# Improving school ethos may reduce substance misuse and teenage pregnancy

Current strategies to improve teenage health are not having the desired effect. **C Bonell**, **A Fletcher**, and **J McCambridge** examine the evidence for a wider focus

Substance misuse and teenage pregnancy are major public health challenges. Existing responses generally focus on individual characteristics, such as knowledge and attitudes about substances and sexual risk, rather than wider social and institutional influences, and seem to have brought about only limited benefits. We review evidence suggesting that interventions aiming to promote one such wider influence—positive school ethos—might provide an effective complement to existing interventions.

### Limitations to current responses
School based surveys indicate that a third of 15 year olds in England have taken illegal drugs in the past year and about a quarter use them monthly or more.[1] Among the 40% of 15 year olds who drink alcohol, average weekly consumption is over 10 units.[1] A quarter of 15 year old girls smoke.[1] Teenage **pregnancy** rates in the UK are the highest in western Europe.[2] Early substance misuse and teenage parenthood are associated with subsequent adverse outcomes[w1-w3] and the UK government has made their reduction a priority.[w1 w4-w6]

Trends suggest existing responses have not produced major population benefits. Rates of illegal drug use and drinking continue to rise, and previous falls in smoking have ceased.[1] Conceptions among girls under 16 rose by 1% between 2002 and 2003.[3] This may partly be explained by the narrowness of current responses. Classroom interventions on substance misuse **and sex education aiming to improve** knowledge, develop skills, and modify peer norms are now standard practice in schools.[w6] Although systematic reviews report that such interventions can have positive effects on substance misuse and sexual health, these are small, inconsistent, and generally not sustained.[4-7] Although government policies refer to the links between social disadvantage and young people's health,[w1 w4 w6] they recommend few interventions to tackle wider influences. One such influence on young people's health is school ethos—that is, institutional culture and, in particular, the extent of student engagement and quality of teacher-student relationships.[w7]

### Evidence of school level effects
Although UK studies have noted that schools can add value in terms of examination performance, few have explored effects on health.[w8] West and colleagues did a longitudinal study of the effects of Scottish secondary schools on health behaviour,[8] following 2371 students from the end of primary school (age 11) into secondary school and recording health behaviours at ages 13 and 15. They measured and adjusted for potential confounding arising from students' health behaviours before entry to secondary school, individual and family sociodemographic factors such as parental behaviours and disposable income, and neighbourhood effects. They found that rates of drug, alcohol, and tobacco use were significantly lower in some secondary schools than others.

Although high rates of these behaviours in some schools couldn't be explained by student, family, or neighbourhood factors, they did seem to be explained by large school size and independently rated poor school ethos. Variations were greater for smoking and drinking than for drug use, and stronger at age 13 than age 15. The possibility that these associations may reflect causality is enhanced by their specificity. Positive school ethos and good relationships were not associated with better diets among students, which seemed to be more affected by family factors.[8] There was also some evidence that school effects on smoking were mediated by peer network characteristics.[w9]

This evidence should be treated cautiously because observational studies cannot eliminate confounding. West and colleagues acknowledge that confounding may have occurred at a more local level of neighbourhood than was measured and that confounding by peer group may have occurred. Non-health behaviours that were not assessed may also have contributed to the observed outcomes. However, the argument that positive ethos can affect health is supported by high quality randomised trials in the United States and Australia.[9-11] As well as enabling better control of confounding, these studies also indicate how interventions to improve ethos can practically be delivered.

In the US, Flay and colleagues used a cluster randomised trial to evaluate the Aban Aya youth project, an intervention aimed at reducing substance misuse and poor sexual health as well as violence and truancy among high school students in Chicago.[10] The intervention aimed to enhance students' sense of belonging and social support by setting up a task-force of staff, students, parents, and local residents to examine and amend school policies on substance misuse, behaviour, and ethos; developing links with community organisations and businesses; training

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**SUMMARY POINTS**

Substance misuse and pregnancy among teenagers are major public health problems

Existing responses have largely focused on individual determinants

Wider social influences may have a greater effect on risk behaviour

Interventions to improve school ethos have produced promising results

Such interventions should be piloted and evaluated in the UK

teachers to develop more interactive and culturally appropriate teaching methods; and teaching students about social skills (box 1).

The investigators reported a 34% reduction in a combined measure of alcohol, tobacco, and cannabis use among boys in the intervention schools compared with those in the control group, plus significant benefits regarding condom use, frequency of sex, violence, and truancy. Similar benefits were not reported among girls.

An Australian trial in 26 schools found that students were less likely to report a range of risky health behaviours (such as regular smoking and drinking and marijuana use) in the intervention schools compared with comparison schools, although the differences were not initially significant.[11] The intervention in the Gatehouse project included initiating a school-wide group to review policies about inclusion and health behaviour and implement changes. Other actions included surveys of the health and sense of inclusion among students, an audit of current activities, the deployment of a health expert to act as "critical friend" in encouraging schools to make appropriate changes, and training for teachers on interactive teaching and better classroom management, as well as lessons on social development (box 2).

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**Box 1 | Aban Aya project to improve school ethos**

A cluster randomised trial in 12 schools. Students were followed from entry aged 10-11 to age 13-14.

**Interventions**

- Teacher training to encourage teachers to integrate teaching of social skills (anger management, negotiation, and stress management, etc) into the mainstream curriculum
- Task forces initiated specific activities such as:
  - Mentoring schemes for students experiencing problems
  - School fairs and fieldtrips to promote sense of student connection with school
  - Improving teacher-parent communication

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The non-significant finding may mean that the intervention was ineffective, perhaps because health behaviours were already established at age 13-14, when the intervention was delivered. However, it may be that the intervention took longer than expected to work: a four year follow-up study found a significant protective effect for subsequent cohorts of year 8 students at intervention schools compared with comparison schools for a composite measure of health risk behaviours.

This evidence makes sense. After the family, and alongside the media and peers, the most important

**Box 2** | Gatehouse project, Australia[11]

The intervention was evaluated in a cluster randomised trial in 26 schools. Researchers surveyed students at the beginning of year 8 (age 13-14) and the end of year 10 (age 15-16). Actions varied between schools in order to respond to specific issues identified in school surveys. Actions typically fell into four categories.

**Bullying**
- Amendments to school policies
- Rules developed in consultation with students
- Supervision of risky areas during break times
- Involving parents in development of anti-bullying policy
- Providing parents with information on anti-bullying activities

**Student-teacher communication**
- Training teachers to encourage voicing of and listening to a range of views in classrooms
- Negotiation and display of rules governing teacher and student conduct in classes
- Introducing teacher as mentor programmes for students experiencing difficulties
- Clear and regular teacher-parent communication
- Forming teachers into peer teams to support such changes

**Students' self-esteem**
- Encouraging schools to put more emphasis on positive feedback on student work, sport and social skills
- Displays of student work around school

**Student participation**
- Increasing the number of school committees
- Training student leadership teams to feed in wider views to such committees

institution in the lives of most children and young people is their school. Young people who enjoy school and value qualifications are less likely to view drugs, alcohol, or tobacco as more attainable markers signalling the transition to adulthood.[w10] Young women who feel supported by their schools and confident about their future careers are less likely to view early parenthood as a way of finding meaning and gaining respect from their peers and communities.[w11]

### Scope for action

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. 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. The UK Government Advisory Council on the Misuse of Drugs recently recommended a careful reassessment of the role of schools in preventing drug misuse.[w12] Such an exercise should give specific attention to ethos. Evidence on the influence of ethos is currently more substantial for substance misuse than for teenage pregnancies, and the effect may vary across behaviours.

The UK government already recognises that the whole school environment has a key role in promoting young people's health. The National Healthy Schools Programme—compulsory in all schools by 2009—requires schools to develop positive and supportive environments and encourage student participation in decisions.[w13] This sounds exactly what is required. However, an evaluation of pilot schools provided no evidence that schools were attempting the systematic approaches to improving environment and ethos such

as those described in the US and Australian studies. Schools in the programme still do not receive detailed guidance on how they should improve ethos.[w14] Levels of disaffection in UK schools are currently high. In one study, 18% of 14-15 year olds reported disliking school,[12] and 55 000 pupils miss lessons each day.[w15] There is an urgent need to reverse these trends.

### Conclusion

Improving school ethos to combat disaffection should be viewed as a promising complement to classroom based interventions. A practical intervention package could be developed, informed by the trials reviewed above, that helps UK schools to improve their ethos in order to reduce student disaffection and consequent problems within the domains of health and education. Interventions should target young people as soon as they enter secondary school, if not before, and use school action groups comprising staff, parents, and students to review and revise policies affecting ethos, inclusion, substance misuse, and sexual health. However, the interventions cannot simply be imported from other settings. They need to be carefully tailored and piloted within the UK before being evaluated in cluster randomised trials and fully implemented.

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