Student nurses' attitudes to illicit drugs: A grounded theory study

Martyn R. Harling a,⁎, Warren Turner b,1

a School of Education Health and Sciences, The University of Derby, Room G09D, Britannia Mill, Mackworth Road, Derby, DE22 3BJ, United Kingdom
b Faculty of Health & Social Care, London South Bank University, Borough Road, London, SE1 0AA, United Kingdom

ARTICLE INFO

Article history:
Accepted 2 May 2011

Keywords:
Grounded theory
Student nurses
Illicit/illegal drugs
Attitudes

SUMMARY

The aim of this research was to identify the factors that influence the attitudes of student nurses towards illicit drugs. This insight is important in providing a foundation for the development of educational approaches aimed at challenging what appear to be negative attitudes to illicit drug users within nursing.

The absence of a testable hypothesis prior to the investigation led to the generation of theory from the data (inductive enquiry) with a constructivist approach to grounded theory (Charmaz, 2006), being employed. Data generation involved informal conversational interviews (n = 12), semi-structured interviews (n = 9), four focus groups and an audit of the education received by students (n = 61) around substance misuse issues.

The final grounded theory indicated that:

Student nurses enter training with a wide range of personal experiences relating to illicit drug use. The influences of society’s negative views and the image of drug use presented in the press appeared to be significant factors in developing their attitudes on the subject. In the absence of effective approaches to education, and given that many professionals in the practice environment appear to view illicit substance users in a negative way, it is likely that interventions with identified drug users will be influenced by negative attitudes.

© 2011 Elsevier Ltd. All rights reserved.

Introduction

The aim of the study was to provide an insight into the factors which influence the attitudes of student nurses to illicit drugs.

There is a general dearth of research considering attitudes towards illicit drugs amongst student nurses within the UK. Even from an international perspective there are few articles with an equivalent focus to the current study. An Australian study (Norman, 2001) did measure the attitudes of a group of 55 final year nursing students after being shown an image of intravenous illicit drug use, reporting that 42% indicated negative attitudes. However, Norman (2001) did not explore the factors influencing the students’ attitudes prior to showing the image or consider any variables which may have influenced their score.

More information is available from studies of qualified nurses, although there are some discrepancies between their findings and recommendations. A recent study focusing on A&E nurses in Ireland found “near optimal attitudes” for working with substance-using patients (Kelleher and Cotter, 2009, p.12). However, previous literature considering the attitudes of qualified nurses has overwhelmingly suggested that individuals who misuse psychoactive substances are viewed in a negative manner (Moodley-Kunnie, 1988; Carroll, 1995, 1996a,b; Howard and Chung, 2000). Nurses have been reported as holding moralistic, stereotypical and cynical views about drug addiction (Gerace et al., 1995) and negative attitudes can result in drug misuse being inadequately managed within healthcare settings (Carroll, 1995).

At a national level there appears to be little consistency in the amount and content of teaching dedicated to the topic of substance misuse within nursing syllabi (Rassool, 2004). Qualified nurses often feel that their training inadequately prepares them for working with substance misusers (O’Gara et al., 2005). However, nurse education is only one factor which could potentially influence the attitudes of student nurses. Commonly students progress through a series of practical placements in a variety of health care environments during which they work alongside a wide range of health and social care workers with different professional roles and responsibilities. They are also likely to come into contact with patients seeking advice or treatment for substance misuse or patients who identify themselves as using illicit drugs whilst seeking care for other, unrelated, health problems (Hayes, 2002).

The principal author of this study has worked for many years as a clinician within substance misuse services and as a lecturer teaching student nurses, maintaining an academic interest in the study of substance misuse. The research was conducted within a university in the East Midlands region of the UK and approval for the study was obtained from the university ethics committee.
Attitudes

Consideration of an abstract concept such as an ‘attitude’ raises issues around definition and measurement. Attitudes are a rather difficult concept to define and identifying the factors involved in their formation is far from easy. Traditional models describe three components to attitudes; the cognitive, affective and behavioural components (Smith and Mackie, 2000). The cognitive element relates to the facts and beliefs that an individual holds around a certain object or issue. Beliefs are not always based on a balanced view; the opinions of significant others and the influences of society in general can be an important factor in their formation. The second component is the affective, where the individual assigns a positive or negative emotion to the attitude object. Behaviour is often measured and seen as an outward manifestation of an attitude, however, it is rather too simplistic to directly link attitudes to behaviour as a multitude of factors influence behaviour in any given situation (Fishbein et al., 2003).

In addition to the complexities of defining attitudes, it is also important to specify what is meant by the term ‘drug’. As South (1999) pointed out, the term ‘drug’ may be applied to a range of substances used in everyday life including medicines, foods, drinks and psychoactive chemicals. Within this study the term ‘drug’ is used to mean a substance with psychoactive properties. The adjective ‘illicit’ is used to indicate the use of substances categorised as A, B or C under The Misuse of Drugs Act (Home Office [HO], 1971), thereby excluding substances such as alcohol and tobacco.

Illicit drug use tends to polarise the attitudes of individual members of society on an affective level, with both individuals and the state possessing a value laden view on the topic. Some individuals favour a hard line legislative response to illicit drug use and others suggest that some, or all, of these drugs should be decriminalised or legalised (Luty and Grewal, 2002).

Research design

The absence of a testable hypothesis prior to the investigation and the aim of generating theory from the data led to the adoption of a grounded theory [GT] approach to inquiry. GT has a long tradition in nursing and health related research, however, there has been a great deal of methodological debate over how a GT study should be conducted. The approach to GT adopted in this study could best be described as following Charmaz’s (2000, 2006) constructivist approach. This approach to grounded theory acknowledges that the researcher is an active part of the research process, retains a focus on the important of the informant’s perspectives and considers the contributions of other sources of evidence in developing the final GT (Charmaz, 2006).

Data collection

The initial stage of data collection involved the use of informal conversational interviews (N = 12) undertaken by the principal researcher as part of his role as a lecturer. Informal conversational interviews consist of few questions and the interviewee is encouraged to guide the progress of the interaction. They are not pre-arranged and follow the “same basic rules that apply to all conversations” (Chenitz, 1986, p.80). They lack formality and can spontaneously occur in a range of settings, and last from a few minutes to several hours (Chenitz, 1986).

The aim of these interviews was to generate a broad base of data relevant to the focus of the study. The only consistent feature of the conversational interviews was that they related to the primary focus of the study (illicit drug use), and were conducted with student nurses (see Table 1 for details of these interviews). The specific content of each discussion varied from interviewees discussing their experiences of treating patients during practical placements, to more personal accounts of family members who had used illicit drugs. Due to the range and diversity of information obtained from these informal conversational interviews they were not coded alongside more formal data collected in the study. Notes were contemporaneously transcribed and used to develop a semi-structured interview schedule for the more formal stage of data collection.

Students were then recruited to participate in semi-structured interviews (N = 9) by placing an advert on the School of Nursing website. Potential participants were provided with contact details and left to contact the principal researcher in order to arrange a mutually convenient time and location for the interviews (see Table 2 for details of participants).

In addition four focus groups were later conducted in order to expand on the data generated in the semi-structured interviews. Volunteers, from different cohorts, were sought to participate in the focus groups (see Table 3 for details of the composition of the focus groups).

The final stage of data collection involved the use of a questionnaire aimed at auditing the education linked to substance misuse, received by one cohort of students. The questionnaire was completed by third year students from Mental Health, Adult and Learning Disabilities branches (n = 61). Third year students were chosen to complete the questionnaire as they were in the best position to comment on the training they had received so far and were unlikely to receive further training on substance misuse prior to qualification as a registered nurse.

Data analysis

In GT data analysis runs concurrently with sampling and data collection. Careful attention to coding is a vital step which enables the researcher to develop the final grounded theory. However, there is

<table>
<thead>
<tr>
<th>Interview number</th>
<th>Gender</th>
<th>Approx age</th>
<th>Year of training</th>
<th>Approximate length, location, precipitating event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Female</td>
<td>30</td>
<td>1st</td>
<td>10 minute discussion in a classroom setting following on from a lecture focusing on substance misuse</td>
</tr>
<tr>
<td>2</td>
<td>Male</td>
<td>35</td>
<td>1st</td>
<td>15 minute discussion in a classroom setting following on from a lecture focusing on substance misuse</td>
</tr>
<tr>
<td>3</td>
<td>Male</td>
<td>35</td>
<td>1st</td>
<td>10 minute discussion in a classroom setting after a group presentation focused on substance misuse</td>
</tr>
<tr>
<td>4</td>
<td>Female</td>
<td>25</td>
<td>1st</td>
<td>5 minute discussion in a communal area after a group presentation focused on substance misuse</td>
</tr>
<tr>
<td>5</td>
<td>Female</td>
<td>45</td>
<td>3rd</td>
<td>25 minute discussion in a communal area after being approached by a student</td>
</tr>
<tr>
<td>6</td>
<td>Female</td>
<td>40</td>
<td>2nd</td>
<td>45 minute discussion in a private office after discussions around an essay focused on substance misuse</td>
</tr>
<tr>
<td>7</td>
<td>Female</td>
<td>35</td>
<td>2nd</td>
<td>35 minute discussion in a private office after discussions around a recent placement on A&amp;E and treatment of a substance misusing patient</td>
</tr>
<tr>
<td>8</td>
<td>Female</td>
<td>30</td>
<td>2nd</td>
<td>20 minute discussion in a private office around a recent practice placement on a gastro-intestinal ward and the treatment of a substance misusing patient</td>
</tr>
<tr>
<td>9</td>
<td>Female</td>
<td>25</td>
<td>1st</td>
<td>10 minute discussion in a private office after a tutorial</td>
</tr>
<tr>
<td>10</td>
<td>Male</td>
<td>35</td>
<td>2nd</td>
<td>10 minute discussion in a private office after a tutorial</td>
</tr>
<tr>
<td>11</td>
<td>Female</td>
<td>30</td>
<td>2nd</td>
<td>15 minute discussion in a private office after discussions around a recent placement on a substance misuse unit</td>
</tr>
<tr>
<td>12</td>
<td>Female</td>
<td>35</td>
<td>3rd</td>
<td>5 minute discussion in a private office after discussions relating to the student’s final placement</td>
</tr>
</tbody>
</table>
some debate in GT literature around the processes involved in coding. Strauss and Corbin (1998) suggested that data is coded on three levels; open coding, axial coding and selective coding. Open coding enables the researcher to examine the data, exposing categories of information. Axial coding “identifies a single category as the central phenomenon” (Creswell, 1998, p.151) allowing the researcher to contextualise this in terms of its relationship with other categories. The final stage, selective coding, identifies a ‘story’ that integrates the categories in the axial coding (Creswell, 1998). Charmaz (2006) advocated a simplified two-stage approach for constructivist GT and suggested that the three stage approach “adds complexity to the method but may not improve the analysis” (Charmaz, 2006, p.328). This simplified two stage approach consists of open (or initial coding) and selective (or focused coding) and was adopted in this study.

Thematic software, in the form of QSR N6 was used to manage and code the qualitative data generated in the study. Categories were developed from the data in keeping with the inductive aims of the study and a constructivist approach to GT (Charmaz, 2006). Data was examined in detail and sections of data allocated to appropriate categories. The properties and dimensions of each category were examined in detail and sections of data allocated to appropriate categories. Where gaps in data were identified further approaches to theoretical sampling were conducted with the aim of addressing these gaps.

Interlinked cycles of data collection and analysis added to a growing understanding of the focus of enquiry and ended when saturation was reached. This occurred when new data collection activities ceased to add further insights to the enquiry (Charmaz, 2006; Hood, 2007).

Literature review and results

Strauss and Corbin (1998) suggested that comparisons with existing literature can lead to “fuller, more specific and denser” (p.96) explanations. The approach taken in this study was to consider the concepts identified through GT analysis alongside existing literature (see Fig. 1 for a diagrammatic representation of the concepts generated).

One of the key issues to emerge from the data related to the multiplicity of experiences, outside nurse education, influencing the students’ attitudes to illicit drugs. In order to effectively describe and diagrammatically represent (see Fig. 1) this range of experiences, the format and structure used by Thompson (1998) in his PCS model was adopted. The PCS model, originally developed to consider anti-discriminatory practice in the human services, proved a valuable framework in the process of describing the relationship between categorised sections of data. It consists of three concentric circles representing the “interrelated levels; personal, cultural and structural” (Thompson, 1998, p.12), which can influence attitudes. The diagram in Fig. 1 links these three levels to further data relating to professional practice experiences (practice environment) and theoretical education (nurse education). A dotted line is used to indicate the apparently inconsistent quantity and quality of the substance misuse education received by the students in the study.

Society

This first category of data in the current study equated closely to the structural level in the PCS model, consisting of “the macro-level influences…of the contemporary social order” (Thompson, 1998, p.16). Smith and Mackie (2000) noted that the cognitive elements of an individual’s attitudes are influenced by the wider society in which they live. The majority of the students in the study appeared to generally agree with the UK’s legislative response to illicit drugs, although confusion was expressed between medical reliance on drugs for treatment and society's response to recreational use of psychoactive substances.

(Anonymous) Do you think society deals with it in the right way? (Interviewee) They do and they don’t. They send a lot of mixed signals don’t they?...They say amphetamines are bad but they give amphetamines to kids with ADHD don’t they to calm them down so I don’t know, is it good, is it bad? (Interview 9)

Despite a general concurrence with society’s response to illicit drugs, several participants expressed concerns over the punitive stance taken by society to illicit drug use.

I don’t think putting them in prison does anything really. My sister’s a police officer, she used to be a prison officer and she said there were more drugs inside than there were outside and a lot of people that went in without a habit came out with one ... (Interview 6)

Many participants discussed individuals using illicit drugs to improve their health from both psychological and physiological perspectives. Individuals who gained health benefits from the self-administration of illicit drugs were viewed more positively than hedonistic users.

I suppose seeing people using cannabis when they’ve got ME or something like that, I don’t see that as such a big issue as someone who’s drawing up in some pub toilet, I think that’s completely different but that’s probably just because I’m a nurse. (Interview 8)

The media

Media representations have been noted as reflecting dominant cultural values around illicit drug use (Davenport-Hines, 2001; Roskos-Ewoldsen and Roskos-Ewoldsen, 2005). Many respondents mentioned media stories as an important source of information on illicit drugs. Participants in the focus groups expressed particular interest in discussing recent media stories. When asked where their

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Characteristics of the students involved in the semi-structured interviews.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview number</td>
<td>Gender</td>
</tr>
<tr>
<td>1</td>
<td>Male</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
</tr>
<tr>
<td>3</td>
<td>Female</td>
</tr>
<tr>
<td>4</td>
<td>Female</td>
</tr>
<tr>
<td>5</td>
<td>Female</td>
</tr>
<tr>
<td>6</td>
<td>Female</td>
</tr>
<tr>
<td>7</td>
<td>Male</td>
</tr>
<tr>
<td>8</td>
<td>Female</td>
</tr>
<tr>
<td>9</td>
<td>Male</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Characteristics of the students involved in the focus groups.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus group</td>
<td>Number of students</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
</tr>
</tbody>
</table>
views on illicit drugs had emerged from, focus group 3, comprising of recent recruits to nurse education, stated:

(female student 1) Anyone in the media, there’s a heavy influence in the media. It’s like today I got the Daily Mail, erm, front page MPs use spliffs, cannabis. (female student 4) Yes I read that.

A small number of students expressed a degree of scepticism relating to how the media presented stories relating to illicit drugs. Interviewee 9 commented:

the media are never going to print a nice story about drug addicts are they because it doesn’t sell papers. They’d rather print one saying ‘drug addict off his face stabs old lady to death’, they’re not going to say ‘drug addict runs into burning building and saves a baby’. It doesn’t work like that, it’s all negative isn’t it. Like in films you never see a nice drug dealer; they’re all with guns shooting people. Stories about the bad side of drugs sells papers, sells films, it’s more interesting so you watch it.

However the majority voiced opinions which appeared to uncritically accept the media’s portrayal of illicit drug use.

Culture

Thompson (1998) described the cultural level in the PCS model as sets of patterns shared across particular groups of individuals. Data pertaining to the students’ experiences gained within local communities and through social networks was equated to this level.

The use of illicit drugs, particularly drugs such as heroin and cocaine, has often been linked to areas of social deprivation, poor working class and inner city populations. Central Government has focused on the harm done to local communities (HO, 2008) and in particular attempted to address the issue of crime in relation to funding dependent drug use (Hough, 1996). Whilst information about the students’ socio-economic background was not collected in the study, several students mentioned coming across illicit drug use in their local communities.

Alongside discussions relating to their local communities, respondents mentioned illicit drug use in connection with more narrowly defined social groups such as family and friends. Respondents mentioned the role of such contacts in their ability to access and experiment with illicit drugs.

(female student 1) the people that I used to knock about with would take drugs (Facilitator) Yes so friends. (Female student 1) If I were the kind of that er [pause] hasn’t got her own mind I could have quite easily gone down that track.

Individual level

Collecting data relating to the participants’ personal use of illicit drugs was purposefully avoided in the current study due to ethical and professional considerations. However, participants did talk about their individual experiences from the perspective of their upbringing.
and the influences of significant others. From a psychological perspective such influences are significant in terms of developing attitudes (Baron and Byrne, 2003).

Schools of nursing recruit from a range of social, ethnic and educational backgrounds (Nursing and Midwifery Admissions Service [NMAS], 2005). This was reflected in a broad range of experiences linked to illicit drug use with some participants expressing familiarity with illicit drug use.

( Interviewer) where do you think your beliefs/attitudes/values around drugs have come from? (Interviewee) I think it’s just experiences of yourself, people you see and people you know who take drugs and the media, it just comes from everywhere and because I am younger, I’ve grown up with drugs being in the limelight and someone who is older hasn’t, so I have a little bit more understanding. (Interview 8)

Other students reported a rather limited level of personal experience.

I’m 39 and I’m quite innocent where drugs are concerned and maybe people who are on my course who are maybe 18, know everything there is to know. (Interview 3)

Several participants recounted personal incidents and stated that personal experiences had directly influenced their attitudes to illicit drugs.

I wouldn’t say all drug users are criminals. I’d say perhaps more the ones that are addicted to heroin and things like that but that’s because I’m biased because my Gran was broken into by someone that was a heroin addict and I developed a disliking for them. Drugs are associated with crime aren’t they? You get gangs selling drugs and then you get druggies dealing to pay for drugs. It’s a perpetual circle isn’t it? (Interview 9)

The majority of these experiences around illicit drug use appeared to be negative, however, exceptionally respondent 1 stated:

When I was growing up there was a definite difference between the people who misused alcohol on a regular basis and the people who misused marijuana on a regular basis. People who misused marijuana tended to be the more arty, the more laid back, the ones that weren’t so heavily into sports [pause] they preferred their music whereas the people that were misusing alcohol would be the ones that would be well into their sports, would be going out Saturday night, getting in fights. (Interview 1)

Practice environment

One area that emerged as an important consideration related to the experiences that the students had gained in practice environments. All of the participants in the study, who had reached a point in their training where they had worked in healthcare settings, recounted experiences of working with illicit drug users.

The general level of acceptance of such individuals in healthcare settings appeared to be rather poor with staff members expressing negative views in front of the student nurses.

It was awful really, they had no patience with them, no sympathy, it was as if they couldn’t be bothered. Those people were there because they had put themselves there. That was the type of attitude towards looking after them. The needs were met, I can’t say they weren’t but, after everybody else — they came bottom of the heap. (Interview 3)

I actually think they are singled out. From this experience, I actually heard two nurses, one of them quite young so I don’t think age has anything to do with it, who turned round and said “well they get what they deserve” and I said “what do you mean” and they said “well she’s a junkie anyway” and I said “well she’s here because she’s ill” and I was quite shocked by that. There was another older nurse that was of a similar mind but thought that the quicker we can get her better the quicker we can get rid of her. She was almost praying that the blood tests would come back positive so we could get rid of her. (Interview 2)

The feeling amongst the participants was that drug users appeared to be considered as an inconvenient drain of resources by some healthcare staff.

Nurse education

In addition to the practice environment, nurse education was considered as a separate category of data. Literature concerning substance use as a topic in nurse education in the UK is notable in its paucity. The NMC (2004) prescribed a series of competencies which students need to achieve in order to be accepted for professional registration, but the NMC (2004) guidelines are rather general and do not specify curricula content in detail.

In order to provide further evidence around education a brief questionnaire was issued to third year students from Mental Health, Adult and Learning Disabilities branches (n = 61). This indicated that educational input varied between different branches within the same school of nursing. Adult branch students (n = 29) reported that they had not received any taught hours linked to substance misuse, whilst mental health branch students (n = 22) reported a mean of 5 h (s.d. = 6.4) of education linked to the topic.

Alongside what appears to be a limited time allocated to substance misuse in the curriculum, comments were made during the interviews on the standard of the taught sessions the students had received.

The gentleman who was teaching us in the first year did the drugs lecture; he was very anti drugs and yet in the same sentence he said he wouldn’t mind his 15 year old daughter going out and having a few pints. I found that very difficult to stomach, I find it odd that someone could say they wouldn’t mind someone misusing alcohol but they wouldn’t like them misusing drugs. (Interview 1)

Although exceptionally one student commented that they had received a rather more positive educational experience delivered by a non-statutory drug agency.

( Interviewee) It was a bit intense because that’s all we spoke about all day. The cost of drugs and what drugs we use for what. (Interviewer) So quite a lot on substance misuse. Did you find it useful? (Interviewee) Very useful. To put drugs in classifications; amphetamines, marijuana and some of the legal aspects as well and how long you could go to jail for. (Interview 7)

All of the students who completed the questionnaire indicated the importance of substance misuse as a topic area of nurse education. Only 18% (n = 11) of the completed surveys indicated that the subject was covered in enough detail, with one student stating that it was covered in too much detail. Students said that they would like more factual information on illicit drugs to be included in the nursing curricula.

Final grounded theory

Charmaz (2006) pointed out that it is important to create a GT that is based on the scope and findings of the study, proposing that an interpretive view on theory is more consistent with the constructivist approaches to GT. Charmaz (2006, p.126) stated that such theories
“allow for indeterminacy rather than seek causality and give priority to showing patterns and connections rather than to linear reasoning”. Since the overall design of this study was descriptive, an interpretative approach to theory development (Charmaz, 2006) was adopted in order to describe the final theory generated. The final interpretative grounded theory generated from the emergent categories of data stated that:

Student nurses enter training with a wide range of personal experiences relating to illicit drug use. The influences of society’s negative views and the image of drug use presented in the press appeared to be significant factors in developing their attitudes on the subject. In the absence of effective approaches to education, and given that many professionals in the practice environment appear to view illicit substance users in a negative way, it is likely that interventions with identified drug users will be influenced by negative attitudes.

**Implications of the study**

Whilst there are clear problems associated with making recommendations based on the findings of a small scale GT study, there are some areas for consideration and further research highlighted by this study. A key issue raised was the lack of consistency in the coverage of illicit drug use during training. This lack of consistency is particularly interesting when it is noted that all of the participants were recruited from the same school of nursing. It is not unreasonable to assume that if inconsistency occurs within one school of nursing this will be reflected at a national level.

Concerns over the omission of substance misuse from nurse education are far from new (Rassool and Oyefeso, 1993; O’Gara et al., 2005), but the findings of this study re-emphasise these concerns. Respondents confirmed that they would like more factual information on drug use within their course, mentioning issues such as the physical effects of drugs and treatment interventions as areas for further learning. Deficits in knowledge could result in a reluctance to engage with substance using patients/clients.

Assessing the effects of education on the subsequent attitudes of professionals is difficult. Recent articles by Ford et al. (2008, 2009), based on a cross-sectional survey of qualified nurses indicated that workplace education without organisational role support is ineffective in improving qualified nurses’ therapeutic attitudes towards working with illicit drug using patients/clients. However, longitudinal changes in attitudes and subsequent practice are difficult to measure and evaluate. The participants in the current study indicated that their views had been influenced by the stereotypes of illicit drug use presented in media and society in general. Challenging such views may influence attitudes at an individual level with the potential to influence care for this patient/client group. Further research will be required to assess the impact of any future educational interventions linked to illicit drug use.

**References**