people or kw: person*)) or (kw: under and kw: 16)
3	kw: needl* and kw: exchang*
4	kw: counselling and kw: interview*
5	kw: substitute and kw: prescri*
6	kw: rehab* or kw: prison* or kw: probation
7	kw: harm and kw: reduction
8	#3 or #4 or #5 or #6 or #7
9	#1 and #8
10	#9 and #2
11	#10 and py: >1990
12	#11 and la: english

APPENDIX 2

THE EFFECTIVENESS OF TREATMENT AND CARE SERVICES REVIEW: LIST OF EXPERTS

Dr. Laura Amato
Department of Epidemiology, ASL RM/E
Agency for Public Health, Lazio, Italy

Dr Yvonne Bonomo
Fellow, Adolescent Medicine
University of Melbourne, Australia

Dr Nicholas Clark
Turning Point Alcohol & Drug Centre
Australia

Professor Ilana B Crome
Chair in Addiction
Department of Psychiatry
University of Keele, UK

Mr Adrian Dzialdowski
Drug & Alcohol Service
Lifespan Healthcare NHS Trust
Mill House, Brookfields Hospital
Cambridge, UK

Professor Fabrizio Faggiano
Associate Professor
Department of Public Health
University of Torino
Italy

Professor David Foxcroft
Oxford Brookes University
Oxford, UK

Professor W. Boudewijn Gunning
Amsterdam Academic Medical Centre
Amsterdam
The Netherlands

Dr Menno van Leeuwen, MD, PhD
Executive Director
Health Council of the Netherlands
The Netherlands

Dr John MacLeod
Department of Primary Care and General Practice
University of Birmingham
Birmingham, UK

Professor RP Mattick
Director of Research and Acting Executive Director
National Drug and Alcohol Research Centre (NDARC)
University of New South Wales
Sydney
Australia

Professor Neil McKeganey
Centre for Drug Misuse Research
University of Glasgow, UK

Dr Maristela G. Monteiro
Coordinator
Management Substance Dependence
World Health Organisation
Geneva
Switzerland

Professor G Pearson
Department of Social Policy & Politics
University of London
Goldsmith's College
London, UK

Dr Greet Peersman
Division of HIV/AIDS Prevention
Centers for Disease Control and Prevention
Atlanta
Georgia, USA

Dr Anthony Petrosino
Initiatives for Children Program (IFC)
American Academy of Arts & Sciences
Center for Evaluation, USA

Dr Robert Power
Academic Dept. of Gu. Medicine
Royal Free & University College Medical School
London, UK

Dr Salaam Semaan
Deputy Associate Director for Science
Division of STD Prevention
National Center for HIV, STD and TB Prevention
Centers for Disease Control and Prevention
Atlanta, USA

Dr Manit Srisurapanont
Department of Psychiatry
Chiang Mai University
Thailand

Dr Robert Weir
Senior Research Fellow
NZHTA
Christchurch School of Medicine and Health Sciences
University of Otago
Christchurch
New Zealand

Dr AJ Wood
Carol Kendrick Unit
Withington Hospital
Manchester, UK

Professor H Zeitlin
Consultant Child and Adolescent Psychiatrist
Trust Headquarters
Springfield, Chelmsford
Essex, UK

APPENDIX 3

THE EFFECTIVENESS OF TREATMENT AND CARE SERVICES REVIEW: PAPERS RETRIEVED ASSESSED AND APPRAISED

Year	Total received and assessed	All papers Accept for full appraisal (reviews)	Prim papers rejected because they appear in accepted reviews	Primary papers rejected after appraisal	Reviews rejected after appraisal	Total Accepted for review Primary papers (reviews)
1990	14	3 (0)	3	-	-	0 (-)
1991	35	7 (2)	2	3	2	0 (0)
1992	35	4 (3)	1	-	2	0 (1)
1993	48	10 (1)	4	5	1	0 (0)
1994	59	8 (1)	2	3	1	2 (0)
1995	65	14 (6)	3	4	6	1 (0)
1996	47	4 (1)	1	1	1	1 (0)
1997	52	7 (3)	0	2	1	2 (2)
1998	76	15 (5)	1	8	4	1 (1)
1999	82	9 (6)	0	4	3	0 (2)
2000	107	14 (4)	0	7	4	2 (1)
2001	74	9 (2)	0	5	2	2 (0)
Total	694	104 (34)	17	42	27	11 (7)

APPENDIX 4

THE EFFECTIVENESS OF TREATMENT AND CARE SERVICES REVIEW: PRIMARY PAPER AND REVIEW APPRAISAL FORMS

APPRAISAL FORM- PRIMARY PAPERS

Use for RCTs ^{1,2}, Quasi-Experimental ³, Controlled ³ and Observational Studies ³.

1 General Information

Date of assessment:

Reviewer:

Author

Title

Source: Journal
Year

Volume

Pages

Country

Do the results of this paper appear in any systematic review? Yes No

If yes, which one?

Author

Title

Source: Journal
Year

Volume

Pages

Country

Should the paper be excluded ?

yes. no.

2 Which type of study design ³ ?

- | | | |
|--|-----|----|
| 1. High Quality Experimental (eg, RCT: concealed allocation, random allocation) | yes | no |
| 2. Low Quality Experimental (eg, no concealed allocation) | yes | no |
| 3. High Quality controlled observational (eg, Cohort and case control) | yes | no |
| 4. Low Quality controlled observational (before and after, cross-sectional, time series) | yes | no |

3 Assessing the quality of RCT and Experimental Studies

a) RCT Quality Scale ¹

- | | | |
|--|---------|--------|
| 1 Was the study described as randomised? | yes (1) | no (0) |
| 2 Was the method of randomisation appropriate? | yes (1) | no (0) |
| 3 Was the study described as double blind? | yes (1) | no (0) |
| 4 Was the method of double blinding appropriate? | yes (1) | no (0) |
| 5 Was there a description of withdrawals and dropouts? | yes (1) | no (0) |

Total score:

Please grade as Good >3
Moderate 3
Poor = <2

b) RCT and Non RCTs²

- | | | |
|--|-----|----|
| 1 Were the groups similar at baseline regarding the most important prognostic indicators? | yes | no |
| 2 Were eligibility criteria specified? | yes | no |
| 3 Were point estimates and measures of variability presented for the primary outcome measures (eg mean sd, se, ci) ? | yes | no |
| 4 Did the analyses include an intention to treat analysis? | yes | no |

c) Non-RCT studies ²

- | | | |
|---|-----|----|
| 1 Was a method of treatment allocation performed? | yes | no |
| 2 Was treatment allocation concealed? | yes | no |
| 3 Was the outcome assessor blind? | yes | no |
| 4 Was the care provider blind? | yes | no |
| 5 Was the patient blind? | yes | no |

d) Overall assessment of study quality

Good
Moderate
Poor

Why was this score given?

4 Assessing the quality of Cohort studies ³

a) Cohort studies

- | | | |
|---|-----|----|
| 1 Is there sufficient description of the groups and prognostic factors? | yes | no |
| 2 Are the groups assembled at a similar point in their disease progression? | yes | no |
| 3 Is the intervention reliably ascertained? | yes | no |
| 4 Were the groups comparable on all important confounding factors? | yes | no |

5	Was there adequate adjustment for the effects of confounding factors?	yes	no
6	Was a dose-response relationship between intervention and outcome demonstrated?	yes	no
7	Was outcome assessment blind to exposure status?	yes	no
8	Was follow-up enough for the outcomes to occur?	yes	no
9	What proportion of the cohort was followed up?		
10	Were drop-out rates and reasons similar across the intervention and unexposed groups?	yes	no

b) Overall assessment of study quality

Good
Moderate
Poor

Why was this score given?

6 Assessing the quality of case-control studies (matching and random sampling)³

1	Is the case definition explicit?	yes	no
2	Has the disease state of the cases been reliably assessed and validated?	yes	no
3	Were the controls randomly selected from the source of population?	yes	no
4	How comparable are the cases and controls with respect to potential confounding factors?	yes	no
5	Were interventions and other exposures assessed in the same way for cases and controls?	yes	no
6	Was the response rate defined?	yes	no
7	Were the non-response rates and reasons for non-response the same in both groups?	yes	no
8	Is it possible that that over-matching has occurred in that cases and controls were matched on factors related to exposure?	yes	no
9	Was an appropriate statistical analysis used (matched or unmatched)	yes	no

b) Overall assessment of study quality

Good
Moderate
Poor

Why was this score given?

7 Assessing the quality of before and after, cross-sectional, time series studies³

- | | | |
|--|-----|----|
| 1. Is the study based on a representative sample from a relevant population? | yes | no |
| 2. Are there criteria for inclusion? | yes | no |
| 3. Did all individuals enter the study at a similar point in their disease progression? | yes | no |
| 4. Was follow-up long enough for important events to occur? | yes | no |
| 5. Were outcomes assessed using objective criteria or was blinding used? | yes | no |
| 6. If comparisons of sub-series are being made, was there sufficient description of the series and the distribution of prognostic factors? | yes | no |
| 7. What proportion of the sample were followed –up | | |

c) Overall assessment of study quality

Good
Moderate
Poor

Why was this score given?

References

¹ Jadad AR, Moore RA, Jenkinson C et al. Assessing the quality of reports of randomized clinical trials: Is blinding necessary? 1996 *Controlled Clinical Trials* 17: 1-12.

² Verhagen AP, De Vet HCW, De Bie RA. The Delphi List: A Criteria list for quality assessment of randomised clinical trials for conducting systematic reviews developed by Delphi Consensus. 1998 *J Clin Epidemiol* 51, 12, 1235-1241.

³ NHS Centre for Review and Dissemination. Undertaking Systematic Reviews of Research on Effectiveness. 2001 Report 4, second edition. University of York.

APPRAISAL FORM - REVIEWS ^{1,2,3,4}

Date
Reference

Reviewer

Reasons for exclusion

Not a systematic review

Background information

Authors search and Quality Assessment Process

Search strategy
Databases searched (>= 3 'good' ²)

Medline

Embase

Assi

Cinahl

Bids

PsycLit

Not stated

Other, please specify.....

Search terms specified Yes No

Hand searching Yes No

Grey literature Yes No

Conference abstracts Yes No

Contact experts Yes No

Defined population/ study groups Yes No Age:

Defined intervention(s) Yes No

Time period Yes No What:

Clearly defined question Yes No

Assessment of literature search Good Moderate Poor

Comment: (is it likely that important studies were missed i.e. limited search?)

Yes No

How the assessment was conducted				
Was an assessment/ appraisal form used	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	Not known
Independent assessment by two or more reviewers	<input type="checkbox"/> yes	<input type="checkbox"/> No	<input type="checkbox"/>	Not known
Blinded Assessment	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	Not known
Was assessor agreement measured	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	Not known
Was assessor agreement statistically tested	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	Not known
RCT studies included only	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Other control/comparison studies included	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Assessment method (comment)	<input type="checkbox"/> Good	<input type="checkbox"/> Moderate	<input type="checkbox"/> Poor	

Author's Assessment of primary papers				
Sample clearly stated	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	Not known
Appropriate randomisation method	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	Not known
Appropriate blinded assessment	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	Not known
Are samples comparable	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	Not known
Attrition rate accounted for in analyses	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	Not known
Objective outcomes clearly stated	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	Not known
Appropriate statistical analyses	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	Not known
Did the analyses include intention to treat	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	Not known
Are confounders accounted for in analyses	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	Not known
Are the results generalisable	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	Not known
Assessment of primary papers (comment)	<input type="checkbox"/> Good	<input type="checkbox"/> Moderate	<input type="checkbox"/> Poor	
		<input type="checkbox"/> Not applicable		

Author's analysis and synthesis of primary papers			
Sample size and type stated	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Individual effect size stated	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Quality of studies allowed for in the analysis?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
If yes, did authors excluded poor quality studies	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Was there an attempt to synthesise the findings	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
if yes, formal meta-analysis	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Forrest Plot used to display trial results?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Inappropriate
Heterogeneity assessed or explained by authors	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Sub-group analyses performed e.g. m/f, old v young	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Was sensitivity analysis performed e.g. US v UK	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Inappropriate
Qualitative assessment	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Were results displayed/weighted by study quality	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Publication bias assessed (e.g. funnel plot of sample size v effect size) or if qualitative analyses was this discussed	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Were recommendations made for policy or practice	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Was a need for further research identified?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Is the quality assessment reproducible?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Assessment of analyses and syntheses (comment)	<input type="checkbox"/> Good	<input type="checkbox"/> Moderate	<input type="checkbox"/> Poor

Overall assessment

Target group

Intervention

Effectiveness	Harmful	<input type="checkbox"/>
	No effect	<input type="checkbox"/>
	Weak	<input type="checkbox"/>
	Strong	<input type="checkbox"/>
	Insufficient evidence	<input type="checkbox"/>
Confession box	publication bias	<input type="checkbox"/>
	Heterogeneity	<input type="checkbox"/>
	Search	<input type="checkbox"/>
	other (specify)	<input type="checkbox"/>
Over all assessment of review	Good	<input type="checkbox"/>
	Moderate	<input type="checkbox"/>
	Poor	<input type="checkbox"/>

Why was this score given?

References

- 1 Elliott L, Crombie IK, Irvine L et al The Effectiveness of Public Health Nursing: A Review of Systematic Reviews. The Stationery Office. HMO Edinburgh.
- 2 Klassen TP, Jadad AR, Moher D. Guides for reading and Interpreting Systematic Reviews: I Getting started. Arch Pediatr Adolesc Medicine. 1998. 152, 700-704.
- 3 Jadad AR, Moher D. Klassen TP. Guides for reading and Interpreting Systematic Reviews: II How did the authors find the studies and assess their quality? Arch Pediatr Adolesc Medicine. 1998. 152,812-817.
- 4 Moher D. Jadad AR. D Klassen TP. Guides for reading and Interpreting Systematic Reviews: III How did the authors synthesize the data and make their conclusions? Arch Pediatr Adolesc Medicine. 1998. 152, 915-920.

APPENDIX 5

REVIEW OF THE LEGAL FRAMEWORK: SEARCH STRATEGY

Search Strategy for Caredata:

kw: (Young People or Adolescence) and (Drug Misuse or Drug Misusers)

Search Strategy for CINAHL and Medline:

- 1 kw: drug and (kw: use or kw: abuse or kw: misuse)
- 2 kw: adolescent or (kw: young and (kw: people or kw: person or kw: persons)) or (kw: under and kw: 16)
- 3 kw: law or kw: laws
- 4 kw: legislation
- 5 kw: legal and kw: issues
- 6 kw: legal*
- 7 kw: statut*
- 8 kw: legalit*
- 9 kw: child and kw: advoca*
- 10 #3 or #4 or #5 or #6 or #7 or #8 or #9
- 11 #1 and #10
- 12 #2 and #11
- 13 #12 and yr: >1990
- 14 #13 and la: English

Search Strategy for Web of Science:

kw: drugs and law

Search Strategy for WESTLAW:

kw: young people

APPENDIX 6

REVIEW OF THE LEGAL FRAMEWORK: DETAILS OF WEBSITES AND NUMBER OF EXPERTS CONTACTED

Websites

Organisation

Children In Scotland
Department for Education and Employment
Drug Misuse in Scotland
Drug Problems Advisory Service
Drugscope
European Monitoring Centre for Drugs
and Drug Addiction
Information Commissioner,
(Lord Chancellors Department)
Institute for the Study Of Drug Dependence
National Children's Bureau
National Youth Agency
Reporters Office
Royal College of Psychiatrists
Scottish Drugs Forum
Substance Abuse and Mental Health Services
Administration
The Princes Trust

Address

www.childreninscotland.org.uk
www.dfes.gov.uk
www.drugmisuse.isdscotland.org
www.dpas.gov.uk
www.drugscope.org.uk
www.emcdda.org
www.dataprotection.gov.uk
www.isdd.co.uk
www.ncb.org.uk
www.nya.org.uk
www.childrens-hearings.co.uk
www.webmaster@rcpsych.ac.uk
www.sdf.org.uk
www.health.org
www.princes-trust.org.uk

[Key words used to search publication lists:

drug/s, use, misuse, abuse, young people/person/persons, adolescence, law/laws, legal issues, legislation, statutory]

Numbers of Experts and Organisations contacted in relation to Review

	Law	Health Care	Social Care	Drug-related	Total
Subject Experts	5	6	7	4	22
Organisations	2	5	2	12	21