

# Alcohol prevention programmes

## A review of the literature for the Joseph Rowntree Foundation (part two)

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An integrated, planned and implemented community prevention system is needed to tackle the excessive alcohol use in young people.

Young people's drinking is a major cause for concern for policy-makers, communities, parents and many young people themselves. Many interventions have been attempted to try to prevent this excessive use of alcohol. This report reviews these, summarises the findings, and suggests that an integrated, planned and implemented community prevention system is needed.

The report:

- examines the prevention approaches which have been developed, based on the major socialising influences on children and young people as they learn about alcohol and begin to drink which were reviewed in a partner report, 'Influences on how children and young people learn about and behave towards alcohol';
- establishes the efficacy of current interventions;
- explores implications for future interventions;
- concludes that young people's norms about drinking need to be changed;
- lays out a range of suggestions for how interventions might be changed, and for how a universal prevention programme might be developed and delivered.

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# Preface

The present review is drawn from a much larger and more comprehensive review (Velleman, 2009a), available online and for downloading from the University of Bath website (<http://www.bath.ac.uk/health/mhrdu/>). A second short review published at the same time as this present one focuses on how young people learn about alcohol, the impact of family, peers and the media and of cultural variation (Velleman, 2009b).

Some of the ideas outlined in the first review – *Influences on how children and young people learn about and behave towards alcohol* (Velleman, 2009b) – have been used to develop interventions, and these interventions serve as a good test of whether the ideas are correct. If the interventions ‘work’, then it adds weight to our belief in the ideas behind them; if they do not ‘work’, then further research is needed to clarify whether the original ideas were incorrect, or if other, as yet un-theorised processes, have interfered with the intervention.

The first review (Velleman, 2009b) suggested that there are a number of factors that serve to increase the risks to children and young people: risks of commencing alcohol use early, and risks of then developing problems with that alcohol use. Various prevention programmes focus on one or more of these issues: altering how children learn about and develop attitudes and expectancies towards alcohol, reducing more general risk factors and enhancing protective factors and developing resilience.

Of all of the interventions that have been tried, ones based on the family have the best evidence for their efficacy, implying that the theories that place the family’s influence as central are being supported. One major systematic review of psychosocial and education-based alcohol misuse primary prevention programmes among young people found that family-based programmes (and especially the Strengthening Families Program [SFP]) were the only primary alcohol prevention programmes to show longer-term results in the alcohol field. Another showed that family-based prevention approaches have effect sizes two to nine times greater than approaches that are solely child focused (eg schools-based, peer-based or individual-based). There is, however, some evidence that a combination of family- and child-focused approaches might work well (and indeed the SFP works in this way).

These family-based interventions generally have worked on a number of aspects of family

processes aimed at enhancing family bonding and relationships, including:

- skills training on parent supportiveness of children;
- parent–child communication;
- parental involvement;
- parental monitoring and supervision;
- practice in developing, discussing and enforcing family policies on substance misuse.

The SFP has separate components for both parents and children independently, and a third component for both parents and children together. The programme is designed to develop a number of specific protective factors, including:

- the development in parents of improved communication styles with their children;
- improved parental rule-setting, disciplining and management of intergenerational relationships;
- a more nurturing and supportive parenting style;
- greater school involvement;
- greater use of contingent parenting;
- development in children of positive goals for the future;
- a far greater incidence of following rules;
- improved family communication;
- improved relationships with parents;
- stress management;

- skills for dealing with peer pressure and refusal of alcohol or drug offers.

Although many family interventions are relatively complex, aiming to improve a wide range of family, parent–child and parenting behaviours, one recent study suggested that the single most important thing that parents needed to do was to regularly and frequently (five times per week or more) eat dinner with their children. This study suggested that this relatively simple intervention worked to effectively protect children not only from substance misuse, but also from poor school and academic performance, shown to be an independent factor related to many poor outcomes, including early substance misuse. Obviously, ‘family dinners’ work here as a proxy for a range of other variables: what is likely to occur when families eat together every or almost every night is that all the other important variables such as family communication and family joint activity also improve. It may be that persuading families to eat together could work as an important proxy for these other vital family factors, and one that is far easier to encourage in the general population than retraining communication, rules, contingencies and so on.

However, one problem with all universal family interventions is recruiting and retaining parents into the programmes. One reason for this might be that, despite the research evidence, parents do not have a strong sense of the importance of parental influence and modelling of behaviour on subsequent behaviour in their children. The present review concludes that it is of primary importance to educate parents about the effects of their own behaviour in influencing young people’s use of alcohol or drugs. Programmes that work with parents need to equip parents with three sorts of skills: *parenting skills*, giving parents the skills to develop family cohesion, clear communication channels, high-quality supervision and the ability to resolve conflicts; *substance-related skills*, providing parents with accurate information and highlighting the need to model the attitudes and behaviours they wish to impart; and *confidence skills*, to enable parents to communicate with their children about drugs.

There is some, although less strong, evidence suggesting that interventions based around

altering peer influence can work, by improving young people’s skill to resist peer pressure, or by improving their skills in dealing with general life issues, or by recruiting and engaging with peers to train them to become educators and attitude-formation leaders. The interventions that appear to work best are those that are interlinked with ones that also involve the family. This also corroborates the findings from the earlier sections of the review, which showed that peer influences were more short term than family ones, and that the family also exerted a significant influence on who young people select and maintain as friends in the first place.

There have been very few preventative interventions based on the ideas of the dominance of media and cultural representations of alcohol, meaning that it is not possible to come to any even tentative conclusions about this area from such intervention studies. However, the wealth of evidence outlined in the section on advertising and the media suggest that these are indeed dominating influences on young people’s knowledge, attitudes and then behaviour towards alcohol. Multi-component interventions have also been used and these, especially the ones that have used family interventions as one of the components, have also been effective.

Finally, all previous reviews as well as the present one reach the conclusion that there is a major lack of robust UK-based evaluations of prevention interventions and programmes, whether oriented towards alcohol initiation, general substance initiation or later patterns of drinking. It is clear that more research is required (and hence to be funded) in the UK to undertake medium-term, longitudinal studies of a range of family, school-based, community-based programmes (including mass media campaigns as a part of multi-component prevention programmes) to allow some understanding of what works in a range of UK settings.

Implications for future interventions are explored. The review concludes that young people’s norms about drinking need to be changed, as do adults’ and society’s. A range of suggestions is laid out for how these might be changed, and for how a universal prevention programme might be developed and delivered.

Programmes need to:

- delay the onset of drinking;
- provide coherent messages about which age is appropriate for parents to introduce their children to alcohol;
- help parents to realise that it is a good thing to delay the onset of drinking and that there are things that they can do to achieve this;
- change children's and young people's norms about drinking;
- get parents to provide alcohol to young people and to supervise their drinking when they do start.

The task is to *replace the cultural norm* of (and therefore the resulting peer support for) bingeing and other forms of drinking dangerously, with positive parental role models for sensible alcohol consumption.

As well as the elements concerning drinking, programmes also need to encourage parents to create a strong family life, family bonds, family values, family concern, family rules and family supervision, and a balance between family care and family control.

Parents may need help with this, implying a need for a universal prevention programme, which needs to be started when children are young, not when families are starting to consider how to prevent teenage drinking.

Another way in which cultural norms about age of onset and regularity of excessive drinking need to be altered is via improving the enforcement of restrictions on alcohol purchasing for young people. This relates to the wider issue of alcohol and its availability and affordability to children. Recommendations to start to deal with these issues include:

- an increased use of test purchasing and greater investment in policing underage sales;

- increased enforcement of immediate and severe penalties for every individual or establishment found to be selling alcohol to young people;
- universal adoption of age checks for individuals purchasing alcohol who look under the age of 21;
- advice to parents about monitoring the income and expenditure of children so that there is a better understanding about how much money children have and whether it is being spent appropriately.

What is needed is an integrated, planned and implemented community prevention system, which draws together what is known about effective parenting training programmes, organisational change programmes in schools, classroom organisation, management and instructional strategies, classroom curricula for social and emotional competence promotion, multi-component programmes based in schools, community mobilisation, community/school policies, enforcement of laws relating to underage purchasing and selling alcohol to intoxicated people, altering community and cultural norms so that drunken comportment behaviour is not tolerated (and certainly not encouraged), and how to effect policy changes with respect to price, availability and accessibility, and to implement them in a planned fashion. There is evidence that, if integrated multi-component programmes are undertaken, then outcomes can be much superior, and the programmes can be very effective, although there have been no research projects funded to allow for evaluations of sufficient power to test these ideas in a UK context.

Future research needs are outlined.

# 1 Introduction

*Influences on how children and young people learn about and behave towards alcohol* (Velleman, 2009b) reviews the literature on how children learn about alcohol and summarises what we know about how knowledge, attitudes and behaviour towards alcohol are formed in young people. That review suggests that:

- there is strong evidence linking a wide range of parental and family factors to developments in young people's attitudes and behaviour towards alcohol;
- there is also quite strong evidence for the influence of peers;
- there is also strong evidence for the influence of advertising, the media and wider cultural socialisation processes;
- there is some evidence about the influence of ethnicity, religion and other societal or cultural factors such as sport and other extra-curricular activities.

That review also suggests that there are a number of other factors, over and above what and how they learn, which serve to increase the risks to children and young people: risks of commencing alcohol use early, and risks of then developing problems with that alcohol use. These other factors that increase risk (such as child abuse, truanting and poor school performance) were briefly reviewed in the first review, alongside a brief review of some of the protective factors that research has shown are linked to greater resilience in young people.

This range of findings summarised above are all important for this present review, because various prevention programmes focus on one or more of these issues: altering how children learn about and develop attitudes and expectancies towards alcohol, reducing more general risk factors and enhancing protective factors and developing resilience.

If it is the case that children learn about alcohol via a mixture of influences from primarily parents and other family members, peers and the media, and if it is the case that alcohol use is not simply a matter of knowledge, but also of attitudes, expectations and intentions, and if it is the case that there are certain risk factors that make it more likely that young people will start to drink problematically, and other protective factors that make it more likely that young people will become resilient, then prevention programmes that target these areas, and/or target those young people who appear to be at particular risk of developing problems with their alcohol use, should be more effective than others, which solely provide knowledge and information, or which just tell young people not to drink.

If the evidence linking parental and family factors to the development of attitudes, intentions and behaviour towards alcohol is correct, then preventative interventions involving parents ought to lead to changes in these attitudes, intentions and behaviour. If the link with peers is correct, then preventative interventions with peers ought to work; and if advertising and general culture is a driving factor, then interventions aimed at these elements ought to work.

Similarly, if it is the case that there are certain more general risk factors that make it more likely that young people will develop problems, and if it is the case that there are certain protective factors that lead to increased resilience in young people, then preventative interventions that focus on these elements (such as social skills training or changes to the school environment or the development of extra-curricular activities) ought also to work.

If any of these prevention programmes do work, then we obtain important corroboration of our theories. If they do not work, this may be because our theories are incorrect, or because we have focused on the wrong part

of the theory, or because the way we have implemented the ideas stemming from the theory are wrong. It may also be the case that the measurement and evaluation techniques that have been employed are inadequate or inappropriate.

So, how have prevention interventions based on these ideas worked in practice?

There have been a number of reviews recently of the effectiveness of alcohol or other substance prevention programmes (Tobler *et al.*, 2000; Cuijpers, 2002a, 2002b, 2003, 2005; Foxcroft *et al.*, 2002, 2003; Kumpfer *et al.*, 2003; NIDA, 2003; Skara and Sussman, 2003; Tait and Hulse, 2003; Roe and Becker, 2005; Gates *et al.*, 2006; Jones *et al.*, 2006a, 2006b, 2007a, 2007b; Stead *et al.*, 2006; Jefferson *et al.*, 2007; NICE, 2007; Taylor *et al.*, 2007), and this present review draws on these, as well as on primary research. Brief summaries of the key interventions discussed in this review can be found in Appendix 1.

In Chapter 2, interventions targeting parents and family, peers, advertising and the media, and more general risk and protective factors are examined. Chapter 3 follows on from this with a discussion of the implications for policy and practice, which points to areas where further research is needed. The report is drawn to a conclusion in Chapter 4.

# 2 Prevention programmes

## Parents and family

There is evidence that interventions utilising the family and the family/parenting factors examined in Velleman (2009a, 2009b) are among the most effective. There are a number of examples of well-evaluated parent- or family-based interventions, for example the Strengthening Families Program (SFP) (see Box 1 and described in more detail later in this chapter). Systematic reviews (Foxcroft *et al.*, 2002, 2003; Kumpfer *et al.*, 2003; NIDA, 2003; Stead *et al.*, 2006; Jones *et al.*, 2007a) have found evidence for the effectiveness of a number of family-based interventions. Foxcroft *et al.* (2002, 2003), from their systematic review of psychosocial and education-based alcohol misuse primary prevention programmes among young people, argue that family-based programmes (and especially the SFP) are the only primary alcohol prevention programmes to show longer-term results in the alcohol field. Stead *et al.* (2006), in their review of the effectiveness of social marketing interventions related to alcohol, tobacco and substance misuse, found four studies that had examined the long-term impact (over two years) of their intervention on alcohol use. Although it is not clear that these are in fact 'social marketing approaches' (which Stead *et al.*, 2006, p 6 define as 'The systematic application of marketing concepts and techniques to achieve specific behavioural goals relevant to a social good'), two of the four studies had positive effects: one was a multi-component community intervention (Project Northland: Perry *et al.*, 1996, which will be described in a later section on multi-component programmes), the other was the SFP (Spath *et al.*, 2001).

However, Foxcroft *et al.* (2002, 2003) draw attention to the fact that the majority of the studies they were able to review emanated from the US and this meant that the core prevention outcome used tended to be abstinence. They suggested that consideration needs to be given to how these prevention approaches may transfer to other countries, where messages regarding consumption

of alcohol (and indeed other drugs) are very different.

### Box 1: Examples of family-based interventions

- Strengthening Families Programme (SPF) developed by Spoth and Molgaard.
- Family Check-Up, developed by Dishion and colleagues.
- Adolescent Transitions Programme (ATP), developed by Dishion and colleagues.
- STARS (Start Taking Alcohol Risks Seriously) for Families, developed by Werch and colleagues.

The National Institute on Drug Abuse (NIDA, 2003), in its review of the prevention of drug use among children and adolescents, also shows that family-based prevention programmes that deal with many of the issues outlined in Velleman (2009a, 2009b) are to be encouraged. Its review argues that:

*Family bonding is the bedrock of the relationship between parents and children. Bonding can be strengthened through skills training on parent supportiveness of children, parent-child communication, and parental involvement... Parental monitoring and supervision are critical for drug abuse prevention. These skills can be enhanced with training on rule-setting; techniques for monitoring activities; praise for appropriate behaviour; and moderate, consistent discipline that enforces defined family rules... Drug education and information for parents or caregivers reinforces what children are learning about the harmful effects of drugs and opens opportunities for family discussions about the abuse of legal and illegal substances.... Brief, family-focused*

*interventions for the general population can positively change specific parenting behaviour that can reduce later risks of drug abuse.*

(NIDA, 2003, p 3)

Kumpfer *et al.* (2003) found evidence of the effectiveness of a number of types of family-based prevention approaches, including in-home family support, behavioural parent training, family skills training, family education and family therapy. These authors stated that family-based prevention approaches have effect sizes of between two and nine times greater than approaches that are solely child-focused (eg schools-based, peer-based or individual based) and they argue that effective family strengthening prevention programs should be included in all comprehensive substance abuse prevention activities' (2003, p 1759). Core components of family-focused prevention programmes that they identify include that they are interactive, able to engage and retain hard-to-reach families and aim to build the core elements of resilience.

Bolier and Cuijpers (2000, reported in Cuijpers, 2003) conducted a systematic review of family-based drugs intervention programmes, and identified seven such programmes that had mounted a controlled evaluation. One was the STARS (Start Taking Alcohol Risks Seriously) for Families programme: Werch and colleagues undertook a randomised controlled trial of this intervention versus a minimal intervention control with 650 school students (Werch *et al.*, 1999, 2003a). They demonstrated the intervention's effectiveness at one-year follow-up, with those in the intervention arm being significantly less likely to intend to drink in the next six months.<sup>1</sup>

Jones *et al.* (2007b), in their comprehensive review of community-based interventions for the reduction of substance misuse among vulnerable and disadvantaged young people concluded that, despite a wide variety of approaches producing improvements in substance use *knowledge and attitudes*, regardless of the type of population targeted, few interventions resulted in a reduction of use behaviours that lasted beyond the immediate post-intervention assessment phase. However, they concluded that, in general, for young people exhibiting multiple risk factors, family-focused work

showed most potential for success. Many parent and family-focused interventions also produced significant improvements in some secondary outcomes of family functioning (including positive parenting styles and child behaviour). They also reported that they considered that this type of approach had high applicability, after suitable adaptation, to UK settings. However, Jones *et al.* (2006b), in their review of universal drug prevention interventions, suggest that:

*more research is needed to identify which types of family-orientated interventions are effective in the UK. This may include interventions to promote engagement of parents in drug prevention activities, interventions that help facilitate parent/child communication, and interventions that help to build parents' knowledge about and confidence of dealing with drug issues. The tiered approach, incorporating different levels of engagement, is useful to avoid stigmatisation of families.*

(Jones *et al.*, 2006b, p 16)

There is some evidence that a *combination* of family- and child-focused approaches might work well. The best-known example is the SFP (eg Spoth *et al.*, 2005, 2008). This programme is a US-based community programme for parents and their children. It was developed by Spoth and Molgaard at Iowa State University and emerged from a major revision of the earlier Strengthening Families Program (SFP), developed by Kumpfer and associates at the University of Utah (Kumpfer, 1998). The original SFP was developed for substance-misusing parents and their children while at elementary school (aged 6–10), and the current Iowa SFP has extended this both as a prevention programme for all families, irrespective whether the parents misuse substances, and aiming at the older age range of 10–14. The revised SFP programme aimed at young people aged 10-14 is named 'SFP-10-14'. The SFP is primarily a drug and alcohol problems prevention programme, although it has also been used with young people who themselves misuse substances alongside these young people's parents. The main features of this programme are that it has been extensively tested, with diverse audiences, across quite a

wide age range of children and families, in both rural and urban settings, and across a number of sociocultural and ethnic groups within the US.

The programme, which has components for each group (parents and children) independently, and for the two groups combined, is designed to develop a number of specific protective factors, and to work to reduce a number of specific risk factors. These include:

- the development in parents of improved communication styles with their children;
- improved parental rule-setting;
- a more nurturing and supportive parenting style;
- greater school involvement;
- the development in children of positive goals for the future;
- a far greater incidence of following rules;
- improved family communication;
- improved relationships with parents;
- improved skills for dealing with peer pressure and refusal of alcohol or drug offers.

There have been a number of evaluations of the programme (eg Molgaard and Spoth, 2001; Spoth *et al.*, 2001, 2004, 2008). As an example, one study (Spoth *et al.*, 2001, 2004) randomly assigned 667 families (who lived in areas with a high percentage of economically stressed families) to either the programme or a control condition; 447 of these families were followed up from the children's 6th through to their 10th grade (ages 11–12 to 15–16). The research team found significant differences between the control and interventions groups, both in the young people and their parents (see Box 2 for details). The differences between programme and control youth increased over time, indicating that skills learned and strong parent–child relationships continue to have a greater and greater influence.

## **Box 2: Key findings from the SFP evaluation (randomised controlled trial of 446 families at follow-up) (Spoth *et al.*, 2001, 2004)**

Compared to the control group, young people attending the programme had significantly:

- lower rates of alcohol, tobacco and marijuana use;
- fewer conduct problems in school.

Parents showed:

- gains in specific parenting skills, including setting appropriate limits and building a positive relationship with their child;
- an increase in positive feelings towards their child;
- gains on general child management, including setting rules and following through with consequences;
- increased skills in general child management such as effectively monitoring youth and having appropriate and consistent discipline.

Another effectiveness trial of 118 families with substance misuse problems, randomised to SFP or care as normal, showed a range of significant effects, including on the substance use of children, the substance misuse of parents and the 'educational skills of the parents, self-efficacy of the parents, social skills in the children, and improvements in family relations' (Cuijpers, 2005, p 473).

In a recent study (Brody *et al.*, 2006), over 300 families were randomly assigned to be invited to participate in the programme or to carry on as usual. Two years later, 19% of programme-assigned children had started to drink compared to 29% of the controls, a significant difference.

Gerrard *et al.* (2006) examined the same study and tested whether these effects were due to the intended effects on parenting and on the children's attitudes. The effects were meant to be that enhanced parental monitoring and collaboration alongside clear rule making and implementation (in particular about alcohol) would slow any growth in children's active *intentions* to drink. Alongside that, the programme aimed to foster less attractive images of young drinkers. Gerrard *et al.* (2006) showed that it was through these mechanisms that the programme did seem to exert its restraining effect on age-related increases in drinking.

The SFP has come in for particular praise (eg Foxcroft *et al.*, 2002, 2003) due to its long-term effects on postponing drinking initiation. The Number Needed to Treat<sup>2</sup> (NNT) for this programme over four years for a major postponement of three alcohol initiation behaviours (alcohol use, alcohol use without permission and first drunkenness) was nine.<sup>3</sup> This was the case for each of these behaviours: that is, for every nine young people who received the intervention, one fewer had initiated alcohol use, one fewer had initiated alcohol use without permission, and one fewer reported that they had ever been drunk. It has also been found that the increase in 'ever use' and 'ever been drunk' was lower in the intervention group than in the control group at every follow-up up to four years, with increasing effect sizes, suggesting that the intervention intensified in impact over time. Foxcroft *et al.* (2002, 2003) suggest that the SFP needs to be evaluated on a larger scale and in different settings and that it needs to be adapted and evaluated in different countries and cultural settings. This has started to occur: one UK study piloted SFP-10-14 in Barnsley using the US specific materials and found very positive results (Coombes *et al.*, 2006, 2009), and a further UK evaluation has adapted the US materials for British families and started to test their impact (Allen *et al.*, 2007, 2008), reporting that both families and workers thought that the approach was workable in a UK context. Nevertheless, further research based on a randomised controlled trial design, with an adequate sample size, is required to fully evaluate the potential of the programme in the UK (Allen *et al.*, 2008). A more important criticism is that most of the evaluations of the SFP have been undertaken

by members of the SFP research group, and there is considerable evidence (from a very wide range of types of intervention) that more positive research findings are produced from evaluations conducted by the initial developers of an intervention. Further evaluations from completely separate research teams should be encouraged.

One problem with the SFP is that of recruiting parents and children into the study, and retaining them. Some of the SFP results derive from just over a third of the eligible families, the remainder either not participating in the study or failing to complete all the relevant measures. Indeed, for universal family interventions, the main problem is recruiting parents, something found also in UK studies of drug prevention programmes (see, for example, Velleman *et al.*, 2000).

Velleman *et al.* (2000) undertook an evaluation of five drug prevention programmes that involved parents, and which used a wide variety of approaches, including drugs awareness events, 'Living with Teenagers' and 'Parenting Teenagers' courses, interventions to raise self-esteem, peer education training, volunteer befriender schemes and parent-child shared learning. These projects showed that it is possible to recruit parents and secure their active participation, although most projects found it difficult to recruit the poorest or most marginalised parents, who did not attend school events or respond to discussion opportunities. Lack of time, money, childcare and fear of stigma were all barriers to involvement. These projects found it particularly difficult to recruit fathers, even though there is much evidence to show that boys want more communication about drugs from their fathers, and are influenced by their father's behaviour. The research found several positive effects on parents, including more accurate knowledge and realistic understanding of the potential of drugs prevention; and greater confidence in communicating with their children, in positively influencing them and in coping with any drug-related behaviour. The evaluation concluded that a key task for such programmes is to improve parenting skills: many parents need to develop confidence, communication skills and general understanding of young people through small, more intensive courses. Further, longer-term support is needed for families in difficulties. The

evaluation concluded that more focused ‘drugs’ work should not be conducted at the expense of these vital activities. Velleman *et al.* (2000) argued that drug prevention work involving parents needed to try to equip parents with three sorts of skills:

- parenting skills, giving parents the skills to develop family cohesion, clear communication channels, high-quality supervision and the ability to resolve conflicts;
- substance-related skills, providing parents with accurate information and highlighting the need to model the attitudes and behaviour they wish to impart;
- confidence skills, to enable parents to communicate with their children about drugs.

The SFP is not the only family-oriented programme to show promise. Connell *et al.* (2007), part of the Dishion group (see the multi-component section below), describe an adaptive approach to family interventions, which links engagement in a family-centred intervention to reductions in adolescent rates of substance use and antisocial behaviour. They randomly assigned 988 young people aged 11–17 to a family-centred intervention (N = 998) at age 11–12 and offered a multilevel intervention that included (a) a *universal* classroom-based intervention, (b) the Family Check-Up (*selected*) and (c) family management treatment (*indicated*).<sup>4</sup> All services were voluntary, and approximately 25% of the families engaged in the selected and indicated levels. Participation in the Family Check-Up was predicted by 6th-grade (age 11–12) teacher ratings of risk, youth reports of family conflict, and the absence of biological fathers from the young people’s primary home. Relative to the randomised matched controls, adolescents whose parents engaged in the Family Check-Up exhibited less growth in alcohol, tobacco and marijuana use and problem behaviour during all of the years between ages 11–17, along with decreased risk for substance use diagnoses and police records of arrests by age 18.

Another of Dishion’s programmes (the Adolescent Transitions Program (ATP): Dishion and Kavanagh, 2000) is similarly a tiered, multilevel

(universal, selected and indicated), family-centred prevention strategy that has been tested in a number of controlled studies. One (Dishion *et al.*, 2002) allocated nearly 700 middle school students and their families to ATP or a control condition. Despite poor engagement in the selected and indicated interventions, results at follow-up showed that the cost-effective intervention ‘reduced initiation of substance use in both at-risk and typically developing students’ (Dishion *et al.*, 2002, p 191; with ‘substance use’ meaning in this paper drinking alcohol and smoking cigarettes). Given evidence that integrated prevention strategies are more effective than single ones (Cuijpers, 2003), such programmes as this, using family-centred integration into school-based drugs prevention, are important. The ATP is discussed further in the multi-component section later in the chapter.

One study by Turrissi *et al.* (2001) demonstrated that intervening with parents in order to prevent problematic alcohol-related behaviour does not have to be confined to childhood or early adolescence. The researchers examined the short-term efficacy of a parent intervention to reduce the onset and extent of binge drinking during the first year of college (ie the students were aged 18, and hence all below the legal drinking age in the US). The approach was based on influencing the students before they started college, through their parents, during the critical time between high school graduation and the beginning of college. Specifically, parents were educated about binge drinking and how to convey information to their teenage children, and then encouraged to talk with their children just before they embarked on their college education. Teenagers whose parents implemented the intervention materials were compared with a control sample during their first term on drinking outcomes, perceptions about drinking activities, perceived parental and peer approval of drinking, and drinking-related consequences. The researchers found that young people in the treatment condition were significantly different on nearly all outcomes in the predicted directions (eg lower drinking tendencies/drinking consequences).

Most of these family interventions have been relatively complex, aiming to improve a wide range of family, parent–child and parenting

behaviours. However, a much simpler short cut has been suggested. The recent CASA (2007) study, on the basis of research showing a close association between regular and frequent eating of dinner together as a family and reduced levels of substance use, concluded that the single most important thing for families to do is to eat together. The danger here is that there may well be another set of variables that lie behind this association. Indeed, this is obviously the case here: no one would suggest that the simple fact of eating a meal leads to a lower risk of substance misuse. It is very likely that the intervening set of variables are exactly some of the family and parenting ones that are focused on in the family-based interventions described above, and which are reviewed in detail in Velleman (2009a, 2009b). What is likely to occur when families spend time together, is that all these other important variables also increase: there is likely to be greater family communication, greater family joint activity, the family unit is more likely to gel together as a whole, family monitoring of their children's behaviour is likely to increase, it is more likely that family rules about substance misuse might be discussed, parental approval or disapproval for various behaviours might be increased and made more explicit, etc. So it is likely that families who do all of these things, also tend to eat together as well. Unfortunately, while providing an opportunity for many of these factors to flourish, simply eating together may not suffice. Nevertheless, encouraging families to eat together may also act as a proxy for some of these other areas.

There is a further point here that needs to be made about the wider benefits of parenting programmes. The focus in this present review has been on using these parenting programmes as a way of preventing early alcohol use and subsequent problems. But it should be noted that such parenting programmes have many other significant benefits to both young people and society. For example, the ATP (Dishion and Kavanagh, 2000) is specifically predicated on the idea that parenting practices can serve a protective function within a disrupted community; that by enabling parents to utilise greater levels of parental supervision, they may be better able to protect their young people from escalating patterns of problem behaviour in

high-risk neighbourhoods; that by supporting the caregivers' use of behaviour management skills and building strong parent-child relationships, they will be able to reduce early oppositional problems in the preschool years, antisocial behaviour in middle childhood, and problem behaviour (as well as substance use) in early adolescence. The ATP is but one example – all of the family-based programmes examined in this review utilise inputs that are predicted to lead to stronger family processes and structures, which in turn affect not simply their young people's future use of alcohol (and drugs), but their present and future values, self-esteem and stability, as well as of course impacting on the overall 'culture of parenting', with the consequent possibility of affecting future generations of parenting. In some ways, the fact that these programmes are often funded within the US by the National Institute of Alcoholism and Alcohol Abuse (NIAAA) or the National Institute of Drug Abuse (NIDA) is an oddity, explicable by programme designers and researchers following the funding: if finding existed to develop more general prevention programmes, they might equally have been funded by these funding streams.

To sum up this section, key findings with regard to parent and family interventions are presented in Box 3.

### **Box 3: Key findings: parent and family interventions**

- There is evidence that parenting and family-centred interventions are among the most effective interventions and the impact can be long term.
- The evidence is primarily from US evaluations;
- Recruitment and retention of parents and children in programmes has proved to be difficult.

### **Direct work with young people**

There is also some (although less strong) evidence that interventions that enhance young people's

social skills, and/or utilise peers and/or work to develop individuals' ability to withstand peer pressure, can be effective.

Three related areas will be examined here: skills enhancement, peer interventions and interactions with an individual's personality. Most of these interventions aimed specifically at young people are undertaken in schools. There is some evidence that work at the overall school level may be effective (and this is discussed in the following main section, on the media and culture), but the programmes described here are not overall school-level ones. Instead, they are focused on young people's interactions, and they take place in schools primarily because these are places where young people can easily be accessed; and where they can practice the social interactions on which these programmes are designed to impact.

### **Enhancing young people's social and refusal skills<sup>5</sup>**

Stead *et al.* (2006) found only one study of the long-term impact (over two years) on alcohol use that involved the enhancement of young people's abilities to refuse offers of substances, and of other skills young people need to effectively negotiate adolescence and deal with social influences, among other components. This was Project Northland (Perry *et al.*, 1996), a three-year programme that involved the school curriculum, peer and parent activities and community taskforces. The researchers found a significant impact on past month and past week alcohol use ( $p < 0.05$  for each) in the intervention group compared with the control group at 2.5 years, although the effect had dissipated at four years. This will be discussed further in the multi-component section later in the chapter. Stead *et al.* (2006) did find evidence for medium-term effects (one to two years) for two other programmes based on skills enhancement work: the Dutch school programme (Cuijpers *et al.*, 2002; Smit *et al.*, 2003), where, in a trial of a three-year school-based programme, they found a significant impact on daily alcohol use at immediate post-test and at two years after the start of the intervention, and also a significant decrease in the number of drinks consumed per occasion at both follow-ups; and Project SMART (Hansen *et al.*, 1988), a school-

based social influences programme, which found lower alcohol-use onset among students who received the intervention compared with control group students at one- and two-year follow-ups.

Skara and Sussman (2003) were more positive after their review, where they examined 25 long-term adolescent tobacco- and other drug-use prevention programme evaluations. They specifically restricted their review to published programme evaluation studies that followed adolescents across the transitional period between junior high and high school (the transition occurs between ages 13–14 and 14–15) for a period of at least two years. They concluded that the majority of the 25 studies deemed suitable for examination reported significant programme effects for long-term smoking, alcohol and marijuana outcomes, while indicating a fairly consistent magnitude of programme effects. All but one of these prevention projects was school-based, with the final one, adapted from a school-based curriculum, being delivered through youth clubs (the Boys & Girls Clubs of America). Five of these studies complemented prevention efforts in the schools with a community component that involved intervention programming through such channels as parents, mass media, or health policy change. The main focus of Skara and Sussman's review was on smoking incidence and prevalence; but of the nine studies that provided long-term assessments of other drug use (including alcohol incidence and prevalence), two thirds (six studies) reported positive programme effects (St Pierre *et al.*, 1992; Botvin *et al.*, 1995; Shope *et al.*, 1998; Taylor *et al.*, 2000; Cuijpers, 2002a; Smit *et al.*, 2003; Pentz *et al.*, unpublished). Skara and Sussman reported that the magnitude of effects was fairly consistent across all of the individual studies (adding further to the evidence indicating that the prevention approaches were effective in preventing or reducing tobacco and other drug use), and stated that the results indicated that programme effects were less likely to decay among studies that delivered booster programming sessions as a supplement to the programme curricula. Of the studies that provided booster sessions, the majority had maintained long-term reductions for all three substances at final follow-up testing and specifically, that preventive effects were maintained over the long term for

75% of the interventions that assessed alcohol or marijuana use, which had demonstrated initial programming effects.

On the other hand, Foxcroft *et al.* (2003) concluded from their systematic review that a number of studies that had evaluated educational and psychosocial prevention programmes showed evidence of *ineffectiveness*. They stated that those that reported longer-term evaluations (over three years' follow-up) were examined in more detail, and several promising studies were re-analysed to provide a better indication of the potential impact of the prevention programme. On the basis of this re-analysis, they concluded that none of the school-based or peer-based interventions was effective, and that all of the studies included in their review showed some methodological weaknesses, implying that it is therefore necessary to replicate these studies with more a robust design and analysis, and across different settings.

Jones *et al.* (2007b), in their review of community-based interventions for the reduction of substance misuse among vulnerable and disadvantaged young people, concluded that school-based interventions were the most *popular* type of intervention, and skills training the most frequently evaluated model (whether programmed or generic). Similarly, Jones *et al.* (2006b), in their review of universal drug prevention, also showed that school-based interventions were the most popular and widely researched method of delivering universal drug prevention programmes. Their review suggests that Life Skills Training, or approaches based on it, is one of the few programmes that has demonstrated a small but positive effect on reducing indicators of drug use.

Life Skills Training was developed in the US by Botvin and colleagues (2001) and the publishers describe it as a 'substance abuse prevention/competency enhancement program designed to focus primarily on the major social and psychological factors promoting substance use/abuse' (Stothard and Ashton, 2000, p 6). It is school-based and consists of a block of classes delivered either at ages 11–12 or ages 12–13, followed by booster sessions in the next two years. Specific aims are to:

- provide the skills to resist social (peer) pressures to smoke, drink and use drugs;
- help develop self-esteem, self-mastery, and self-confidence;
- enable children to effectively cope with social anxiety;
- increase knowledge of the immediate consequences of substance use.

The lessons cover:

- personal self-management skills (eg solving problems, managing emotions);
- social skills (eg communication, interacting with others, assertiveness);
- drug-related information and skills (eg knowledge, attitudes, normative expectations, skills for resisting drug offers).

Botvin *et al.* (2001) provided a one- and two-year follow-up of LST, measuring its effectiveness in reducing binge drinking in a sample of 3,000 minority ethnic, inner-city school students with an intervention group who received the programme at the start of their 7th grade (age 11–12) and a control group who did not. The prevention programme had protective effects in terms of binge drinking at the one-year (8th grade, age 12–13) and two-year (9th grade, age 13–14) follow-up assessments. The proportion of binge drinkers was over 50% lower in the intervention group relative to the control group at the follow-up assessments. There were also several significant programme effects on other drinking variables, including drinking knowledge and peer drinking norms. The authors suggest that these findings indicate that a school-based drug abuse prevention approach previously found to be effective among White youth significantly reduced binge drinking among urban minority ethnic youth.

Botvin *et al.* (2003) were interested in seeing if LST could also be effective in younger age ranges, examining the effectiveness of LST in preventing tobacco and alcohol use among school students in grades 3 (age 8–9) through 6 (age 11–12). Rates

of substance use behaviour, attitudes, knowledge, normative expectations and related variables were examined among 1,090 students from 20 schools that were randomly assigned either to receive the prevention programme (nine schools, n = 426) or to serve as a control group (eleven schools, n = 664). Data was analysed at both the individual level and the school level, and major significant differences emerged between the intervention and control groups, at both these levels (see Box 4 for a summary). As a result, Botvin *et al.* (2003) suggest that their findings indicate that LST, previously found to be effective among middle school students, is also effective for elementary school students.

#### **Box 4: Key findings: LST for children aged 8–9 to 11–12 (Botvin *et al.*, 2003)**

At an individual level, controlling for gender, race and family structure, intervention students reported, relative to control ones:

- less smoking in the past year;
- higher anti-drinking attitudes;
- increased substance-use knowledge and skills-related knowledge;
- lower normative expectations for smoking and alcohol use;
- higher self-esteem at the post-test assessment.

At the school level, relative to control schools, the intervention schools':

- annual prevalence rate was 61% lower for smoking;
- annual prevalence rate was 25% lower for alcohol use;
- mean self-esteem scores were higher.

Research on LST has not only been conducted by the creator of the intervention (Botvin). Trudeau *et al.* (2003) evaluated the effects of LST on growth trajectories of substance initiation (alcohol, tobacco and marijuana), expectancies and refusal intentions in a rural US sample of 847 young people, over three waves of data collection, showing that the intervention significantly slowed the rate of increase in substance initiation and significantly slowed the rate of decrease in refusal intentions. The intervention also slowed the rate of decrease in negative outcome expectancies, although the significance level was only marginal. Gender differences were also found, although the intervention was effective in slowing the rate of increase in initiation for both genders.

Jones *et al.* (2007a) found mixed evidence with regards to the success of life skills approaches, with the balance of evidence suggesting that such approaches were associated with immediate and medium-term (although *not* with long-term) reductions in substance use. They specifically suggest that, although much of the evidence is conflicting or contradictory, there *is* evidence to suggest that:

- when delivered as a stand-alone intervention, life skills approaches may produce medium-term reductions in substance use, with some evidence to suggest that this effect may be strongest in girls;
- delivering generic life skills with family components can produce both immediate and medium-term reductions in alcohol use and frequency;
- such life skills programmes can produce long-term decreases in young people's association with substance-using peers;
- there may be some long-term effects when delivered either as a discreet stand-alone intervention or throughout the school year infused within the regular curriculum compared with no intervention.

They do, however, sound a note of caution, pointing out that across relevant studies there

was a heterogeneous population, and a high rate of attrition. Furthermore, there were often inconsistent effects of school-based skills training on substance-use attitudes and norms, meaning that more work is needed to identify underlying determinants of success (eg was success due to the attention paid, and support given, to vulnerable young people rather than to the content of the programme delivered?).

Stothard and Ashton (2000) summarise what they consider to be the positive and negative aspects of LST. They show that LST *can* result in lasting curbs on regular smoking, multi-drug use and problem drinking, which could help preserve physical health throughout life. However, they argue, there is insufficient consistency in the findings to be confident that implementing LST *will* cut legal or illegal drug use, only that it *can do* and *has done*, most consistently in relation to smoking. They argue that keys to the programme's successes seem to be its intensity, use of booster sessions, interactivity, emphasis on skills and its potential for delivery by peer leaders. When it does achieve positive effects, these seem to be gained by correcting misconceptions about the normality and acceptability of drug or alcohol use, improving substance-related knowledge and assertiveness in using substance refusal skills, and heightening anti-drug or other substances attitudes.

Commentators have called attention to the fact that US programmes (including LST) are abstinence-oriented. In contrast, the School Health and Alcohol Harm Reduction Project (SHAHRP), developed by McBride *et al.* (2003), focused on non-abstinence outcomes. It was a classroom-based programme, with an explicit harm minimisation goal, and was conducted in two phases over a two-year period. McBride *et al.* (2003) studied its effects on over 2,300 intervention and control young people in metropolitan, government secondary schools (13- to 17-year-olds) in Perth, Western Australia. The results were analysed by baseline context of alcohol use to assess the impact of the programme on students with varying experience with alcohol. Knowledge and attitudes were modified simultaneously after the first phase of the intervention in all baseline context-of-use groups. The programme had little behavioural impact on those who were 'supervised

drinkers' at baseline; however, those who were either non-drinkers or unsupervised drinkers at baseline were less likely to consume alcohol in a risky manner, compared to their corresponding control groups. Early unsupervised drinkers from the intervention group were also significantly less likely to experience harm associated with their own use of alcohol compared to the corresponding control group and this effect was maintained 17 months after the completion of the programme. The authors conclude that these results indicate that a school alcohol education programme needs to be offered in several phases and that the programme needs to cater for the differing baseline context-of-use groups.

The review above on skills enhancement has focused primarily on more promising approaches – those that have shown at least partial success in evaluations. Other schools-based work using other programmes or models (such as the DARE drug prevention curriculum for pupils of secondary school age; Perry *et al.*, 2003) has failed to provide convincing evidence of effectiveness.

### **Peer interventions**

Peer interventions are aimed specifically at influencing how peers interact, often by using peer educators or peer support. The concept of peer education has been used for several decades, with the term itself suggesting that young people of the same age, sex and interests provide activities to others at school (or in the streets, slums or community). The idea is that these young people, given the right training, can positively influence each other. Peer education is built on the premise that young people have the power to influence and positively change others' attitudes and social values and ultimately the behaviour of colleagues - their peers - once given the necessary knowledge, information and skills. This has also been found to be a useful prevention approach because people of the same age group feel free to talk to each other. Young people feel that their peers are more understanding of their situations and problems or challenges than adults who are more distanced from their reality. Peer-to-peer youth prevention of substance use or misuse also aims at creating an enabling environment for discussions of the issue, and of exploring and providing alternatives to

use. It is argued that it helps change attitudes and misperceptions, and that these young people will spend more time with each other and often will talk together at the very time when the incident is about to take place or the time when real action is desired to affect behaviour. Many examples exist of peer education in many aspects of behavioural change programmes for young people especially in HIV/AIDS, outreach and drug equipment provision.

There is, however, some evidence to suggest that peer support programmes do not always work. For example, Webster *et al.* (2002) evaluated the effects of a peer support programme on adolescents' knowledge, attitudes and use of alcohol and tobacco. The main findings were that there were no significant effects of the programme on participants' knowledge, attitudes and use of alcohol or tobacco. Similarly, Sumnall *et al.* (2006), in their review of drug prevention, showed that findings are mixed with regard to the effectiveness of peer-led education. They suggest that:

*It appears that the child or young person delivering the intervention tends to benefit most from the experience. Based on results from one meta-analysis, the use of peer educators was found to be an effective characteristic of multi-component programmes that had 'strong evidence' of effectiveness. However, this positive effect only seems to be supplementary. Evidence suggests that peer educators can only help increase the effectiveness of an already successful programme, and that the effect may be relatively short-lived.*

(Sumnall *et al.*, 2006 p 23)

The US Department of Health and Human Services issued a factsheet in 2002 (SAMHSA, 2002) arguing that there were 'proven results' from a programme named 'Protecting You/Protecting Me' (PY/PM), a five-year, classroom-based, alcohol-use prevention curriculum for elementary students in grades 1 to 5 (ages 6–11), delivered by trained high school students. In fact, in line with the Sumnall *et al.* review cited above, the positive results were for the *deliverers* of the intervention, the high school students teaching PY/PM. Those students delivering the intervention showed significantly less usage over the previous 60 days (as compared to

their peers who were not trained and did not deliver the intervention) of all types of alcohol, as well as less binge drinking and an increase in perceptions of the harmfulness of underage alcohol use.

To further complicate matters, Valente *et al.* (2007) have shown interaction effects between peer education and the makeup of their existing social/peer networks in a classroom randomised controlled trial comparing control classes with those receiving an evidence-based substance use prevention programme (Towards No Drug Abuse [TND]) and TND Network, which is a peer-led, interactive version of TND. Overall, TND Network was effective in reducing substance use; however, the programme effect interacted with peer influence and was effective mainly for students who had peer networks that did *not use* substances: young people with classroom friends who used substances were more likely to *increase* their use. The authors conclude that a peer-led interactive substance abuse prevention programme can *accelerate* peer influences. For young people with a peer environment that supports non-use, the programme was effective and reduced substance use. For students with a peer environment that supports substance use, an interactive programme may have deleterious effects. Other studies (eg Harden *et al.*, 1999; Posavac *et al.*, 1999) have also found conflicting results. However, many young adults have a positive view of peer-delivered health behaviour change initiatives.

### **Interactions with an individual's personality**

Another approach to school-based interventions has been provided by Conrod *et al.* (2007) who used personality theory to target an intervention at those young people who had what the researchers considered to be personality-based risk factors for substance misuse (ie if their questionnaire scores were high on one of four personality risk subscales: negative thinking, anxiety sensitivity, impulsivity and sensation seeking). In fact, they obtained their best results for those young people (median age 14) with the 'sensation-seeking' personality risk factor. Participants received either a personality-targeted intervention or no intervention. The intervention consisted of three main components: psycho-educational, motivational interviewing, and cognitive-behavioural. The sessions involved

- guided goal-setting designed to enhance participants' motivation to explore ways of coping with one's personality;
- psycho-educational strategies to educate participants about the target personality variable (depending on which personality risk subscale they were high on) and the associated problematic coping behaviours, such as interpersonal dependence, avoidance, aggression, risky behaviours and substance misuse;
- guided cognitive-behavioural work in analysing a personal experience according to the physical, cognitive and behavioural components of an emotional response.

All exercises discussed thoughts, emotions and behaviours in a personality-specific way. Participants were encouraged to identify and challenge personality-specific cognitive distortions that lead to problematic behaviours (eg the sensation-seeking intervention involved challenging cognitive distortions associated with reward seeking and boredom susceptibility).

Analysis showed a group difference in the growth of alcohol use between baseline and six-month follow-up, with the control group showing a greater increase in drinking than the intervention group for this period: sensation-seeking drinkers in the intervention group were 45% and 50% less likely to binge drink at six and twelve months respectively, than sensation-seeking drinkers in the control group (ie the Number Needed to Treat was 2.0). They suggest that these are larger than effect sizes obtained from other effective prevention and early intervention programmes (Tobler *et al.*, 2000; Foxcroft *et al.*, 2002), with effect sizes for sensation-seeking drinkers (the group they suggest are at greatest risk for binge drinking) being double that of any effect size reported for a youth alcohol prevention programme (Foxcroft *et al.*, 2002; and see the section of the review, above, on the SFP). The authors also state that the effects of the sensation-seeking intervention persisted for the most part through the full twelve-month follow-up period. They argue that this is particularly important, in that effective brief interventions for

alcohol misuse that do yield large effects tend to do so in the first few weeks post treatment, but these effects often disappear between six and twelve months post intervention, suggesting that the personality-targeted approach may outperform alternative approaches to reducing and preventing youth alcohol misuse. They suggest that this intervention strategy may prove effective in preventing the onset of adult alcohol-use disorders, by helping high-risk youth delay the growth of their drinking to a later developmental stage.

### **Direct work with young people: conclusions**

Some of the key findings relating to the work described above are summarised in Box 5. Notwithstanding the conflicting results reported above, this present review concludes that there is some evidence that direct work with young people, delivered primarily in school settings and using skills-, peer- and personality-based interventions are sometimes effective. In particular, the review concludes that the LST approach, developed by Botvin and colleagues, which teaches social resistance skills and general personal and social competence skills, may be the most promising of these interventions.

#### **Box 5: Key findings: direct work with young people**

- There is some evidence that life skills enhancement and peer and individual intervention methods to prevent substance use and misuse sometimes work.
- The LST approach, which teaches social resistance skills and general personal and social competence skills, seems to be the most promising of these interventions.
- The personality targeting approach of Conrod *et al.* (2007) also seems promising, and produces significant effect sizes, but needs replication.
- However, effect sizes are generally relatively small, and many studies produce conflicting results.

## Advertising, the media, culture, and social/cultural norms

The third main area of influence on how children learn about and acquire attitudes, expectations and intentions towards alcohol is that of advertising, the media, culture, and social/cultural norms. Unfortunately, it is a great deal harder to develop intervention programmes to counter these effects.

### Advertising and the media

Ellickson *et al.* (2005) have undertaken one of the few studies in this area. As outlined in the sections of the larger review and the first of these smaller reviews (Velleman, 2009a, 2009b) related to the impact of advertising on how children and young people learn about alcohol, Ellickson *et al.* (2005) showed that for 7th-grade (aged 12–13) non-drinkers, exposure to in-store beer displays predicted drinking onset by grade 9 (14–15); for 7th-grade drinkers, exposure to magazines with alcohol advertisements and to beer concession stands at sports or music events predicted frequency of grade-9 drinking.

What they also showed was that participation in the prevention programme ALERT Plus reduced future drinking for both groups and counteracted the effect of in-store beer displays, implying that alcohol prevention programmes and policies may help children counter alcohol advertising from multiple sources and limit exposure to these sources. Ellickson *et al.* (2005) describe ALERT Plus as a programme that seeks to motivate students against using drugs and to give them the skills they need to translate that motivation into effective resistance behaviour. The curriculum seeks specifically to change students' *beliefs about norms for drinking* and taking other drugs and the social, emotional and physical consequences of using alcohol and other drugs; to help them identify and resist pro-drinking, pro-drug pressures from the media, parents, peers and others; and to build resistance self-efficacy, the belief that one can successfully resist pro-alcohol (or other drug) influences. Specific media lessons focus on identifying different types of advertising (eg television commercials, promotional items), countering the persuasive appeals used by alcohol advertisers, understanding how pricing, promotion

and packaging are designed to affect use, and learning how advertisers have used appeals for targeting different groups over the years. Studies such as these are extremely rare, and there are none from the UK.

One area that relates to this issue of challenging the influence of advertising and general media coverage of alcohol is the work discussed below in the subsection on social norms, on challenging false impressions about how normative drinking and bingeing really are (eg Palmer *et al.*, 1998; Ashton, 2000; Wynn *et al.*, 2000), where both these interventions had substantial positive effects.

It is clear, however, that there are major problems in undertaking research in this particular area of preventing the impact of advertising. Such research requires costly longitudinal studies, the ability to randomly allocate young people to interventions with little contamination between them, and many other necessities, all of which put them beyond researchers within the UK, and beyond most researchers, even in the US. Further, as far as the other major areas are concerned (influence of family, of peers), it is relatively easy to see what any intervention programme needs to do and there are only a few ways to actually implement those interventions; whereas in trying to counter the influence of something as pervasive as advertising and media representations of alcohol, it is far less clear both precisely what the interventions need to do, or how they should go about doing that.

### Culture: intervention programmes and ethnicity and religion

Another global influence on alcohol, in the same vein as advertising and the media, is the impact of cultural factors, reviewed in Velleman (2009a, 2009b), including ethnicity and religion. A number of reviews and studies have looked at the role of ethnicity in intervention programmes (Mulvihill *et al.*, 2005; Harrop *et al.*, 2006; Taylor *et al.*, 2007). In general, reviewers suggest that there is a lack of evidence on the effectiveness of interventions targeting specific socio-economic, ethnic or vulnerable groups.

In terms of ethnicity specifically, there is a lack of robust research evidence on the extent to which minority ethnic groups can benefit from culturally specific health behaviour change interventions,

although there may be some limited evidence that appropriately tailored interventions can have enhanced effectiveness in some areas. Although there is evidence from the US that positive racial or ethnic identity can act as a protective factor, which in turn can foster educational resilience, it is very uncertain as to how generalisable such findings are to the range of UK contexts. Nevertheless, US studies have found that general intervention programmes developed with White populations could usefully be implemented (without requiring cultural tailoring) with members of minority ethnic groups; such intervention programmes include school-based interactive ones, delivering interventions in combination with parent workshops, and family-based interventions. One review of the grey literature (McGrath *et al.*, 2006) on drug prevention among young people did find predominantly UK-based research, which suggested that drug prevention programmes that are effective for young White people are similarly effective for Black and minority ethnic populations, although adding components that increase the cultural sensitivity of the programme can enhance its effectiveness.

None of the reviews found any studies that addressed engagement of minority ethnic populations with interventions, something that has been highlighted to be a problem in the UK. There is clearly a need also to undertake primary research on interventions to reduce alcohol use and misuse, and to evaluate their effectiveness, among minority ethnic groups, particularly among a range of different groups from the Indian subcontinent, different groups from Africa, and among African Caribbeans. One specific recommendation is that primary research should be undertaken on the effectiveness of brief interventions to reduce alcohol misuse aimed specifically at various minority ethnic groups, particularly among Asians and African Caribbeans, and at specific religious ethnic groups such as Sikhs, Hindus and Muslims.

### **Intervention programmes and religion**

As with ethnicity, a number of reviews and studies have looked at the role of religion in intervention programmes. Harrop *et al.* (2006) argue that evidence exists to show that religious beliefs work both as an individual-level protective factor and at a

community level, implicating a relationship between religion and health. They suggest that there is evidence of a positive relationship between religious involvement or religiosity and positive outcomes including health, mental health, reduced substance use, competence and educational attainment. They state that, overall, the studies cut across different religious and ethnic groups, although a bias towards Christian groups was reported in one review and seems likely in the others given the ethnic composition of the groups under consideration in these US studies (eg Hispanic, African American, US White). It is also the case that many families of resilient children hold religious beliefs, with an implication that these may provide stability and meaning to lives (Werner, 2000).

It may be thought that religion is not amenable to preventative interventions. But because there is some evidence that religious beliefs and involvement can work as a protective factor (religion and faith in God are among the protective factors shown in Table 1 in Appendix 2), it may be that prevention programmes and interventions *should* be developed that encourage greater religious involvement. As mentioned above, the benefits of religious involvement are suggested to be apparent at both the individual level and the community level, being associated with many positive outcomes including health, mental health, reduced substance use, competence and educational attainment. There is also a suggestion from longitudinal studies that religious beliefs may be associated with resilience in children, with a putative mechanism being that such beliefs provide stability and meaning to lives, and provide roots and coherence.

### **Social and cultural norms**

As mentioned above, most prevention studies that aim at children and young people in the US are abstinence-oriented. Unusually, Wynn *et al.* (2000) undertook longer-term preventative work, which recognised that young people *would* drink, and worked very successfully to reduce future alcohol-related problems. They concentrated on correcting unrealistic beliefs about how normal drinking is – the ‘everyone’s doing it’ fallacy. This study is part of the Alcohol Misuse Prevention Study (AMPS), a study begun in 1983, with very large samples of schoolchildren followed up for several years,

and with a focus on reducing alcohol *problems* rather than alcohol use, and was reviewed by Ashton (2000), which has informed these present paragraphs.

Wynn *et al.* (2000) followed up over 3,000 young people from grade 6 (age 11–12) to grade 10 (age 15–16). The AMPS curriculum begins with a block of lessons at age 11–12, followed over the next two years by booster sessions. Its aim is to reduce the growth of alcohol problems by improving pupils' abilities to identify and resist peer influences (and as such, falls within the type of prevention programme described in a previous section entitled 'Direct work with young people'). A separate analysis suggested that the lessons did retard growth in alcohol problems (such as getting drunk or sick or attracting complaints from parents and friends) but *only* among the minority who had already drunk without adult supervision. Since these were also the pupils with the greatest alcohol problems, the curriculum showed promise for preventing future serious alcohol disorders. Similar results were found four years earlier using a less well-developed version of the same curriculum.

Further analyses attempted to identify how the lessons achieved their impact on drinking problems. The earlier study had found that the lessons worked partly by bolstering pupils' endorsement of reasons not to drink and reducing their susceptibility to peer pressure. Wynn *et al.* (2000) tested two further mediating variables: refusal skills and normative beliefs. Refusal skills (which unusually were assessed by direct observation in role play rather than by questionnaire responses) were improved by the programme. However, these were *not* related to overindulgence in alcohol nor did they account for the curriculum's impact on drinking. Unlike refusal skills, from grade 7 (age 12–13) upwards, pupils' overestimation of how common drinking was among their peers and among adults was related to excessive drinking. Moreover, especially among older pupils (roughly aged 13–14), the programme's correction of these beliefs partly accounted for its impact on excessive drinking. Thus, it appears to be important to equip young people with refusal skills and also to correct normative beliefs, and it also seems that different interventions are needed at different points in drinking development.

Similar findings have come from other studies, including a large-scale US study, which found that a 7th-grade curriculum that focused on correcting normative beliefs reduced alcohol, tobacco and cannabis use relative to simply giving pupils information about the consequences of drug use (Hansen and Graham, 1991; Palmer *et al.*, 1998). As Ashton (2000) concludes, the clearest implication from this and related studies is that school programmes that aim to have a preventive impact must incorporate information that corrects inaccurate beliefs about the normality and acceptability of alcohol use, and Ashton suggests that it would be more logical to focus on correcting incorrect beliefs about the frequency of drinking too much, rather than drinking itself.

### **School culture and environment**

As described earlier in this review, most direct work with children and young people that is focused on their information and social skills is school-based, mainly because of ease of access to the participants. However, interventions have also been mounted that have attempted to alter the overall school culture and environment, and as such have been about impacting on social and cultural norms.

Evidence is starting to emerge that some of the positive effects of some school-based prevention programmes have not been solely about the enhancement of alcohol- or substance-specific information or social skills; instead, they may have been effective due to the changes they engendered in the school atmosphere or the natures of the school's teaching (Bonell *et al.*, 2007).

Some studies in the UK (eg West *et al.*, 2004; Bissett *et al.*, 2007) that have focused on these school-level measures have found that schools that are better at engaging or supporting their pupils showed reductions (compared with schools that are not as good at this) in the speed with which these schools' pupils start drinking as well as start other substance use and misuse. Hence, Bissett *et al.* (2007) showed that, in schools in the West Midlands, the provision of 'value-added education'<sup>6</sup> was associated with reduced risk of early alcohol initiation, heavy alcohol consumption and illicit drug use, after adjusting for gender, grade, ethnicity, housing tenure, eligibility for free school meals, drinking with parents and neighbourhood

deprivation. West *et al.* (2004) showed in an examination of 43 secondary schools in the west of Scotland that school-level variation (school effects) was a far stronger predictor of whether young people drank alcohol or smoked (or used illicit drugs) than were individual or other characteristics. Higher levels of smoking, drinking and drug use were found in schools containing more pupils who were disengaged from education and knew fewer teachers, and in larger schools independently rated as having a poorer school ethos. These findings held true even after controlling for behaviour at age 11, sociodemographic characteristics, religion, family characteristics, disposable income and parental health behaviours.

Studies in other countries have shown similar results. Kellam *et al.* (2008) implemented the 'Good Behaviour Game' (GBG), a method of classroom behaviour management used by teachers, in 1st- and 2nd-grade classrooms (children aged 6–8) in 19 Baltimore City public schools in the US. Control conditions were a curriculum-and-instruction programme directed at reading achievement, or the standard school programme in use at that time. The intervention started in the 1985–86 school year. The GBG intervention was directed at the classroom as a whole, to socialise children to the student role and reduce aggressive, disruptive behaviours, which even in the 1980s were known to be antecedents of later smoking, substance misuse and other disorders. When the children who experienced this classroom behaviour management system were followed up at ages 19–21, it was found that males showed reduced drug and alcohol abuse/dependence disorders, regular smoking and antisocial personality disorder. This was particularly the case for those who, in 1st grade, were more aggressive and disruptive. Another study of the GBG, this time in the Netherlands (van Lier *et al.*, 2009) but with (so far) a follow-up of children at a much younger age, again showed an impact on alcohol and tobacco use. Second-grade classrooms (children aged 7 years) were randomly assigned to the intervention or a control condition; and alcohol and tobacco use was looked at when these children were aged 10–13. The researchers found that the intervention children had lower probabilities of tobacco use over the ages 10–13; and that (among those children reporting having

used alcohol in the previous week – not many due to the age range) intervention children reported having a lower probability of alcohol use.

Other studies (eg Catalano *et al.*, 2004; Flay *et al.*, 2004; Patton *et al.*, 2006) have taken different but equally promising approaches to changing school ethos. Patton *et al.* (2006) in Victoria, Australia, developed the 'Gatehouse' project, designed to promote social inclusion and commitment to education, in reducing among students health-risk behaviours and improving emotional well-being. They implemented this in 25 secondary schools with pupils aged 13–14, using a cluster-randomised design. The idea was not to observe effects on the individual children, but to see whether, in schools where the programme was implemented, the behaviour of children aged 13–14 would increasingly diverge between the intervention schools and the control ones. Accordingly, Patton *et al.* examined the behaviours of interest (substance misuse – any, or heavy, use of alcohol, tobacco or cannabis; antisocial behaviour; and early initiation of sexual intercourse) in 13- to 14-year-olds in the year of first implementation, then looked again at 13- to 14-year-olds two years later and then looked again at yet another group of 13- to 14-year-olds two years further on. They found the increasing divergence that they were looking for, and that four years after the programme started, pupils in the intervention school showed 25% less of these health-risk behaviours than did pupils in the comparison schools.

Catalano *et al.* (2004) describe the development of school connectedness in two longitudinal studies in the US – the Seattle Social Development Project and Raising Healthy Children. Both programmes worked with elementary schools (children aged 6–11) and used a developmentally adjusted, multiple-component strategy consisting of classroom instruction and management, parent intervention and child skill development. The focus on parenting and child interventions have a similar orientation to programmes described earlier in this review such as the SFP, but what makes these programmes different is the very extensive work on developing teacher and classroom skills, with the teacher training element including training on proactive classroom management, interactive teaching to motivate learners, cooperative learning, effective

reading instruction, teacher coaching and teachers' peer mentoring. Outcome data was collected annually until the children were aged 16, and then when they were aged 18, and every three years subsequently at ages 21, 24 and 27 (although at the time of this paper, data was still being collected for some of the older young people who had entered the programme's schools at a later time). Study results show that the intervention increased school bonding and achievement and reduced problem behaviour throughout elementary school. During middle and high school the level of school bonding declined less for full intervention students than for control students. This difference increased by 12th grade (ie age 13). Compared to the control group, levels of school attachment, commitment and academic achievement were higher in the senior year of high school (age 16), and school problems, violence, alcohol misuse and risky sexual activity were all reduced. At age 21, pregnancy rates were lower among females.

These studies provide support for prevention strategies in schools that move beyond health education or skills training for children, to promoting positive social environments. There seem to be some promising results suggesting that schools that engage pupils in their school and their education seem also to protect them against risky forms of substance use, offering a way to prevent substance misuse by focusing on core educational and social virtues. Fletcher *et al.* (2008), in their systematic review of school effects on young people's drug use, conclude that schools that develop supportive, engaging and inclusive cultures, and which offer opportunities to participate in school decision making and extracurricular activities, create better outcomes across many domains, including non-normative substance use. Bonell *et al.* (2007), in their review, suggest that, although the existing evidence is not well developed, current studies indicate the potential of interventions aimed at ethos in overcoming the limitations of existing school-based approaches. They state that the evidence suggests that schools may be able to alter the health behaviours of pupils not only by educational interventions but also by changing the nature of the school as an institution. Fletcher *et al.* (2009) suggest that various pathways may plausibly

underlie school effects on substance use and misuse, and that these pathways support the idea of 'whole-school' interventions to reduce substance use through recognising students' varied achievements and promoting a sense of belonging, reducing bullying and aggression, and providing additional social support for students.

Bonell *et al.* (2007) further argue that the UK government already recognises that the whole-school environment has a key role in promoting young people's health. They draw attention to the National Healthy Schools Programme – compulsory in all schools by 2009 – which requires schools to develop positive and supportive environments and to encourage student participation in decisions. However, they also suggest that schools are not being provided with any detailed guidance on how they should improve ethos, and that an evaluation of pilot schemes of attempts to implement the National Health Schools Standard (Blenkinsop *et al.*, 2004; Schagen *et al.*, 2005; Warwick *et al.*, 2005) showed that no schools were introducing systematic approaches to improving environment and ethos such as those described in the US and Australian studies above.

### **Intervention programmes and sport and other extra-curricular activities**

Sport and other extra-curricular activities have also been found to be important: young people involved in extra-curricular activities including sport are less likely to have problems with alcohol (although some contradictory evidence exists that youths participating in sports may be more prone to risky drinking practices). It is also the case that young people who do *not* become involved in such activities are also more likely to initiate alcohol use early. One research group suggested that participation in organised sport activities may delay the initiation of both drinking and intoxication in younger teenagers, and it recommended that sports organisations should be included in drinking prevention programmes (Hellandsjo Bu *et al.*, 2002).

Werch *et al.* (2003) undertook two interventions studies based on these ideas. They developed a novel sport-based intervention aimed at preventing alcohol use within the context of a sport programme and promoting physical activity among adolescents, and found that significant

improvements occurred between baseline and follow-up for various measures of alcohol, exercise and risk/protective factors. The authors concluded that a brief sport-based screen and consultation tailored to adolescents' health habits, with and without parent materials, may potentially reduce alcohol use while increasing exercise frequency. Werch *et al.* (2005) tested this a second time, this time utilising a randomised controlled trial design, demonstrating significant positive effects at three months' post intervention for alcohol consumption, alcohol-initiation behaviours, alcohol-use risk and protective factors, drug-use behaviours and exercise habits, and at 12-months for alcohol-use risk and protective factors, cigarette use and cigarette initiation. Again the authors concluded that a brief, one-to-one consultation integrating alcohol avoidance messages within those promoting fitness and other positive health behaviours holds promise for influencing adolescent alcohol and cigarette use and other health behaviours at post treatment and one year later.

Sport is not the only extra-curricular activity that has been found to interact with alcohol use in young people. Membership of youth groups is another. Bellis *et al.* (2007), in their study of the predictors of risky alcohol consumption in schoolchildren, showed that membership of youth groups/teams was in general protective against risky drinking (bingeing, high-frequency drinking, drinking outdoors) despite some contradictory association with bingeing (as with the findings in relation to sports presented above).

Further evidence of the importance of extra-curricular activity comes from a study by Oman *et al.* (2004), which looked at a number of protective factors, which they described as 'youth assets'. They looked at the potential protective effect of these assets on adolescent alcohol and drug use, in a sample of 1,350 adolescents and parents from a low-income, inner-city population. They examined nine youth assets, and found significant positive relationships between several and non-use of alcohol and drugs, including the use of time (religion), good health practices (exercise/nutrition), aspirations for the future, peer role models, responsible choices and family communication. For example, youths who had the peer role model

asset were nearly 2.5 times more likely to report non-use of alcohol compared with youths who lacked the asset, and those with the positive family communication asset were almost 2.0 times more likely. Youths who possessed all of the statistically significant youth assets were 4.44 times more likely to report non-use of alcohol and 5.41 times more likely to report non-use of drugs compared with youths who possessed fewer youth assets.

In many ways these youth assets and the influences of religion, sport, strong family bonds etc can all be seen as protective factors, which increase a young person's resilience and enable them to withstand some or all of any risk factors that they might also have. Risk, protective and resilience characteristics are shown in Table 1 in Appendix 2.

Scales and Leffert (1999) undertook another study that looked at 'assets'. They developed a scale of resilience factors (which they called 'developmental assets'), and looked in one population at how many young people had these factors. These resilience factors, and the percentage of children in that population having them, are shown in Table 2 in Appendix 2. As Table 3 in Appendix 2 shows, there is a clear relationship between the number of these resilience factors and a reduced chance of a child starting to act in a risky fashion.

To sum up this section, the key findings in relation to advertising, the media, culture, and social/cultural norms are presented in Box 6.

### **Box 6: Key findings: advertising, the media, culture, and social/cultural norms**

- There have been so few interventions based on the ideas of the pervasive influence of media and cultural representations of alcohol, that it is not possible to draw conclusions about this area from intervention studies, although the importance of this area suggests that more attention needs to be paid to developing and testing such interventions.

- There is a lack of evidence on whether minority ethnic groups would benefit from culturally specific interventions.
- There is some evidence that religious beliefs can work as a protective factor at the individual and community level.
- There is quite good evidence that influencing young people's views about normative drinking behaviour can have significant preventative effects.
- Evidence is starting to emerge of the positive effects of some school-based prevention programmes that have impacted on school atmosphere or the nature of the school's teaching, as opposed to simply working at the level of the individual child.
- Sport and other extra-curricular activities are also starting to be shown to be important, especially in enabling young people to develop resilience.

## Multi-component approaches

Not surprisingly, if there is evidence that a number of disparate approaches (parents, peer interaction and refusal skills, clarification of norms, etc) do lead to positive effects on drinking initiation and drinking levels once started (albeit with differing levels of effectiveness), then doing them in an integrated way should lead to even better results. Many of these programmes have already been discussed and where appropriate the reader will be referred back to the relevant section/subsection.

Integrated or multi-component approaches to preventing and reducing alcohol-related harm have been reviewed by Thom and Bayley (2007) and have been examined in a number of reviews of preventative interventions with young people (Skara and Sussman, 2003; Jones *et al.*, 2006b; Sumnall *et al.*, 2006). All have concluded that there is evidence that multi-component programmes do work well, with Jones *et al.* (2006b), in their review of universal drug prevention, concluding that

multi-component programmes and those based on the social influence model have shown the most consistently positive (albeit still limited) outcomes.

Stead *et al.* (2006) suggested that a number of multi-component approaches had shown at least some success in reducing substance misuse. Of those interventions for which there existed medium (one- to two-year) or longer-term follow-ups, Stead *et al.* identified three that were multi-component and successful – Project SixTeen (Biglan *et al.*, 2000), Project SMART (Hansen *et al.*, 1988) and Project Northland (Perry *et al.*, 1996). Project SixTeen (Biglan *et al.*, 2000) was designed primarily to reduce illegal sales of tobacco and youth tobacco use, but it also appeared to have affected alcohol use: five years after the start of a three-year intervention, alcohol use in the previous week had increased significantly in communities that had received only a school-based programme but not in the intervention communities. Project Northland (Perry *et al.*, 1996, 2002; Komro *et al.*, 2001; Stigler *et al.*, 2006) was a three-year, community-wide, multilevel intervention. As already noted (see Appendix 1 for details) they found significant reductions in alcohol use in the intervention group compared with the control group. Project Northland also found a significant reduction in 'proneness to alcohol, drug and family problems' after three years of the programme, suggesting that the family-focused 6th-grade component of the programme was effective in influencing wider precursors of problem behaviour. Similarly, Project SMART (Hansen *et al.*, 1988) found lower alcohol use onset among students who received the intervention compared with control group students (see Appendix 1 for details).

Among the most important of the multi-component projects (although not reviewed by Stead *et al.*, 2006) is the Adolescent Transitions Program (ATP), a parent training programme for at-risk early adolescents. ATP is a multilevel approach to family-based interventions within a middle-school setting, and it is multi-component because it uses family, school and peer components. Dishion and Kavanagh (2000, 2003) say that the intervention strategy is based on an 'ecological framework' for studying social and emotional development in children and adolescents, emphasising a network of contextual factors within which

parenting is both directly and indirectly influential on the development of problem behaviours. This approach and the associated data (Dishion and Kavanagh, 2000, 2003; Dishion *et al.*, 2002, 2003, 2004) are consistent with the broad literature reviewed above supporting the effectiveness of family interventions, especially for high-risk youth. What makes this approach especially interesting is the effective implementation of family interventions within a school context, which suggests that these interventions can make a significant contribution to reducing problem behaviour and substance use from a public health perspective. Dishion *et al.* also recognise the importance of school-level interventions as discussed above, as an intervention that can be integrated with work that uses the school to effect individual behaviour change via the improved skills of young people, and work that focuses on improving parenting practices. As they state:

*The field has moved collectively toward a set of principles that are critical to preventing and reducing problem behavior in early adolescence: (a) parenting practices are particularly important to target, especially among high-risk youth; (b) creating 'artificial' peer group environments may actually lead to iatrogenic effects, as indicated by our own outcome data, as well as that of others; and (c) schools may remain as a medium for rebuilding communities, in general, and specifically, for re-engaging families in the primary task of socialization and promoting the health of young people.*

(Dishion and Kavanagh, 2000, p 909)

Dishion *et al.*'s parent-focused curriculum is based on family management skills of encouragement, limit setting and supervision, problem solving and improved family relationship and communication patterns. Teaching these skills follows a step-wise approach towards effective parenting skills and strategies for maintaining change. The long-term goals of the programme are to arrest the development of antisocial behaviours and drug experimentation in young people, with intermediate goals being to improve parent and family management and communication skills. The

curriculum has been targeted at a broad cross-section of parents, but group leaders are trained to adapt the curriculum to be sensitive to the education level and cultural orientation of families.

The ATP includes parent group meetings, individual family meetings and booster sessions once the programme has been completed. The meetings involve discussion and practical exercises to help develop parenting and communications skills. Data (Dishion and Kavanagh, 2000, 2003; Dishion *et al.*, 2002, 2003, 2004) from randomised controlled studies shows that the programme has been effective in reducing observed negative parent-child interactions, that teacher reports show decreases in antisocial behaviours at school, that the programme has been effective in reducing youth smoking behaviours at one-year follow-up and that there is high parent satisfaction with the ATP.

Another multi-component parenting intervention utilising family, school and community, is that developed by Sanders (2000) in Australia – the Triple P – Positive Parenting Program. The system comprises a tiered continuum of increasingly intensive parenting interventions ranging from media interventions with wide reach, to intensive behavioural family interventions with narrow reach for high-risk families where parenting problems are complicated by other factors, including marital conflict, parental mood disturbance and lack of social support. Sanders (2000) discusses the scientific basis of the system of intervention, and various papers demonstrate evidence for this approach's efficacy (Connell *et al.*, 1997; Sanders and McFarland, 2000; Sanders *et al.*, 2000; Martin and Sanders, 2003; McTaggart and Sanders, 2003; Markie-Dadds and Sanders, 2006; Turner and Sanders, 2006) in the school, primary care, workplace and other settings.

Although there are reports of the success of multi-component programmes, there are also problems with these interventions. Jones *et al.* (2006b) and Stead *et al.* (2006) draw attention to the fact that research is lacking about which components contribute to the overall effectiveness of multi-component programmes. As part of Project Northland, analyses have been undertaken that attempt to clarify the differential effectiveness of different components (Stigler *et al.*, 2006). Stigler

*et al.* (2006) attempted, post hoc, to tease apart the effects of different intervention strategies used in Project Northland. The initial intervention occurred when students were in 6th to 8th grade (ages 11–12 to 13–14), and intervention during that phase included five components:

- classroom curricula;
- peer leadership;
- youth-driven/led extra-curricular activities;
- parent involvement programmes;
- community activism.

Student exposure to/participation in these components was followed over time, and those measures were used as time-varying covariates in growth curve analyses to estimate the effects of the intervention components over time. Stigler *et al.* (2006) show that the impact of the components appears to have been differential. Overall, the parent involvement programme had the most consistent and positive effect. As well as this, the strongest effects were documented for the planners<sup>7</sup> (youth-driven/led extra-curricular activities) of extra-curricular activities; and parent programme components. The classroom curricula proved moderately effective, but no effects were associated with differential levels of community activism. Interestingly given that this is one of the rationales for undertaking multi-component interventions, Stigler *et al.* (2006) show that the interactions they tested did *not* provide support for synergistic effects between selected intervention components.

There are other problems that reviewers call attention to as well. Stead *et al.* (2006) state that, in large-scale multi-component and community interventions and mass media programmes, it is impossible to control fully for other factors that might influence outcomes, even where matched-comparison cities or communities are used. It is also difficult, where effects *are* found, to identify whether these are attributable to particular intervention components, or to the combination of activities (notwithstanding Project Northland's

unusual work in these two directions), or to other factors such as secular trends. Furthermore, intervention approaches such as community organisation, direct action and media advocacy do not lend themselves readily to precise statement as independent variables whose effects can be measured.

To sum up this section, key findings in relation to multi-component approaches are presented in Box 7.

### **Box 7: Key findings: multi-component approaches**

- There is some evidence that multi-component interventions work.
- However, it is problematic to identify which components are effective; It is difficult to control for outside influences and thus to attribute effects to particular intervention components, or to a combination of activities.
- Approaches such as community mobilisation are difficult to measure.

## **Researching complex interventions: issues and challenges**

When assessing the effectiveness of any preventative intervention programmes, it is important to examine the quality of implementation. It is of course vital for such interventions to be based on both:

- research evidence as to the factors that might lead to alcohol initiation and problematic use; and
- psychological or educational theory about what messages need to be delivered as a result of that research and how best to deliver them.

However, this is not enough: it is also important that the intervention is delivered to a high quality, with appropriate fidelity, in real-life settings.

Hence, for example, when assessing the effectiveness of school-based skills-enhancement programmes, it is important for researchers to examine the quality of implementation (Stead *et al.*, 2009). In several studies examined in the various reviews above, substance use prevention curricula were not implemented as intended, or were poorly implemented, meaning that any failure to detect effects may reflect weaknesses in delivery rather than in programme theory and design. As Stead *et al.* conclude:

*Nearly all schools provided drug education but modes of delivery and learning approaches did not always reflect the evidence base. There was a strong reliance on information provision and more limited use of social influences, resistance and normative approaches. Teaching was reasonably interactive, particularly with teachers who had been trained. Although drug education was provided across all school years, there was limited linkage and some duplication of content for different age groups. The rationale for resource use was not always clear, and some resources were inappropriate for pupils.*

(Stead *et al.*, 2009, p 1)

There were also many methodological limitations within almost all of the studies examined in the previous sections of this present review, which most of the other reviews cited above discuss in some detail. Most reviews of these and related areas concentrate on these methodological limitations, often concluding that because of them, no substantive conclusions can be drawn. This present review takes a different view. Given the immense problems in undertaking the sort of double-blind randomised controlled trials that so many reviews appear to consider are the ‘gold standard’, this reviewer considers that the weight of evidence supports the notion that interventions, based on some of the range of factors highlighted in the earlier parts of this review, can be and often are effective.

One frequent criticism made about the sort of interventions studies discussed in this present review does deserve some further discussion. Most reviews of the areas outlined above have sought long-term effects. These reviews have often

deemed an intervention of less (or even no) utility if it cannot demonstrate long-term effects, even if it has demonstrated short- and medium-term ones. However, this reviewer would argue that if the aim of the intervention is to slow down drinking initiation, then an intervention that manages to do this for a significant number of young people for one to two years should be seen as successful. Further, there is an issue of how strong one might reasonably expect any intervention to be, relative to all of the influences that any person is exposed to over their lives. It seems reasonable to expect a prevention initiative to have both an immediate and a medium-term effect, but not for it to be held responsible for long-term outcomes. Finally, it is important not to place too much weight on interventions relative to ongoing factors within society that may act to encourage young people to drink (such as the relative low cost of alcohol, its great accessibility and availability, and the significant marketing pressures on young people to consume alcohol). It is unrealistic to expect a few hours of preventative intervention, even with ‘booster sessions’, to enable children to withstand these pressures.

Nevertheless, and even with all these caveats, all the reviews examined, and this present review as well, reach the conclusion that there is a major lack of robust UK-based evaluations of prevention interventions and programmes, whether oriented towards alcohol initiation, general substance initiation or later patterns of drinking. It is clear that more research is required in the UK to undertake medium-term, longitudinal studies into of a range of family, school-based, community-based programmes (including mass media campaigns as a part of multi-component prevention programmes) to allow some understanding of what works in a range of UK settings.

To sum up this section, key findings with regard to interventions are presented in Box 8.

### **Box 8: Key findings: interventions**

- Overall, the present review and the reviews outlined above have found reasonable evidence that substance-use interventions can be effective.

- A majority of the interventions included in this review that sought to prevent youth alcohol, tobacco or illicit drug use reported significant positive effects in the short term. (There are also a great number of interventions and preventative programmes that have no positive findings, even in the short term; these have only been mentioned in passing, so that this review could concentrate on those with some evidence for their effectiveness). Even in the interventions that reported positive short-term effects, these effects tended to dissipate in the medium and longer term. Nevertheless, around half of the alcohol and tobacco interventions still displayed some positive effects two or more years after the intervention.
- Interventions based on family, parenting and parent–child interactions are the most effective when delivered in either stand-alone formats or as part of integrated multi-component ones within the school or other settings. This corroborates the huge amount of research underlining the importance of the family in the initiation to and subsequent behaviour towards alcohol and other substances, and reinforces the fact that the family has significant long-term impacts on future substance-using behaviour.
- There is some, although less strong, evidence suggesting that interventions based around altering peer influence can work, by improving young people’s skill to resist peer pressure, or by improving their skills in dealing with general life issues or by recruiting and engaging with peers to train them to become educators and attitude-formation leaders. The interventions that appear to work best are those that are interlinked with ones that also involve the family.
- In comparison with family-based interventions, skills enhancement and peer-based interventions appear to be

less effective: they have far less of a longer-term impact.

- There have been very few preventative interventions based on the ideas of the dominance of media and cultural representations of alcohol, meaning that it is not possible to come to any even tentative conclusions about this area from such intervention studies. However, the wealth of evidence outlined in the section on advertising and the media suggests that these are indeed dominating influences on young people’s knowledge, attitudes and then behaviour towards alcohol. The importance of this area suggests that more attention needs to be paid to developing and testing such interventions.
- Evidence is starting to emerge of the positive effects of interventions aimed at altering the school ethos or atmosphere or the nature of the school’s teaching.
- There is some evidence that influencing young people’s views about normative drinking behaviour can have significant preventative effects; as can interventions aimed at sport and other extra-curricular activities, especially in enabling young people to develop resilience.
- There is some evidence that multi-component interventions are also effective. Community-oriented interventions within this category may also have had an influence on various components of the community and wider society – the behaviour of retailers, on local policy, etc – although of course it is difficult to attribute changes to the interventions rather than to other events and trends in the community. There is a lack of robust UK-based evaluations of prevention interventions and programmes, whether oriented towards alcohol initiation, general substance initiation or later patterns of drinking.

## 2 Implications for policy and practice

### Messages

Children are going to learn about alcohol. The important question for society (and for parents) is 'what messages do we (society, parents) want them to learn?'. To a very large extent, this *is* a societal decision, as well as a family one, given the massive effects that non-family influences have, through direct and indirect media representations.

There is a move within current society to change towards a more 'continental style' of drinking, which would imply teaching young people to drink moderately, at home, with the family, as opposed to getting extremely drunk as a 'rite of passage' to adulthood, and then continuing to expect to drink heavily, as a definition of what makes for a 'good night out'.

The problem, however, with teaching young people to drink moderately, at home, with the family, is that many parents do not drink moderately: instead what is taught (usually by observation of parents' behaviour) is heavy home drinking: there has been a significant rise in the numbers and proportions of adults who drink over recommended limits, with much of that drinking occurring in the home. What is taught, then, by observation, to children and young people in many families, because they see adults drinking so heavily, is that drinking to excess in the home is very allowable, which leads to (or certainly normalises) these young people replicating this behaviour in other contexts (binge drinking away from home). Hence, Seljamo *et al.* (2006) found that fathers' current heavy drinking was the best predictor of 15-year-olds' heavy drinking, a finding replicated by a recent report by the Substance Abuse and Mental Health Services Administration (SAMHSA, 2009).

Hence, whatever we teach about drinking has to be coherent and consistent, and currently it is not. At present, young people receive a huge range of mixed messages, from home, school and society in general, which leads many of them to

be very confused. In both the UK and the US too, mixed messages are conveyed to children and adolescents about alcohol use, often via various media sources (for example, drinking alcohol is often glamorised by rock stars and is associated with major sporting events in both the UK [eg the football leagues are sponsored by alcohol companies] and the US [such as the Super Bowl]). In the US, many television advertisements convey the message that drinking alcohol is a component of being popular among friends and is central to attracting that 'special someone' in your life. It has been estimated that children in the US will see alcohol consumed an average of 75,000 times (via television, movies and personal observation) prior to reaching the legal drinking age. In addition, in both the UK and the US, many parents allow their underage children to drink alcohol. Therefore, even though alcohol use among children and adolescents is illegal by societal standards, in practice such messages are poorly conveyed and enforced, and experimentation with alcohol use among adolescents is not surprising.

In fact, the only very clear and unambiguous message that young people get is the expectation that young people *will* drink, and that (from the media) most will drink excessively/binge. Given this, it is not too surprising that many of them do so! This probably contributes to the shift that has occurred in young people's expectations of what they think that their own behaviour should be, and their understanding of what the norms for young people's drinking behaviour actually are. There appears, for many young people, to be a general expectation, a new cultural norm, even a cultural definition of what constitutes leisure, such that 'having a good time' has become synonymous with excessive drinking, and even drinking to oblivion.

## What needs to be done: more than teaching about alcohol

### Young people at particular risk

Recent guidance has made a good start at suggesting what should be done for especially vulnerable and disadvantaged children and young people. Guidance from the National Institute for Clinical Excellence entitled *Community-based interventions to reduce substance misuse among vulnerable and disadvantaged children and young people*<sup>8</sup> (NICE, 2007) recommends that all vulnerable and disadvantaged children and young people aged 11–16 and assessed to be at high risk of substance misuse, and all parents or carers of these children and young people, should be offered a family-based programme of structured support for over two or more years, drawn up with the parents or carers of the child or young person and led by staff competent in this area. It recommends that the programme should include at least three brief motivational interviews each year aimed at the parents/carers, and that programmes should assess family interaction, offer parental skills training, encourage parents to monitor their children's behaviour and academic performance, include feedback, continue even if the child or young person moves schools, and offer more intensive support (for example, family therapy) to families who need it.

It further recommends that, for children aged 10–12 who are persistently aggressive or disruptive and assessed to be at high risk of substance misuse, they should be offered group-based behavioural therapy over one to two years, before and during the transition to secondary school. It says that sessions should take place once or twice a month and last about an hour, and that each session should focus on coping mechanisms such as distraction and relaxation techniques, and should help to develop the child's organisational, study and problem-solving skills, and involve goal-setting; and that their parents or carers should be offered group-based training in parental skills. It recommends that this should take place on a monthly basis, over the same time period, and should focus on stress management, communication skills and how to help develop the child's social-cognitive and problem-solving

skills, and should advise on how to set targets for behaviour and establish age-related rules and expectations for the child.

### What about children and young people who are *not* especially vulnerable and disadvantaged?

The guidance from the National Institute for Clinical Excellence is helpful, but it is part of a paradigm that suggests that substance-misuse problems occur to problem people (in this case, especially vulnerable and disadvantaged children) as opposed to an alternative paradigm that suggests that substance misuse, and especially the heavy and binge drinking of young people, is more a societal than an individual problem. In fact, both paradigms are useful: there are often particular factors (examined in Velleman 2009a, 2009b) – parent, sibling, peer and individual – that make young people more vulnerable to early initiation and subsequent heavy or binge use of alcohol; but there are also broader societal factors that need to be taken into consideration, for example the possible effects of national policy and approaches to alcohol including measures such as taxation, licensing, alcohol promotion and advertising on how young people learn to drink in the UK. Action needs to be taken to deal with both the particular and the societal if the current trend for early initiation and subsequent heavy use of alcohol is to be reversed.

Hence, as well as ensuring that society's messages about alcohol and young people are coherent and consistent, and ensuring that especially vulnerable young people receive specific and particular help, there are a range of other things that need to be done if we want to prevent early and/or excessive alcohol consumption in children and young people. These include:

- *Delay the onset of drinking.* There needs to be a concerted move to alter people's norms, so that they do not introduce alcohol to children at too young an age. This will involve an information campaign, informing people that, contrary to popular opinion, continental drinking styles do *not* involve giving children sips of alcohol at (for example) age 8, and that on the continent, young people tend to start drinking at a much

later age and to drink considerably *less* than in the UK.

The research summarised in Velleman (2009a, 2009b) suggested that children were confused by the mixed messages that they receive, but it is the case that parents are confused as well. Because parents *think* that they know that it is helpful to introduce children to alcohol sensibly and within the parental home as opposed to making it a major 'adult' 'rite of passage', and because they *think* that they know that 'on the continent' parents start their children off young with sips of watered-down wine, they have become confused as to what an appropriate age might be to make this sensible introduction. They need to be helped to realise that, if they consider that it is appropriate for their children to start drinking alcohol at (say) 16 (which it must be recalled is still five years before the legal drinking age across the US), then maybe they might start to introduce their children to sips of wine etc in the family home, with a meal, at the age of 14 or even 15, not at the age of (say) 8.

Of course, in many cases, children will have had alcohol before this (eg for religious reasons, or sips of alcohol at family celebrations such as weddings or Christmas), but children are very adept at separating out behaviour in different contexts, so drinking alcohol as part of religion or special occasions will easily be seen as very different from any form of regular drinking.

It is also the case, as Harnett *et al.* (2000) pointed out, that drinking styles at any age are transitional, and that most young people pass through from one style to the next as a form of social development. Nevertheless, there still needs to be a realignment of social norms about drinking such that both young people and adults expect drinking to start at an older age and expect drinking to excess to be a rare event, not a 'normal' one.

- *Parents therefore need to be helped* to realise that it is a good thing to delay the onset of drinking, and that there are things (such as not introducing alcohol too early) that they can do. This links with the *teaching of norms*, and with *altering those norms*, so that people (parents, journalists) realise that it is not helpful to start

their children off with sips of alcohol at too young an age.

This also links with the recent suggestion by Srabani Sen, at that time the chief executive of Alcohol Concern, that the legal drinking age in the UK should be raised from 5 (its present level) to (say) 15. Her point, lost on the furore following that suggestion, was that parents need clear guidance over what is an appropriate age to start their children drinking, and that children also need clear guidance over this; and the best way of informing everybody about what they are expected to do (the best way of altering the drinking norms away from the current pressure to drink at too young an age, and towards delaying onset of drinking until much later) is to enshrine this in law – not so that parents of children can be prosecuted if they do not obey, but to send as clear a message as possible to the whole country. (Clearly, any such law would also need to allow for alcohol's use in religious rituals as a separate case.)

- As well as changing parents' behaviour, work needs to be done to *change children's and young people's norms about drinking*. Some of the discussion above has used the term 'binge drinking', but in fact most young people do not see themselves as 'bingeing' or 'drinking riskily' or in fact doing anything abnormal (Coleman and Cater, 2007; Griffin *et al.*, 2007; Hackley *et al.*, 2008; Szmigin *et al.*, 2008).

Coleman and Cater (2007) looked, using individual in-depth interviews and a number of focus groups, both at how young people construed their own drinking and at what they thought could usefully be done to change the culture of young people's binge drinking. They found that, on the whole, most young people did not classify themselves as binge drinkers, with drinking considered to be part of a normal and fun existence.

In terms of what they thought would work to stop binge drinking, responses included shock tactics that young people could relate to (eg experiences of peers rather than 'diseased livers'), witnessing and reflecting on antisocial and embarrassing behaviour, acknowledging the likelihood of regretted sexual experiences and

greater enforcement of not purchasing alcohol when drunk. Coleman and Cater suggest that ways to change these cultural norms of binge drinking (which is not even recognised as such by the young people doing it) might include changing the definition of a binge away from a number of units, towards something more understandable such as being based on being drunk; and developing interventions to change norms that are youth-, culturally and ethnically specific. The key issue, they suggest, is that the messages in any intervention must be ones that young people can identify with.

They also stated that the young people they interviewed consistently mentioned the acceptance of being drunk in public settings. This implies that the tightening of laws over ejecting people from bars, clubs and pubs due to drunkenness needs to be revisited. The issue here is not that the legislation needs to be in place, rather that this legislation requires greater support and enforcement.

This issue of young people not seeing themselves in the way that they are described by others (eg a binge drinker) is important. Szmigin *et al.* (2008) looked at marketing communications that present drinking as a crucial element in 'having fun', and as an important aspect of young people's social lives. Their empirical study involved analysis of focus group discussions and individual interviews with young people aged 18–25 in three areas of Britain: a major city in the West Midlands, a seaside town in the South-West of England and a small market town also in the South-West. They argued that the term 'calculated hedonism' better described the behaviour of the young people in their study and in particular the way they managed their pleasure around alcohol, than the emotive term 'binge drinking'.

Similarly, Hackley *et al.* (2008) argue that the current focus on 'binge drinking' risks isolating young people as both cause and effect of the alcohol problem, which thereby places an unrealistic burden of responsibility on local communities and agencies. These writers conclude that alcohol policy requires a more substantive, clearly specified and evidence-based approach, which acknowledges the complexities of the situation and allocates responsibilities in a more focused way, in particular addressing the significant

role of drinks manufacturers, the retail trade and the marketing and advertising industry.

All of this is correct; yet it is still the case that children's and young people's norms about what constitutes 'normal drinking' need to be altered. A recent nationwide (UK) survey carried out with 1,491 9- to 11-year-olds asked the children about their perceptions of adult drinking ([www.lifeeducation.org.uk/newsletter/newsindex.php?action=publicarticle&id=372](http://www.lifeeducation.org.uk/newsletter/newsindex.php?action=publicarticle&id=372)). Almost a third of the children (30%) thought that for adults who drink wine, drinking five or more glasses of wine in one night is normal drinking behaviour. Over a quarter of the children (27%) also thought that people who drink beer would normally drink four pints or six bottles in an evening. If one third of children believe that normal drinking constitutes drinking at levels that are categorised as binge levels, it should not be surprising that so many young people also do the same when they start drinking in more 'adult' ways.

All of this links in with the material reviewed above on altering social norms (Hansen and Graham, 1991; Palmer *et al.*, 1998; Wynn *et al.*, 2000), which showed that pupils' overestimation of how common drinking was among their peers and among adults was related to their excessive drinking, and that programmes that focused on correcting normative beliefs reduced alcohol, tobacco and cannabis use.

- *At the time children start drinking, parents should provide the alcohol for them.* Although parents should not provide alcohol to their children when they are too young, in that it serves to encourage earlier onset of drinking, it is helpful if they do so when children are actually starting to use alcohol. Bellis *et al.* (2007) found that being bought alcohol by parents was associated with both lower bingeing and less drinking in public places. They concluded that parental provision of alcohol to children in a family environment may be important in establishing child–parent dialogues on alcohol and in moderating youth consumption. They make the point, however, in line with the recommendations above, that this will require supporting parents, to ensure that these parents develop only moderate drinking

behaviours in their children and only when appropriate.

The task is to replace the cultural norm of (and therefore the resulting peer support for) bingeing and other forms of drinking dangerously, with positive parental role models for sensible alcohol consumption. This may include teenage children drinking alcohol with their parents during meals or elsewhere, in moderation, in order to educate them about alcohol use.

Given this weight of evidence, the recent Chief Medical Officers' guidance for parents and children, issued for consultation in January 2009, is to be welcomed (CMO, 2009). That guidance recommends five points:

- An alcohol-free childhood is the healthiest and best option. If children drink alcohol, it shouldn't be before they reach 15 years of age.
- For those aged 15–17, alcohol consumption should always be with the guidance of a parent or carer or in a supervised environment.
- Parents and young people should be aware that drinking, even at age 15 or older, can be hazardous to health and not drinking is the healthiest option for young people. If children aged 15–17 consume alcohol, they should do so infrequently and certainly on no more than one day a week.
- The importance of parental influences on children's alcohol use should be communicated to parents, carers and professionals. Parents and carers need advice on how to respond to alcohol use and misuse by children.
- Support services must be available for children and young people who have alcohol-related problems and their parents.

In line with the conclusions of this present review, the guidance aims to support parents, give them the confidence to set boundaries and help them engage with young people about drinking and risks associated with it. Encouragingly, the results of the consultation, published in July 2009 (DCSF, 2009),

show that there is a broad base of support for these guidelines. Over 26,000 responses were received to the consultation, with a large proportion of the responses coming from young people themselves as well as from parents. These responses show that parents and young people mostly agree with the Chief Medical Officers' guidance, which suggests that young people should not consume alcohol under the age of 15 and that between 15 and 17, any alcohol consumption should be with the guidance or supervision of parents and carers. There was a broad level of agreement over there being a clear need for government advice and information for parents; and respondents were very clear that government had a role to play on the issue and that parents were keen for more support and information.

- Parents need to do more than simply work on their children's drinking behaviours. As well as this, *parents need to be encouraged to create a strong family life* and family bonds, family values and family concern, family rules and family supervision, and a balance between family care and family control. The reviews in Velleman (2009a, 2009b) have demonstrated the wealth of evidence that shows that this is the clearest way of both delaying onset (outside of home) and ensuring that drinking, once started, will be less excessive, and less likely to lead to longer-term problems. The focus on these elements is the main reason that the SFP, and other family-oriented programmes, seem to work.
- As well as encouragement, *parents may need actual help*. One suggestion might be that family programmes are not only offered and delivered to vulnerable families as per the guidance from the National Institute for Clinical Excellence, but to everyone – *a universal prevention programme*. Almost all of the research reviewed in Chapter 2 on family factors, and in the reviews of influences on how young people learn about alcohol (Velleman, 2009a, b), shows that these are vital, and yet many parents and families will be less than perfect on every one of those family factor dimensions. In a way, that is similar to the clash of paradigms related to 'problem families' versus 'societal ills' as the

cause of early-onset drinking and problems. At present there is a dichotomous division between 'problem families' and 'non-problem families'; but in reality there is an immense continuum along which all families and parents will lie, with a relatively arbitrary cut-off deciding on who is 'a case', a 'problem family'. In reality, almost all families and parents will have deficits on at least some of these family factors, and parenting skills training and family management intervention strategies are the things most likely to delay adolescent alcohol initiation and prevent later misuse.

- *Such universal prevention programmes need to be started young*, not when families are starting to consider how to prevent teenage drinking. As Kaplow *et al.* (2002) showed in their study of early-onset drinking, preventative interventions aimed at influencing the children through their parents need to be started when children are very young. Kaplow *et al.* found that children with none of the risk factors that they had identified when the child was aged 3 had less than a 10% chance of initiating substance use by age 12, whereas children with two or more risk factors at age 3 had greater than a 50% chance of initiating substance use by age 12. Assisting parents to develop these effective parenting and family management skills when families are new and children are young will mean that they become embedded as the normal way that the family works and interacts, and that the family does not have to unlearn old and less helpful ways of working. Enabling families to function better throughout a child's life will not only help delay initiation into alcohol use, it will also assist in preventing a wide range of other children's problems that are associated with less optimal family functioning.
- *Alcohol purchasing.* Another way in which cultural norms about age of onset and regularity of excessive drinking have been derailed is that the expectation of early drinking is not only held by children themselves and by their parents, it is also condoned or colluded with by society as a whole: it is remarkably easy for young people

(even very young ones) to be able to purchase alcohol.

Although under-18s cannot normally buy alcohol legally, the Youth Lifestyles Survey in 1998/99 found that 63% of 16- to 17-year-olds, and even 10% of the 12–15s, who had drunk in the previous year, usually bought their alcohol themselves. Only a third of under-18s who tried to buy alcohol reported that retailers had refused to sell to them on at least one occasion in the previous year. The most popular places where under-18s try to buy alcohol are pubs, bars and nightclubs and they are normally successful (Harrington, 2000).

Ten years on from the 1998/99 survey, this is still happening. A 2006 Home Office report (Home Office, 2006) suggested that around 13% of 10- to 15-year-olds who had drunk alcohol in the previous year had tried to buy alcohol (illegally) from a shop, and 11% from a bar or a pub. For 16- to 18-year-olds, the figures rose to 47% and 59% respectively. The report also suggested that most of those who had attempted to buy alcohol illegally had been successful at least once, and some had been successful much more frequently. In 2007, one newspaper reported that:

*Police have expressed disappointed after half of the premises they tested in Leicester sold alcohol to people aged under 18. Two off-licences, five bars and one restaurant in the city centre sold alcohol to an underage mystery shopper during recent test purchases. Each salesperson was issued with an £80 fixed penalty notice. Officers said they were talking to managers at the premises concerned to see if further action would be taken. Pc John Webb, said: 'It was very disappointing to see so many businesses still selling alcohol to someone who is so obviously under the age of 18. Hopefully the message is now getting through to licensees and their staff that the sale of alcohol to under-18s will not be tolerated.'* A 15-year-old boy and a girl, 16, visited 18 premises as part of the police operation.

(BBC, 2008)

This is not an isolated case: recent government figures (Underage Sales, 2007) show that 40% of

licensed premises from a sample across England and Wales failed to ask for identification on the first visit by the inspection team (although that percentage reduced on a second visit following an official warning, and reduced further on a third visit). There certainly is an argument to be made that, by continually failing to prosecute those shops that do sell alcohol to minors, society has allowed a culture of impunity to form, and has contributed to the cultural norm that drinking by children and young people is allowable.

As the Schools Health Education Unit has reported (SHEU, 2007, p 61), the off-licence remains the most important source of purchased alcohol, especially for 14- to 15-year-olds, followed by the supermarket. As it commented when considering its results:

*This is of course illegal, but they [ie the young people surveyed] still keep telling us they are able to make such purchases. All the cigarettes, alcohol and drugs used by young people are ultimately obtained from adults.*

(SHEU, 2007, p 61)

This relates to the wider issue of alcohol and its availability to children (Ogilvie *et al.*, 2005). Ogilvie *et al.* show that alcohol is widely available for sale, and that the real price of alcohol in the UK has halved since the 1960s, with consumption by adults rising in parallel with increasing affordability and increasing density and opening hours of sales outlets. They also cite evidence showing that around 80% of 15-year-olds in the UK perceive alcoholic drinks to be very or fairly easy to obtain. Although the under-18s may not legally buy alcohol in most circumstances, only around half of 12- to 15-year-olds who have consumed alcohol never buy it: all the rest have and do buy alcohol. Ogilvie *et al.* discuss a number of ways of controlling the availability of alcohol to young people, including price, licensing and sales. With *price*, they state that demand for alcohol is price-sensitive with, in the UK, a 10% increase in price being estimated to reduce demand for beer by about 5% (for drinking on the premises) or about 10% (in off-licences), for wine by about 8% and for spirits by about 13%. Ogilvie *et al.* suggest that some, but not all, reviews have concluded that young people may be more

sensitive to price than older adults. With *licensing*, they argue that several controlled and uncontrolled studies in Nordic countries with state alcohol monopolies have shown that major relaxations in controls on beer strength or sales outlets were followed by increases in alcohol consumption (and, in one study, drunkenness and alcohol-related hospital admissions), or conversely that consumption fell after controls were reintroduced. US studies have also shown an association between outlet density, alcohol consumption and fatal road crashes. However, they say, the effects of marginal changes in availability when alcohol is already widely available are much less clear. With *sales*, they show that two systematic reviews of controlled before-and-after studies have concluded that raising the minimum purchase age reduces consumption and alcohol-related road crashes among young people; and that enforcement substantially increases the effectiveness of the law. Most evidence comes from US studies of varying the minimum purchase age within the range 18–21, but one Danish study has also shown a decrease in consumption and drunkenness following the introduction of a minimum purchase age of 15 for beer where previously there had been none. Intensive staff training coupled with rigorous enforcement can reduce under-age sales and intoxication among customers. Unenforced voluntary codes of practice have not been shown to be effective.

The issues of price and availability and their twinned effects on young people's purchasing, and on the implicit agreement society provides for young people's drinking, is taken up by Alcohol Concern in its report, *Cheap at twice the price: Young people, purchasing power and alcohol* (Alcohol Concern, 2007). In this report it shows that children's pocket money has increased by 200% over the last 20 years, and that it now costs less than an average week's pocket money to buy *three or four times* (depending on whether one uses male or female adult limits) the recommended *adult* limit of alcohol in some supermarkets. It shows that the average pocket money in 2007 for 12- to 16-year-olds was £9.53. A combination of rising disposable income and stable alcohol prices means that alcohol is now 65% more affordable to buy than it was 20 years ago.

In November 2007, Alcohol Concern collected price information from random branches throughout London of the supermarket chains that had most frequently failed the Home Office's 2006 test purchasing campaign. The aim was to discover how far a teenager's allowance could actually go for those who manage to buy alcohol, either in person or through a proxy. For those who are successful, very low prices enable them to buy as much as three times the daily recommended limits for *adult* men and more than four times the recommended limit for women. Alcohol Concern says that the results from the 2006 test purchasing campaign:

*make it clear that despite some progress, many young people are still able to buy alcohol from supermarkets. For those that are successful, very low prices enable them to buy as much as 4 times the adult, daily recommended limits for their Friday and Saturday night revels.*

(Alcohol Concern, 2007, p 7)

It also makes the point that, as well as the inadequate systems in some premises that permit young people to buy alcohol illegally, a large proportion of young people buy their alcohol through (presumably older) friends and relatives, and there may be scope to more actively enforce the laws meant to prevent this practice.

Nevertheless, Alcohol Concern concludes that, regardless of whether the young person buys it themselves or through a proxy, the fact that they can source large quantities of alcohol for less than £10 remains one of the major reasons why children and young people continue to consume increasing volumes of alcohol.

All of this is corroborated by Bellis *et al.*'s (2007) study of the predictors of risky alcohol consumption in schoolchildren, where they surveyed 10,271 15- to 16-year-olds, 88% of whom drank alcohol. Of the drinkers, 38% usually binged when drinking, 24% were frequent drinkers and 50% drank in public settings (streets and parks, but also bars and clubs). They found that binge, frequent and public drinking were all strongly related to *expendable income* and to *children and young people buying their own alcohol*, as were obtaining alcohol from friends, older siblings and adults outside shops.

It is difficult not to conclude that the real cost of alcohol to young people (a combination of reductions in real price and increases in real income/pocket money) is another key factor in determining whether or not young people drink, and drink to excess. Bellis *et al.* also conclude that:

*eradicating underage alcohol sales and increased understanding of children's spending (are) key considerations in reducing risky alcohol use.*

(Bellis *et al.*, 2007, p 1)

All of the issues discussed within this section require a coherent National Alcohol Policy that pulls together the research and then suggests policy and practice interventions, as has been done above. Until very recently, the UK National Alcohol Strategy failed to do this. For example, within current National Alcohol Strategy (Safe, Supportive, Social) (DH, 2007) the word 'prevention' is mentioned only eight times: three of these are about 'crime prevention', one is about a proposed review of National Health Service spending, which it is hoped will inform 'smarter spending decisions, driving local investment in prevention and treatment' (DH, 2007, p 7), one is about the prevention of underage sales, one is about the responsibilities of strategic health authorities to ensure that 'health services are commissioned according to need, with a focus on prevention through to healthcare and in partnership with social care' (2007, p 67), one is about the Young People Substance Misuse Grant, and the final one is about how a proposal made in the 2004 National Alcohol Strategy for research to be commissioned 'to review the evidence base for the effectiveness of interventions on alcohol prevention for children and young people both inside and outside the school setting (including youth and leisure facilities)' has been deferred pending the publication of two reports on the findings of the Blueprint research programme, which aimed to ensure that future provision of alcohol education in schools addresses attitudes and behaviour as well as providing information. Furthermore, the National Alcohol Strategy backs away from developing further restrictions on alcohol advertising and it continues the idea of using only voluntary codes of practice with the alcohol industry.

On the other hand, the Strategy does state that a key task is to provide:

*Trusted guidance for parents and young people: authoritative, accessible guidance about what is and what is not safe and sensible in the light of the latest available evidence from the UK and abroad.*

(DH, 2007, p 7)

and it further states that:

*The Government will adopt a new national leadership role in which it will challenge the attitudes and practices that underlie cultural attitudes towards alcohol, and it will back this up with a series of marketing campaigns to raise public awareness of the risks associated with drinking too much.*

(DH, 2007, p 58)

In the last two years, there have been moves to further develop these more positive ideas, with the production of both the Draft Guidance issued by the UK Chief Medical Officers (CMO, 2009) and the Youth Alcohol Action Plan (DCSF, 2008). The Youth Alcohol Action Plan focuses on five priorities:

- stepping up enforcement activity to address young people drinking in public places;
- taking action with industry on young people and alcohol;
- developing a national consensus on young people and drinking;
- establishing a new partnership with parents on teenage drinking;
- supporting young people to make sensible decisions about alcohol.

Alongside this, the ministerial Foreword to the revised National Alcohol Strategy states that:

*We will challenge the idea (among some of the population) that drunken antisocial behaviour is acceptable or normal. For the*

*first time, we will publish clear guidelines for parents and young people about the effects of alcohol and what is not safe and sensible.*

(DH, 2007, p 1)

and as noted above, the Draft Guidance does this.

Further recommendations to start to deal with the issues raised in this section include:

- an increased use of test purchasing and greater investment in policing underage sales;
- increased enforcement of immediate and severe penalties for every individual or establishment found to be selling alcohol to young people;
- universal adoption of age checks for individuals purchasing alcohol who look under 21;
- advice to parents about monitoring the income and expenditure of children so that there is a better understanding about how much money children have and whether it is being spent appropriately.

## Future research needs

Although there has been a great deal of material examined for and cited within this review, many questions still remain unanswered. Some of them are:

- Is drinking behaviour in particular social and economic contexts influenced by cultural norms and processes and if so, how?
- What has drinking alcohol come to represent to those sharing an ethnic identity?
- The following three issues should be addressed by ethnographic research. What is the role that cultural institutions, values, and processes play in:
  - protecting against excessive drinking in the general population, as well as particular patterns of drinking among males and females;

- fostering drinking as a normative behaviour within particular gender and age cohorts; and
  - affecting the distribution of particular drinking trajectories (eg early- versus late-onset of drinking, drinking characterised by rapid versus slow escalation, etc)?
- This ethnographic analysis would serve as a complement to assessments by researchers who examine intra-ethnic group differences by examinations of social class, education, residence, racial segregation and acculturation (although there has been remarkably little of this to of research too, within the UK).
  - Parenting styles and respect for elders (especially within minority ethnic groups) are two variables highlighted in the US as important factors influencing smoking behaviour. Beyond noting that these factors may also affect drinking uptake and age of initiation, we need to consider how and in what ways they affect young people once they begin drinking.
  - In addition to examining the influence of family and peers it might be useful to focus attention on the influence of other role models. For example, among many different ethnic groups, senior women (mothers, grandmothers and extended kin) often, but not always, act as effective role models for the young as providers and survivors.
  - Another issue worth considering is how core cultural values affect drinking behaviour once drinking has started. For example, the importance accorded to social exchange and reciprocity within different ethnic groups may be an important factor to investigate.
  - Similarly, cultural values may influence peer group norms and boundary-setting related to alcohol use. It may be that peers sometimes play a dual role in both encouraging drinking uptake and also limiting where, when and how much friends drink; that is, they are at once a risk and a protective factor that may affect drinking trajectories. The role of peers in establishing boundaries for acceptable behaviour has also been noted. An issue worth exploring is whether peer relations vary within different ethnic groups such that friends are more or less likely to act as boundary-setters circumscribing the behaviours of peers, in relation to alcohol.
  - What is the impact of aesthetics and style as important cultural factors influencing drinking, because they are often associated with ethnic identity? Do boys and girls within different minority ethnic groups see using alcohol as enhancing or detrimental to their drinking, in comparison to mainstream White boys and girls? Is drinking equated with style?
  - Although sociocultural events and traditional ceremonies or festivities such as Christmas, football matches, alcohol within religious ceremonies, etc) are clearly an important part of the socialisation process within any culture and subculture, there is no research clarifying the specific part that they play as influencing children's learning, attitudes and behaviours.
  - What are the important family/community contexts and environments that influence children's experiences (eg growing up in families with a drinking/drug problem; 'excluded' families; teetotal families; families or communities with specific religious and cultural beliefs about alcohol; 'deprived' communities, etc)? Although a lot is known about the specific influence of growing up in families with a drinking/drug problem (eg Velleman and Orford, 1999), much less is known about most of the other areas.
  - Research into the important outcome variables needs to be undertaken. There is no single outcome measure of youth drinking behaviour that is used in evaluation studies, and no clear understanding of which outcome measures are important predictors of alcohol misuse, morbidity and mortality in later life (Foxcroft *et al.*, 2002).

- There is a need to fill the current evidence gap in interventions to reduce alcohol misuse in young people.
- There is a clear need for more research into prevention approaches in the UK. One major difference between the UK and the US is in the existence of national bodies dedicated to substance-use research. The National Institute on Drug Abuse, the National Institute on Alcohol Abuse and Alcoholism, the Center for Substance Abuse Prevention (and there are many others in the US) have no precedents in the UK. Even much of the good practice that is occasionally supported by new government funding or directives to others such as primary care trusts or local authorities to assist in funding do not support research or even the evaluation of outcomes.
- A review by *Jones et al.* (2007b) identified major gaps in research for most of the groups they identified, and in particular, young people who are (or have been) looked after by local authorities or in foster care; young people who are (or have been) homeless or who move frequently; school excludees and truants; young people involved in commercial sex work; young people with behavioural conduct disorders; and young people with mental health problems. For some of these populations there is adequate substance-use service provision, and research is therefore needed into the effectiveness of existing approaches. However, for most populations, basic levels of specialist substance use service are required before evaluation research can proceed. *Jones et al.* also argue that additional work is also needed to address the gaps in evidence for the majority of secondary outcomes, in particular: identification of the characteristics of an effective intervention facilitator; the engagement of young people in interventions; implementation of interventions; wider health inequalities; stigmatisation of substance users; and community cohesion.

## 4 Conclusion

In many ways, the conclusions of this review are similar to those reached by Newburn and Shiner (2001), who highlighted three general approaches to be taken: education; the management and supervision of the 'transition' to drinking outside the home; and changes in the licensing laws, and they make a number of useful suggestions as to how each of these approaches might be undertaken, especially in relation to licensing.

What is clear is that understanding how young people learn about and acquire their attitudes, expectations and intentions towards alcohol are key to thinking about how to change early initiation and subsequent problematic patterns of alcohol consumption. It is equally clear that this learning and acquisition is influenced by a wide range of interrelating major factors: economic and policy factors, media influences, community factors, peer influences and familial factors, all of which impact on young people's initiation into and then subsequent behaviour towards drinking.

Again, it is quite clear that changing the way that young people and their parents and society think about normative behaviour towards alcohol is a major task, and will only be achieved by intervening on multiple levels, as indicated above. The family has a major role to play, and the state has an equally major role in supporting them and providing universal prevention programmes to do that. But the state also has another major role to play, in intervening in the areas of price, availability and accessibility.

The fact that efforts will need to be made at multiple levels within society should not be surprising. As Cook (2003) notes, individuals live in multiple social contexts simultaneously, whether they be family, peer, neighbourhood, school or work contexts. In individual lives, it is likely that the forces within any one context that promote healthy human development are correlated with whatever causal forces operate to the same end in other contexts. That is why it is important to consider social contexts, but in combination.

What is needed is an integrated, planned and implemented community prevention system, which draws together what is known about effective parenting training programmes, organisational change programmes in schools, classroom organisation, management and instructional strategies, classroom curricula for social and emotional competence promotion, multi-component programmes based in schools, community mobilisation, community/school policies, enforcement of laws relating to underage purchasing and selling alcohol to intoxicated people, altering community and cultural norms so that drunken comportment behaviour is not tolerated (and certainly not encouraged), and how to effect policy changes with respect to price, availability and accessibility, and to implement them in a planned fashion. Indeed, there is evidence (Hawkins *et al.*, 2002; Mistral *et al.*, 2007; Thom and Bayley, 2007) that, if integrated multi-component programmes are undertaken, then outcomes can be much superior, and the programmes can be very effective, although there have been no research projects funded to allow for evaluations of sufficient power to test these ideas in a UK context.

# Notes

- 1 Intention has been shown to be a good predictor of drinking (Velleman, 2009a, 2009b).
- 2 This is the number of people who would need to receive an intervention in order for one person to show positive effects (or in medical terms, the number of patients who need to be treated to prevent one adverse outcome). It describes the difference between treatment and control conditions in achieving a particular clinical outcome. It can be used to describe any outcome where event rates are available for both treatment and control.
- 3 That is, nine young people would need to receive the intervention in order for one person to show these positive effects, four years later, compared to controls.
- 4 A 'universal' prevention intervention is one that targets an entire population without regard to their specific risk of the thing to be prevented; a 'selective' intervention targets those who have a heightened risk of the thing to be prevented (eg in this scenario, children of problem-drinking parents); and an 'indicated' intervention targets those who are already showing signs of problems (eg in this scenario, young people already drinking heavily).
- 5 These programmes aim to address direct and indirect pressures to use substances. They usually involve the practice of resistance and other skills, which young people need to effectively negotiate adolescence and deal with social influences.
- 6 Defined as those schools that offered enhanced educational support and greater levels of control.
- 7 Planners were students who 'self-selected to plan one or more activities in 7th and/or 8th grade – and if so, how many activities s/he planned. Planners were considered separately from those who participated, given a previous study that showed differential intervention effects for these two groups' (Stigler *et al.*, 2006, p 272).
- 8 The National Institute for Clinical Excellence defines vulnerable and disadvantaged children and young people as including those whose family members misuse substances, those with behavioural, mental health or social problems, those excluded from school and truants, young offenders, looked-after children, those who are homeless, those involved in commercial sex work and those from some black and minority ethnic groups.

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# Appendix 1:

## Brief summaries of key interventions

### Adolescent Transition Program (ATP)

Authors	Dishion and Kavanagh (2000, 2003); Dishion <i>et al.</i> (2002, 2003, 2004)
Country	USA
Brief description	Parent training programme, multi-component, uses family, school and peer components. Selected intervention for at-risk early adolescents. Family-based within a middle school setting
Target group	Middle school students (aged 11–14) and their families
Comments	Randomised controlled trials (Dishion and Kavanagh, 2000, 2003; Dishion <i>et al.</i> , 2002, 2003, 2004) show programme effective in reducing observed negative parent–child interactions; decreases in antisocial behaviour reported by teachers; decreases in youth smoking at one year

### Strengthening Families Program (SFP)

Authors	Spoth <i>et al.</i> (2001, 2002a, 2002b, 2004, 2005, 2008)
Country	USA
Brief description	Community-based programme for parents and children. Originally developed for use with children aged 6–10 with substance-misusing parents. Age range later extended to 14; and for use with children whose parents did not have problems. Designed to develop specific protective factors & reduce specific risk factors
Target group	Originally children aged 6–10, currently mainly children aged 10–14, and their parents
Comments	Extensively tested across different ethnic, sociocultural groups, rural and urban settings, substance misusing parents and non-substance misusing parents. Number of evaluations (eg Molgaard and Spoth, 2001; Spoth <i>et al.</i> , 2001, 2002a, 2002b, 2003, 2004, 2005). Findings include postponement of drinking initiation, lower rates of alcohol, tobacco and marijuana use, fewer conduct problems at school compared with controls

### School Health and Alcohol Harm Reduction Programme (SHAHRP)

Authors	McBride <i>et al.</i> (2003)
Country	Australia
Brief description	Classroom-based harm reduction programme, conducted in two phases over two years
Target group	13-to 17-year-olds with varying experience with alcohol
Comments	Results show that those who were non-drinkers or unsupervised drinkers at baseline became less likely to consume in a risky manner, and that early unsupervised drinkers experience less alcohol-related harm after SHAHRP

### Project Northland

Authors	Perry <i>et al.</i> (1996, 2002)
Country	USA
Brief description	Three-year community-wide multilevel intervention, including school curriculum, parents, teacher training peer leaders, community mobilisations, media campaign
Target group	Children aged 11–12 to 13–14 at intervention
Comments	Significant impact on past month and past week alcohol use in the intervention group compared with control at 2.5 years, but effect had dissipated at four years. Significant reduction in ‘proneness to alcohol, drug and family problems’ at three years

### Life Skills Training (LST)

Authors	Botvin <i>et al.</i> (2001, 2003)
Country	USA
Brief description	Classroom-based substance use prevention programme with booster sessions. Aims to develop resistance skills, self-esteem, self-confidence as well as knowledge
Target group	Children aged 11–12 at intervention
Comments	Evidence of positive effects (Botvin <i>et al.</i> , 2001; Trudeau <i>et al.</i> , 2003). Also evidence of positive effects in younger children (intervention age 8–9) (Botvin <i>et al.</i> , 2003). Strongest evidence in relation to drinking to intoxication and heavy smoking

## Alcohol Misuse Prevention Study (AMPS)

Authors	Wynn <i>et al.</i> (2000)
Country	USA
Brief description	School-based focused on reducing alcohol <i>problems</i> rather than alcohol use, by improving the pupils' ability to identify and resist peer influences. Block of lessons, booster sessions for two years
Target group	Those aged 11–12 at intervention, followed up until 15–16
Comments	Intervention did retard problems but <i>only</i> in the minority who had already drunk without adult supervision, ie those with the greatest alcohol problems

# Appendix 2

Table 1: Risk, protective and resilience factors for children

<p><b>General risk factors</b></p> <ul style="list-style-type: none"> <li>• high levels of family disharmony;</li> <li>• the presence of domestic violence;</li> <li>• physical, sexual or emotional abuse;</li> <li>• inconsistent, ambivalent or neglectful parenting;</li> <li>• lack of an appropriate balance between ‘care’ and ‘control’ in upbringing;</li> <li>• lack of parental nurturing;</li> <li>• a chaotic home environment;</li> <li>• the absence of a stable adult figure (such as a non-using parent, another family member or a teacher);</li> <li>• parental loss following separation or divorce;</li> <li>• sibling’s (lack of) willingness to drink and actual drinking;</li> <li>• material deprivation and neglect;</li> <li>• the family not seeking help;</li> <li>• parent(s) who misuse drugs/alcohol or suffer from mental health problems.</li> </ul>	<p><b>Protective factors (continued)</b></p> <ul style="list-style-type: none"> <li>• a good support network beyond this;</li> <li>• low levels of separation from the primary carer in the first year of life;</li> <li>• positive family environments;</li> <li>• characteristics and positive care style of parents (a balance between the two dimensions of ‘care’ and ‘control’, where ‘care’ includes parental support, warmth, nurturance, attachment, acceptance, cohesion and love; and ‘control’ includes parental discipline, punishment, supervision, and monitoring); this balance means being responsive, expecting a lot from their children, but also being authoritative (as opposed to permissive, authoritarian or indifferent);</li> <li>• utilisation of rules and consequences, including having clear alcohol-specific rules, and experiencing strong parental supervision or monitoring of behaviour related to those rules;</li> <li>• parents having high expectations of them, and clear and open communication of both expectations (in this case about alcohol use or non-use, but also generally for expectations) and potential disapproval if expectations are not met;</li> <li>• parental self-efficacy;</li> <li>• spending significant time together as a family;</li> <li>• parental modelling of the behaviours expected of or wished for from their children;</li> <li>• having family responsibilities;</li> <li>• family observing traditions and rituals (cultural, religious, familial);</li> <li>• being raised in a small family;</li> <li>• larger age gaps between siblings;</li> <li>• having a hobby or a creative talent or engagement in outside activities or interests (such as sport, singing, dancing, writing, drama, painting, etc) – anything that can provide an experience of success and/or approbation from others for the child’s efforts;</li> <li>• successful school experience;</li> <li>• strong bonds with local community/community involvement;</li> <li>• easy temperament and disposition;</li> <li>• self-monitoring skills and self-control;</li> <li>• intellectual capacity;</li> <li>• a sense of humour;</li> <li>• religion or faith in God;</li> <li>• positive opportunities at times of life transition;</li> <li>• living in a community where there is a sense of caring/ mutual protection;</li> <li>• further, much research shows that, if family cohesion and harmony can be maintained in the face of substance misuse (or domestic violence or serious mental health problems), then there is a high chance that the child will <i>not</i> go on to have any problems.</li> </ul>
<p><b>Substance-specific factors for children of substance misusers</b></p> <ul style="list-style-type: none"> <li>• both parents being substance misusers;</li> <li>• substance misuse taking place in the home;</li> <li>• greater severity of the problem.</li> <li>• Parental drug (as opposed to alcohol) problem specific</li> <li>• exposure to and awareness of criminal activity (eg drug dealing);</li> <li>• presence of the child (although not necessarily in the same room) when drugs are taken;</li> <li>• witnessing someone inject drugs and seeing drug paraphernalia (eg lying around the home).</li> </ul>	
<p><b>Risk factors related to the individual</b></p> <ul style="list-style-type: none"> <li>• early age of first alcohol/drug use (not sip);</li> <li>• concurrent use of any substance;</li> <li>• truancy;</li> <li>• having been suspended from school;</li> <li>• perceived poor academic performance;</li> <li>• low future academic expectations;</li> <li>• low commitment to school;</li> <li>• having been in trouble with the police;</li> <li>• poor coping skills;</li> <li>• a lack of religious belief;</li> <li>• friendship with deviant peers;</li> <li>• favouring peer over family opinion; and</li> <li>• conduct or antisocial behaviour problems, at home or at school.</li> </ul>	
<p><b>Protective factors</b></p> <ul style="list-style-type: none"> <li>• the presence of a stable adult figure (usually a non-substance misuser);</li> <li>• a close positive bond with at least one adult in a caring role (including parents, older siblings and grandparents);</li> <li>• affection from members of extended families;</li> </ul>	

(continued)

Table 1: Risk, protective and resilience factors for children (continued)

Substance-specific factors for children of substance misusers	Substance-specific factors for children of substance misusers (continued)
<ul style="list-style-type: none"> <li>• deliberate planning by the child such that their adult life will be different;</li> <li>• high self-esteem and confidence;</li> <li>• a sense of direction or mission;</li> <li>• self-efficacy;</li> <li>• an ability to deal with change;</li> <li>• skills and values that lead to efficient use of personal ability;</li> </ul>	<ul style="list-style-type: none"> <li>• a good range of social problem-solving skills;</li> <li>• aspirations for the future;</li> <li>• the young person feeling that they have/had choices;</li> <li>• the young person feeling that they are/were in control of their lives;</li> <li>• previous experience of success and achievement.</li> </ul>

Sources: DrugScope (1999), Velleman and Orford (1999), Sutherland and Shepherd (2001), Velleman (2003), Mentor (2007), Velleman and Templeton (2007) and this review

Table 2: Developmental assets

EXTERNAL ASSETS	% with assets	EXTERNAL ASSETS	% with assets
<i>Support</i>		<i>Constructive use of time</i>	
1. <b>Family support</b> – family life provides a high level of love and support	64	17. <b>Creative activities</b> – young person spends three or more hours per week in lessons/practice in music, theatre or the arts	19
2. <b>Positive family communication</b> – young person and parents are able to communicate positively	26	18. <b>Youth programmes</b> – young person spends three or more hours per week in sports, clubs or organisations at school or in the community	59
3. <b>Other adult relationships</b> – young person receives support from three or more non-parent adults	41	19. <b>Religious community</b> – young person spends one or more hours per week in religious activities	64
4. <b>Caring neighbourhood</b> – young person experiences caring neighbours	40	20. <b>Time at home</b> – young person is out with friends ‘with nothing special to do’ two or fewer nights per week	50
5. <b>Caring school climate</b> – school provides a caring, encouraging environment	24		
6. <b>Parent involvement in school</b> – parents are actively involved in helping child succeed in school	29	<b>INTERNAL ASSETS</b>	<b>% with assets</b>
<i>Empowerment</i>		<i>Commitment to learning</i>	
7. <b>Community values youth</b> – young person perceives that adults in the community value youth	20	21. <b>Achievement motivation</b> – young person is motivated to do well in school	63
8. <b>Youth as resources</b> – young people are given useful roles in the community	24	22. <b>School engagement</b> – young person is actively engaged in learning	64
9. <b>Service to others</b> – young person serves in the community one hour or more per week	50	23. <b>Homework</b> – young person reports doing at least one hour of homework each school day	45
10. <b>Safety</b> – young person feels safe at home, at school and in the neighbourhood	55	24. <b>Bonding to school</b> – young person cares about their school	51
<i>Boundaries and expectations</i>		25. <b>Reading for pleasure</b> – young person reads for pleasure three or more hours per week	24
11. <b>Family boundaries</b> – family has clear rules and consequences, and monitors children’s whereabouts	43	<i>Positive values</i>	
12. <b>School boundaries</b> – school provides clear rules and consequences	46	26. <b>Caring</b> – young person places a high value on helping other people	43
13. <b>Neighbourhood boundaries</b> – neighbours take responsibility for monitoring young people’s behaviour	46	27. <b>Equality and social justice</b> – young person places a high value on promoting equality and reducing hunger and poverty	45
14. <b>Adult role models</b> – parents and other adults model positive, responsible behaviour	27	28. <b>Integrity</b> – young person acts on convictions and stands up for beliefs	63
15. <b>Positive peer influence</b> – young person’s best friends model responsible behaviour	60	29. <b>Honesty</b> – young person tells the truth, even when it is not easy	63
16. <b>High expectations</b> – both parents and teachers encourage the young person to do well	41	30. <b>Responsibility</b> – young person accepts and takes personal responsibility	60
		31. <b>Restraint</b> – young person believes it is important not to be sexually active or to use alcohol and drugs	42

Table 2: Developmental assets (continued)

INTERNAL ASSETS	% with assets
<i>Social competencies</i>	
32. <b>Planning and decision making</b> – young person knows how to plan ahead and make choices	29
33. <b>Interpersonal competence</b> – young person has empathy, sensitivity and friendship skills	43
34. <b>Cultural competence</b> – young person has knowledge of and comfort with people of different cultural/racial/ethnic backgrounds	35
35. <b>Resistance skills</b> – young person can resist negative peer pressure and dangerous situations	37
36. <b>Peaceful conflict resolution</b> – young person seeks to resolve conflict non-violently	44
<i>Positive identity</i>	
37. <b>Personal power</b> – young person feels control over 'things that happen to me'	45
38. <b>Self-esteem</b> – young person reports having high self-esteem	47
39. <b>Sense of purpose</b> – young person reports that 'my life has a purpose'	55
40. <b>Positive view of personal future</b> – young person is optimistic about his/her personal future	70

Source: Scales and Leffert, 1999

Table 3: Relation of assets to high-risk behaviour

Behaviour	% of young people demonstrating high risk behaviours for each range of assets			
	0–10	11–20	21–30	31–40
Violence	61%	35%	16%	6%
<b>Alcohol use</b>	<b>53%</b>	<b>30%</b>	<b>11%</b>	<b>3%</b>
Antisocial behaviour	52%	23%	7%	1%
Tobacco	45%	21%	6%	1%
School problems	43%	19%	7%	2%
Driving and alcohol	42%	24%	10%	4%
Illicit drugs	42%	19%	6%	1%
Depression	40%	25%	13%	4%
Gambling	34%	23%	13%	6%

Source: Leffert et al. (1998)

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