How can schools help to reduce the harms of youth substance use? Development of a theoretically-informed whole-school approach

ABSTRACT

Purpose

Substance use prevalence varies considerably between schools, but to date, whole school approaches for reducing substance use have only been moderately effective. This paper develops a novel multifaceted whole school approach to reduce substance use primarily among teenagers aged 11-14 years.

Approach

The outlined approach is premised on the proposal that schools can reduce the harms associated with substance use by promoting school connectedness and improving the school-related experiences of weakly connected and disconnected students. The aim of this approach is to develop students' autonomy so that they may act in their real and long-term interests. This may be attained by promoting the realisation of essential human capacities for 1) practical reasoning - through valued opportunities for cognitive development and 2) affiliation - through valued opportunities for affective development that advance students sense of acceptance within school. Schools may achieve this, it is proposed, by providing outlined forms of appropriate formal support and formal control that are augmented by particular features of school organisation, curriculum and pedagogic practice, which are also described.

Value

The outlined approach may usefully inform the development of future whole school interventions aiming to reduce problematic substance use among school students. Additional potential benefits include more successful student life trajectories.

INTRODUCTION

Substance use (illicit drug use, smoking and drinking) has declined among UK youth over the past twenty years (Fuller, 2014). For some teenagers, substance use is transient, experimental or infrequent and has minimal impact on their lives. However, youth substance use is associated with a wide range of negative short and long-term health outcomes, and this pattern is particularly common among disadvantaged populations. Youth who use illicit drugs are at increased risk of mental health problems (Hall, 2006), self-harm and suicide (Beautrais et al., 1999). Teenage smoking is linked to greater premature mortality among adults (Dunstan, 2012). Pre-teen drinking and excessive teenage drinking are associated with suicidal ideation and attempted suicide (Swahn et al., 2008), unintended pregnancies (Masterman and Kelly, 2003) and criminal activity (Ellickson et al., 2003). Moreover, excessive teenage drinking is associated with truancy, exclusion and lower levels of educational attainment (Masterman and Kelly, 2003) which may negatively affect teenagers' life trajectories especially when they have limiting social, cultural and economic capital. Youth substance use is, consequently, a central UK public health issue (DOH, 2010).

Schools cannot be expected to reverse pupils' social and economic circumstances (Bernstein, 1977) but they do have a duty of care, particularly towards pupils who are vulnerable to problematic substance use because of their home and community environments. The causes of substance use among teenagers including schools are partially understood. However, trials of whole school upstream interventions aiming to reduce teenage substance use have, to date, only been moderately effective (Bond et al., 2004).

This paper develops a novel multifaceted whole school approach based upon the proposal that improving teenagers' school connectedness and school experiences will reduce the harms associated with substance use, including longer-term health inequalities. The primary focus is secondary school students (aged 11-14) who are susceptible to problematic substance use who may also be troubled and/or disaffected but other students are also likely to benefit. The rationale underpinning the proposed approach is outlined. It draws upon factors influencing teenagers' substance use uptake, student agency and school structure.

Why do teenagers use illicit drugs, tobacco and alcohol?

Teenagers are commonly actively involved in decisions regarding substance use (Markham, 2015; Michel and West, 1996) and their decisions to use substances are commonly rational (Jamal et al., 2013). Illicit drug use, smoking and drinking – or abstention from these behaviours – may be used to indicate 'who is the same and who is different' (Markham, 2015) and as markers of status (Jamal et al., 2013). The allure of substance use as an adolescent marker of distinction may have diminished in recent years but it is still an important source of identity and bonding for many teenagers (Milner, 2006). Especially for teenagers in low-income communities who may seek a 'tough identity' to protect themselves (Fletcher et al., 2009a; Paulle, 2013).

School-related factors and experiences that influence youth substance use

Strong evidence indicates that school culture influences substance use. Two Scottish studies found that schools which independent researchers reported had more positive school cultures also had lower substance use prevalence, independently of other

known risk factors (West et al., 2004; Henderson et al., 2008). UK and US longitudinal investigations found that schools with high 'socio-demographic value-added' education scores had lower rates of illicit drug use, smoking, drinking, stealing and gang-related violence (Markham et al., 2008; Tobler et al., 2011). These schools had better examination results and truancy rates than would be expected given the socio-demographic profile of their pupils, which it was argued represented more positive school cultures. Importantly these schools exerted their influence across different contexts, including the extremely socially and economically disadvantaged context of inner city Chicago (Tobler et al., 2011). West et al., (2004) reasoned that schools appear to create increased substance use risk or promote resilience against adopting substance use.

Qualitative research suggests that how students experience school might influence their substance use. For example, less engaged students who perceive school as irrelevant to their lives view their substance use as a hostile act towards school (Devine, 1995; Jamal et al., 2013). Increased pupil substance use is also associated with inadequate student support and protection outside of the classroom (Devine, 1995; Fletcher et al., 2009c) and additionally, an inadequate focus on low achieving students (Bonell et al., 2012). Teenage substance use may also be linked to self-medication and help teenagers to 1) cope with the fear and/or cognitive dissonance arising from witnessing bullying at school (Rivers, 2012) or 2) escape from the stress and anxiety of school life and regular high-stakes examinations (Fletcher et al., 2009b).

Students' relationships with each other and with teachers may also influence substance use. Students may adopt substance use not only to signify opposition within the school context but also to highlight differences between school peers (Milner, 2006). Moreover, teenagers who have poorly developed relationships with teachers appear at greater risk of substance use (West et al., 2004).

The rationale for a new whole school approach

Developing a sense of autonomy is a key developmental milestone in teenagers' lives (Osterman, 2000). Osterman (2000) reasoned that students who have difficulty becoming autonomous are 1) at increased risk of having a weaker sense of identity and experiencing psychological distress and 2) less likely to willingly conform to established norms, be motivated to accept the authority of others, act independently and self-regulate (Osterman, 2000). This paper proposes that the active and rational decisions of teenagers who have difficulty becoming autonomous are constrained by their agency and impaired self-determination, within different social contexts, to act in their real and long-term interests. Teenagers in this position are consequently more likely to focus on short-term goals including peer status rather than long-term goals such as getting a good education and career. They are also at greatest risk of being orientated towards conforming to pro-substance use peer norms - including via the school-related pathways described above. Relatively autonomous students are at reduced risk but may also actively and rationally decide to adopt substance use, for example to signify opposition.

This paper proposes, schools, can protect students who are vulnerable to problematic substance use because their autonomy is constrained. This protection arises when

pupils perceive their school meets their needs, but what are these needs? Markham and Aveyard (2003), drawing upon Nussbaum (1990), reasoned that developing a sense of autonomy depends on realising the essential human capacities for practical reasoning and affiliation. Extrapolating from Markham and Aveyard (2003), this paper reasons that reducing the harms of substance use may arise *specifically* when students perceive their school promotes:

1) Their realisation of the capacity for practical reasoning through valued opportunities for cognitive development, success and advancement.

2) Their realisation of the capacity for affiliation through valued opportunities for affective development that advance their sense of acceptance within school. Acceptance in this context does not necessarily refer to strong friendships with classmates and popularity. Instead it refers to not being widely disliked, having positive relationships with teachers and the majority of classmates and the perception that others care about you (Osterman, 2000).

Schools can meet these student needs by providing extended support opportunities and administering appropriate control (Markham and Aveyard, 2003; Markham 2015). Schools that do this effectively will, this paper reasons, promote student connectedness and improve the school-related experiences of weakly connected/disconnected students. Drawing upon Kellam et al. (1998) and Osterman (2000), this paper reasons that pupils who perceive these needs are not met by their school are prone to disconnectedness, substance use and withdrawal and/or antisocial behaviour and/or aggression.

The provision of appropriate support and control then would aim to promote students' autonomy and agency, student advancement, students' sense of acceptance at school and thereby reduce problematic substance use. This provision would have four objectives. First, to promote students' competence, educational development and attainment by facilitating engagement with the formal/informal curriculum and pedagogic practice. Second, to protect students from intimidation and unhelpful student interactions that impede students' engagement with the formal/informal curriculum (Swinson, 2010),. Third, to promote students' perceptions that their school cares about their well-being by supporting students emotionally and facilitating the development of positive relationships with school-based adults and positive reciprocal relationships with peers. Fourth, to facilitate the development of adaptive coping strategies (Gottfredson, 2002).

Markham and Aveyard (2003), Markham (2015), Osterman (2000) and Waters et al. (2009) offered insights into how schools may provide appropriate support. The provision of appropriate control was identified by drawing primarily upon existing school-based anti-bullying and anti-violence interventions and the US Positive Behavioural Support strategy (Sugai and Horner, 2002) and related strategies. Positive Behavioural Support and related strategies focus on school-wide and classroom discipline systems that are reinforced by individual support systems for unresponsive pupils (Sugai and Horner, 2002). These strategies and anti-bullying/anti-violence interventions are informative for four main reasons.

First, adolescent substance use is strongly correlated with bullying others and being bullied (Nansel et al., 2001) and victimisation from severe violence (Thompson et al.,

2008). Moreover, pupils who bully others are more likely to dislike school and victimised students are less likely to feel accepted by or connected to their school (Forero et al., 1999).

Second, Positive Behavioural Support and related strategies result in positive school/classroom climates and are linked to increased student attainment (Strabstein and Piazza, 2008; Sugai and Horner, 2002) and increased recognition of achievement (Walker and Shinn, 2002). Promoting student competence and advancement, this paper proposes, are key elements of school connectedness.

Third, these approaches result in improved student social behaviour (Mayer et al., 1983) and school-based relationships (Luiselli et al., 2005). The quality of these relationships influences substance use (Devine, 1995; Fletcher et al., 2009a), at least partially, this paper reasons, through students' sense of acceptance and school connectedness.

Fourth, a systematic and meta-analytic review of whole school anti-bullying programmes found they reduced bullying and victimisation by approximately one fifth (Ttofi and Farrington, 2011).

A novel whole school approach to reduce substance use among vulnerable youth
The proposed approach and its potential positive short-term and long-term outcomes are summarised in Figure 1. It focuses on the provision of formal support and formal control which are augmented by initiatives located within the school organisation, curriculum, pedagogic practice (Markham and Aveyard, 2003).

Formal support

Formal support for student wellbeing, learning and the development of positive relationships with teachers would be provided via a strengthened pastoral system (Waters et al., 2009). Ideally a designated teacher would be responsible for the pastoral care of a single class as it moves through the school years. She/he would aim to develop caring relationships tailored to each student's needs that promote students' sense of acceptance, support valued advancement and incorporate student input into problem solving and the development of strategies for self-control.

Formal control

Ordered schools are associated with improved and high attainment (Sammons, 2007). Schools aiming to establish order, maintain control and provide students with a safe environment may implement reactive punitive measures in response to students' antisocial behaviour. The implementation of reactive punitive measures including school detention, suspensions, expulsions and establishing alternate school placements is relatively widespread in England and may be accompanied by authoritarian control. In the US, authoritarian control may incorporate the hiring of security personnel, closed circuit television, metal detectors, high fences and locked doors (Mayer, 2002; Paulle, 2013).

However, reactive punishment-based sanctions and authoritarian control if effective at all, are commonly only effective in the short term (Sugai and Horner, 2002), may even lead to increased aggression and disorder (Mayer, 2002) and/or may negatively affect academic engagement (Sugai and Horner, 2002; Ttofi and Farringdon, 2011).

Additionally, sanctions such as suspensions may be administered inconsistently and/or for relatively minor misdemeanours/transgressions such as non-cooperation (Mayer, 2002). Reactive punishment-based strategies should only be implemented for major transgressions, which are relatively infrequent, including vandalism, possession of weapons, violence or dangerous acts. Moreover, reactive punitive strategies need to be supported by predictable preventive initiatives in order to effectively create long-standing ordered schools with positive cultures (Mayer, 2002; US DHHS, 2001, Walker and Shinn, 2002).

Preventive strategies should focus on a few school-wide and classroom-based rules that are clear, fair, understood by all students, supported by all teachers including senior teachers, applied consistently and reviewed periodically (Mayer, 2002). These rules should include a firm discipline statement and focus on how to behave rather than inappropriate or unacceptable behaviour for example, being prepared, being punctual, being respectful and courteous, requesting assistance when required, undertaking homework and agreeing to get adult help if students are bullied (Mayer, 2002; Walker and Shinn, 2002). Unambiguous sanctions within this framework may include serious talks, being sent to a department head or senior teacher, a change of teaching group for a set period, being made to stay close to the teacher during break times, reporting to the teacher at the end of the day and privilege removal (Swinson, 2010; Ttofi and Farringdon, 2011). Thus, censure and punishments have roles but they must be proportionate, implemented consistently and should not dominate relationships between teachers and students. It is more important to focus on positive relationships which are promoted through positive reinforcement involving praise (Swinson, 2010), recognition of student achievement and rewarding positive

behaviour. Positive teacher feedback is a powerful influence on student behaviour (Hattie and Timperley, 2007).

Interventions that augment this preventive strategy include 1) regular and frequent reviews of student progress which will indirectly promote school connectedness providing students are adequately supported (Gottfredson, 2002) and 2) staff development together with constructive supervisory feedback and teacher training (Gottfredson, 2002). Teachers may benefit, for example, from training in behaviour management (Swinson, 2010). Effective classroom management should be supported by active staff supervision of students in non-classroom settings including lunchtime and playground supervision and the identification of bullying 'hot spots' (Sugai and Horner, 2002, Ttofi and Farrington, 2011). Increasing teacher awareness of bullying including non-physical forms of bullying such as cyber-bullying, verbal attacks and social exclusion (Bradshaw et al., 2007; Cross et al., 2009) is crucial when creating a safe caring school environment.

In order to implement their duty of care, schools would need to develop individualised intensive academic and/or behaviour support plans for some at risk students (Walker and Shinn, 2002). At risk students include those who continue externalising problem behaviours (e.g. aggression, bullying and destruction) and/or internalising problem behaviours (e.g. social withdrawal and depression). Behaviour support plans for these students would be based on functional assessments of the nature of the problem behaviours and the environmental determinants including events/conditions that precipitate and maintain these behaviours (Mayer, 2002; Sugai et al., 2000). Some

students may additionally need therapeutic support from adolescent behaviour specialists (Walker and Shinn, 2002).

School organisation

Key aspects of school organisation that influence student substance use through school connectedness and school-related experiences are 1) the school's external relationships with parents, the wider community and outside agencies 2) teacher and student input into the running of the school and 3) school structure. Hence, parents, outside agencies, all grades of teachers and students should be involved in the development of school-wide and classroom rules, positive behavioural support plans and sanctions (Mayer, 2002; Ttofi and Farringdon, 2011). This approach increases the variability between schools but ensures the procedures are socially and culturally appropriate and durable (Mayer, 2002). It also demonstrates that a wide range of people are accepted, trusted and valued within the school.

Involving pupils' families and the wider community

Newsletters, structured avenues for providing parents with regular feedback on their children's school work and behaviour, and meetings with parents help to endorse the school's expectations concerning educational attainment. They may also help to elicit family support for pupils' engagement with the school's educational processes.

Involving parents in the development and implementation of school-wide and classroom rules positively influences student behaviour (Mayer, 2002). Raising parental awareness about the importance and implications of bullying and victimisation is additionally linked to significant reductions in bullying (Ttofi and

Farringdon, 2011). Moreover, parents commonly feel more engaged with school

when they are included in the school's efforts to reduce bullying (Pearce et al., 2011).

Developing positive relationships between the school and pupils' families/wider

community additionally promotes cultural consistency between the school and the

communities it serves. This increased cultural congruence and community cohesion

may positively influence students' sense of acceptance by their school.

Building relationships with external agencies

Relevant external agencies and professionals include alcohol and drug services,

adolescent mental health services, educational psychologists, health services including

health promotion, social services and the police. Positive relationships with these

agencies/professionals facilitates the development of appropriate school-based rules

and is significantly associated with reduced bullying and victimisation (Ttofi and

Farringdon, 2011). These positive relationships also potentially promote improved

support for troubled students who may also be prone to problematic substance use

through two main routes. First, they facilitate rapid student access to in-depth care

such as counselling and therapy when required. Second, because teenage substance

use clusters with other negative behaviours, positive relationships with the police and

social services facilitate the identification of students whose substance use is

problematic at the earliest opportunity.

Teacher involvement in the running of the school

Developing school-based rules, solving school-related problems and planning for

change can be achieved through cooperative group work between teachers at different

grades within the teaching hierarchy. When this is done, it results in reduced school-related disorder and enhanced teacher morale (Gottfredson et al., 2002). This paper reasons that it would also promote student connectedness and positive student school-related experiences because ordered schools are likely to have fewer negative student interactions. Additionally, teachers with enhanced morale are more likely to have the space, time and personal resources to provide students with extended support.

Involving students in the running of the school

Facilitating active student input into the running of the school, school improvement efforts and disciplinary procedures through structured avenues including student councils (Swinson, 2010), would improve students' school-related experiences. It would also increase the likelihood that students understand the school policies and their underpinning philosophy. Pupil connectedness would additionally be promoted through extended opportunities for cognitive development and extended opportunities to develop positive relationships with teachers.

School structure

The promotion of a sense of community and thus, a widespread sense of acceptance among students is more likely in smaller schools (Gottfredson et al., 2005) with smaller classes, student grouping across school years and team teaching (Osterman, 2000). Other initiatives may also help including less departmentalisation based on academic specialisms, houses, remaining in the same tutor group over several school years. Some initiatives, including streaming at an early age, negatively influence students' sense of acceptance (Osterman, 2000).

The curriculum

Personal Social Health Education (PSHE) is a non-statutory element of the UK national curriculum but many schools implement a PSHE curriculum. This paper proposes that PSHE for younger UK secondary school students should focus primarily on student welfare and social competency (Mayer, 2002). Structured comprehensive social competency programmes aim to teach pupils how to interact more effectively with other students and staff. Programme components include problem solving, conflict resolution, friendship building, decision-making skills, and strategies for relieving stress and anxiety (Gottfredson, 2002, Luiselli et al., 2005). These programmes foster school connectedness and improve students' school-related experiences because they 1) afford students with increased opportunities for cognitive advancement 2) provide students with additional opportunities to enact positive classroom behaviours and thus, facilitate positive interactions between students 3) reduce severe violence (US DHHS, 2001) and 4) help students develop adaptive coping strategies (Gottfredson, 2002). This paper's proposal regarding PSHE resonates with the person-oriented approach advocated by De Haes and Schuurman (1975) which was associated with reduced illicit drug uptake.

Extending extra-curricular activities may also promote pupil connectedness and improve school-related experiences through two main pathways. First, by increasing opportunities for acquiring new skills and knowledge, success and advancement through, for example, physically challenging activities such as Outward Bound or the Army Cadets. Second, by promoting students' sense of acceptance through increased opportunities to develop positive teacher-student relationships and positive student connections within and outwith each student's own class and year group (Waters et

al., 2009). The youngest pupils should however, be included in extra-curricular activities, as they are at increased risk of bullying (Cross et al., 2009) and additionally, many find the transition to secondary school difficult. Moreover, active recruitment of students who are susceptible to substance use who may also be troubled would be required as these students are less likely to participate. Active recruitment should focus on the potential for acquiring additional skills and knowledge, worthwhile achievement and new/improved student connections.

Extending the formal curriculum to include additional work-related outcomes also potentially promotes pupil connectedness through valued attainment and success. However, introducing a separate technical and job-related skills curriculum especially when it is the only available curriculum requires consideration. The closure of the newly created Black Country Technical College in Walsall suggests that currently in England, this type of curriculum is not valued by sufficient numbers of students or adequately supported by trained staff. Additionally, and more importantly, forcing this type of curriculum on pupils, as happens in some secondary schools in the Netherlands potentially constrains pupils' life trajectories and life chances (Paulle, 2013).

Pedagogic practice.

This paper proposes that student-centred learning, where students select educational activities, determine the pace and sequencing of these activities, and monitor their own progress, should be extended at the expense of teacher-led didactic teaching. Student-centred learning fosters student connectedness and supports improved school-related experiences through 1) valued advancement, 2) active student engagement,

rather than passive acquiescence, which supports the development of student agency and 3) improved inter-personal relationships with teachers and students. Moreover, it promotes the development of decision-making, problem solving and self-reflective skills. These skills have greater potential applicability to everyday living and compliment social competency skill development in designated PSHE lessons.

Active student involvement is also promoted through shared student tasks, co-operative learning in small groups including group problem solving and peer teaching. 'Continuous progress teaching' and 'schools within schools' focus on small groups of students at the same skill level who aim to master a hierarchy of skills at their own pace (Gottfredson, 2002). Incorporating tasks that match students' functional level fosters feelings of success and reduces academic failure (Mayer, 2002) which promote school connectedness. Osterman (2000) reasoned that cooperative learning promotes students' sense of acceptance through 1) stronger individual beliefs that they are personally liked and other students want to help them and 2) a widening of friendship patterns away from dyads, triads and cliques.

Cooperative learning, positive teacher feedback (Hattie and Timperley, 2007) and social competency training may consequently be the most influential aspects of the whole school approach outlined in this paper.

However, peer mediation, peer mentoring and peer group counselling led by an adult can result in increased rather than decreased victimisation (Gottfredson, 2002; Ttofi and Farringdon, 2011) or increased school disconnectedness (Gottfredson, 1987). Drawing upon these study findings, this paper reasons it is inadvisable to select

students for these types of student-centred initiatives solely on the basis that they are 1) perpetrators or victims of bullying or violence and/or 2) troubled and/or 3) disaffected and/or 4) involved with substance use. Additionally, if student-centred learning is only implemented with low achieving students it risks labelling or pathologising these students and may be perceived as inferior, which would reduce its effectiveness.

CONCLUSION

Implementing the proposed multifaceted programme would be challenging. UK Government initiatives currently pressurise schools to focus on academic achievement at the expense of supporting students' social and affective needs often against teachers' professional experience, knowledge and judgement. Moreover, the programme requires financial investment to support, for example, close working with external agencies, the development of whole school and specific PSHE training programmes, Outward Bound and other extra-curricular activities. This paper additionally recognises that the different facets of the proposed approach would vary in their strength of influence on student connectedness, the quality of students' school-related experiences and student substance use and would have variable effects on individual students. Factors external to school will also influence students' interactions with school and schools/teachers may reinterpret individual components or adapt them to their school's circumstances. However, the potential benefits of the outlined programme are important and include reduced teenage problematic substance use and more successful student life trajectories. The next step would involve working with schools to assess the feasibility of developing the outlined approach and evaluating it. Alternatively, schools may view the outlined framework as a mapping

tool to identify what they do well/less well in order to inform local action to reduce

substance use.

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Figure 1 A multifaceted whole school approach to prevent problematic adolescent substance use (drawn from Gottfredson, 2002; Markham 2015, Markham and Aveyard 2003; Mayer 2002; Sugai and Horner 2002, Ttofi and Farrington, 2011, Walker and Shinn 2002; Waters 2009)