DISCUSSING ILLICIT RECREATIONAL DRUGS WITH PATIENTS: HOW PREPARED DO MEDICAL STUDENTS FEEL?

SEBAG, ARTHUR
Medicine, School of Medicine, Dentistry & Nursing

ABSTRACT

Drug-related deaths are currently at a record-high in Scotland and drug-related acute hospital stays have increased four-fold over the past twenty years. Therefore, ensuring health professionals are adequately prepared to tackle this issue is critical. Teaching about recreational drugs in medical education has recently been investigated across medical schools in England and new teaching initiatives developed as a result. However, no Scottish medical school participated, and research remains scant overall.

This qualitative study used a focus group to investigate the views of medical students at the University of Glasgow Medical School (UOGMS) on whether they feel adequately prepared to discuss issues surrounding recreational drugs during patient consultations, including health promotion and linking with known health outcomes. Findings show that the topic of recreational drugs could be further integrated into the curriculum and students believe that they lack the knowledge to properly support patients. Formal teaching is seen as insufficient and important learning opportunities such as placements are of variable benefit due to a widespread variability in teaching standards on the issue. A positive outcome is the emergence of specific gaps in knowledge, and ideas for change, including specific themes for further study modules; thus, this research opens the way for change in an understudied area of medical education.

INTRODUCTION

Illicit recreational drugs are omnipresent in society. They can be defined as substances covered under the Misuse of Drugs Act (1971) and the Psychoactive Substances Act (2016). Around a third of adults have taken an illicit recreational drug at some point in their lifetime and most doctors will find themselves treating patients whose condition is linked, at least in part, to the use of illicit recreational drugs [1, 2].

In 2018, there were 1,187 deaths in Scotland related to illicit recreational drug use. This was a 27% increase on the previous year, a record-high, and the worst rate per capita in Europe. It was also higher than the 1,136 alcohol-specific deaths [3]. Over the past twenty years, acute hospital stays related to illicit recreational drug use have increased four-fold to 199 per 100,000 [4]. In the UK, roughly 1 in 4 people will experience a mental health issue each year; this huge portion of the population is also at increased risk of developing a substance misuse disorder [5,6].

Healthcare professionals need to be equipped with the skills required to help treat and manage people who use drugs (PWUD). Despite the increase in the use of recreational drugs as well as ill health and death related to their use, the time allocated to teach undergraduate medical students in the UK about recreational drugs has seemingly not increased [7]. UK medical schools report an average of 6 hours of formal substance misuse training, which is mainly confined to psychiatry and public health modules [8,9]. This time, however, does not include informal learning experiences which are instrumental in shaping students' learning and their interactions with patients, but are harder to quantify [10]. Special study modules are another teaching method that can enhance recreational drug teaching [11]. These are modules which medical students can take at specific points in their programme as independent learning units to gain exposure to specialist fields, and gain specialist knowledge, including in the cross-sectional field of research.

Currently, recreational drug teaching in medical education is typically viewed under the lens of diagnosing substance misuse disorders, but to address the issue correctly, a larger view must be taken by medical schools. A large proportion of individuals use recreational drugs in an occasional manner which is not disruptive to their day-to-day [12] but may be harmful in the long-term. Doctors must be aware of how drug harm works and have the proper competencies to discuss these issues with their patients and provide appropriate harm reduction advice. It can be tempting to think of recreational drugs only in terms of substance misuse disorders, but as with alcohol, there is a spectrum of use and a spectrum of harms.

Knowledge of recreational drugs is relevant to all medical specialties. However, a British Medical Association (BMA) Board of Science report noted that recreational drugs are often only taught in psychiatry and public health, such that it is often perceived to be a peripheral or specialised subject [1]. Primary care is the main source of healthcare around the world, including in the UK, and should, thus, be a major focus for recreational drug education. General practitioners (GPs) are the first point of contact for most patients and deal with up to 90% of consultations [13]. The taboo surrounding recreational drugs is a barrier to discussions with patients. Reduced understanding of how patients use recreational drugs consequently leads to not only less knowledge but also less ease and comfort in discussing them. Without this understanding, doctors may not adequately or appropriately address the impact of recreational drugs on patients and society.

As noted above, research on how teaching about recreational drugs is delivered in the medical curriculum is limited. To understand how recreational drugs use is being taught in medical schools, research was run by St George's Medical School, University of London, and funded by the UK Department of Health: Substance Misuse in the Undergraduate Medical Curriculum (SMUG) project [2].

The SMUG project ran in two phases. Phase 1 involved semi-structured interviews with key personnel from all UK medical

Arthur Sebag, Medicine, MVLS, 2299993S@student.gla.ac.uk

schools to develop consensus guidance on the integration of recreational drug teaching in the undergraduate medical curriculum. The majority of teaching was found to be located within psychiatry modules, but some other disciplines were also perceived to include teaching, such as primary care and cross-year teaching (communication skills, problem-based learning, and community-based medicine).

Phase 2 was a review of current approaches and integration of the new curriculum in English medical schools. Learning objectives of teaching sessions were mapped to identify the differences between perceived and actual teaching. Substance misuse was a major focus, however, some teaching sessions addressed specific recreational drug topics, such as links between substance misuse and accidents, lung disease, and mental health. However, there are many more specialty topics that need to be covered, such as advising patients about interactions between recreational and prescription drugs.

A major outcome of the SMUG project was the development of resources to implement curricular change. These resources include a curriculum implementation toolkit and Fast Factsheets, rapid overviews of the most common presentations in the most common settings. The use of academic champions, coupled with a toolkit to aid implementation and factsheets to assist teaching, were crucial aspects of the success of phase 2 and should be conserved in future studies.

Since the SMUG project there has been relatively little research into recreational drug teaching in medical schools. Scottish medical schools did not participate in phase 2. This study aims to address the knowledge gap by investigating medical student perception of teaching on illicit recreational drugs at the University of Glasgow Medical School (UOGMS). This will hopefully pave the way for further research and curriculum overhaul in Scotland. Another aim is to deepen our understanding of recreational drug teaching to further integrate harm reduction practices as part of a holistic approach to managing PWUD. Consequently, the following objectives were:

1. Assess student perception of preparedness for health promotion and linking with illness
2. Investigate student perception of existing teaching about illicit recreational drugs
3. Identify current good practices in medical teaching about illicit recreational drugs
4. Source ideas for improvement of medical teaching about illicit recreational drugs

METHODS

This qualitative study was based on a face-to-face focus group conducted by the main researcher to understand student perception of teaching and awareness of illicit recreational drugs at UOGMS. The study also aimed to provide insights on positive and negative practices as well as source recommendations from the student body, which might be put forward to the faculty.

Focus group

Recruitment for the focus group was done via the same advertisement for the online survey on the Moodle website. The focus group took place in a teaching room of the Wolfson Medical School building, a familiar and accessible environment. Participants were given information sheets and signed consent forms relating to audio recording. Questions related to discussing recreational drug use with a patient during history taking and how they would like to be taught on this issue, followed by a semi-structured discussion [14].

Data analysis

The focus group data were initially transcribed using the Zoom software transcribing function then manually reviewed with the audio file. Data from free-text boxes and the focus group were thematically analysed using an inductive approach. This allows for the discovery of patterns directly from the data without using any prior assumptions, these can then be discussed using existing literature. Thematic analysis is a flexible method which generates themes from the qualitative data which can be illustrated with quotes [15-17].

FINDINGS

Four main themes emerged from the focus group and the free-text comments:

1. Inadequate teaching about recreational drugs
2. The importance of clinical placements
3. Variability in teaching standards
4. Good practices in recreational drug teaching
5. Ideas for improvement

Inadequate teaching about recreational drugs

Focus group participants agreed that teaching on recreational drugs and related issues was insufficient, citing stigma as a barrier.

> We haven't really been taught about recreational drugs as it's sort of a taboo topic.

> No teaching on how to respond/offer help to stop (such as [with] smoking cessation), very little teaching on impact of recreational drugs on aspects of mental and physical health.

> Recreational drugs are so rarely covered which is upsetting.

Though the exact impact of stigmatisation of recreational drug use has on medical education is unknown, the findings from the focus group suggested that students are missing out on learning opportunities due to this. Participants expressed passion about the subject but it is known that PWUD experience strong stigma [18], so it is likely that it is present within the student cohort, as well as teaching staff. An expanded study would do well to examine this factor and consider evidence-based strategies to reduce it [19,20]. Considerable work has been done to explore how stigma affects provision of healthcare [21], including regarding medical cannabis [22].

Participants also felt that they were not offered any special study modules on the topic.

> There's been nothing.

> I haven't seen any.

Special study modules are a cost-effective way of integrating topics into a curriculum [23] and have the potential to be part of curricular reform that includes recreational drug teaching. Results from the SMUG study showed that only eleven medical schools in England – fewer than half of all medical schools in England – had at least one special study module related to recreational drugs. It is likely that this is also the case in Scottish medical schools and should be investigated.

This was contrasted by the plethora of information and teaching received on alcohol and tobacco. Participants expressed concern that alcohol and tobacco teaching was overshadowing and even replacing recreational drug teaching.

> With the keeping people healthy block there was just that one lecture, but it was also merged with alcohol,

> which kind of overshadows it, considering we have so many individual teachings on alcohol. So I think it needs to be reinforced somewhere else in the curriculum, again, because it's quite a big topic.

> Lectures that were billed as drugs and alcohol focussed almost entirely on alcohol.

Mapping the curriculum using stated learning outcomes from teaching sessions, as done in the SMUG study, [2] would help to quantify this. This could also be coupled with analysis of teaching materials.

Students felt prepared to interact with a patient who discloses using recreational drugs, as with alcohol or tobacco, which could be attributed to general communication skills training. However, they expressed concern at their lack of foundational knowledge, leading to uncertainty regarding next steps.

> If someone told me they take drugs. I wouldn't be shocked or just be silent. I would say okay. Same as I would, say if they drink or they smoke. But then I wouldn't know what to do next, or how to approach and give them helpful tips or advice.

Recreational drug use is related to a number of diverse issues ranging across mental and physical health, with social care implications as well [12].

Participants did not feel they understood these issues, nor had the tools to accurately assess patients' use.

> I don't know what the long-term effects are, I don't know what the complications are, I don't know what drugs do to you.

The links between use of recreational drugs and illness, as well as interactions with prescribed drugs, have been researched. Resources, such as the "Fast Factsheets" which was developed as part of the SMUG study [2], would be of great use to medical students.

Participants felt that they did not know what constitutes physically or mentally harmful levels of usage, nor what do to if this was suspected. This was again contrasted with their ease in dealing with the same situation for alcohol and tobacco.

> With smoking and drinking you ask how much they've taken, how much they'd regularly consume, you don't really have a marker against which to compare recreational drugs.

This specific issue requires separate research to resolve, however, greater exposure to PWUD will enable medical students to develop their own personal prognosticators, as is done in various areas of medicine where precise indicators do not exist.

Students cited knowledge they did have as mostly arising from independent study.

> I am only knowledgeable about drugs due to personal interest and study.

Despite this, students felt that they were expected to be knowledgeable on the topic.

> There is a strong assumption that you are supposed to know the street names/class/effects/antidotes etc.

This places students in a difficult position, whereby they must dedicate additional study time to meet learning outcomes. Indeed, medical students even have difficulty recognising scientific names of recreational drugs, let alone street names [24].

More can be done to prepare medical students to support patients who disclose recreational drug use. The good news is that we are already doing this well for alcohol and tobacco, from which we can extract many good practices to build a functioning framework for strong medical education on recreational drugs.

The importance of clinical placements

Clinical placements were noted to be the primary area where students acquired competencies on issues surrounding recreational drugs at UOGMS.

> "The only time I've had teaching on it properly is on placement. […] It's actually just learning from speaking to the patients themselves and then speaking to the doctors after."

Speaking to patients and discussing cases with doctors is part of the experiential learning process of the medical curriculum [25] and clinical placements are crucial in delivering this.

However, participants did not feel that they were able to get the full benefit of these learning opportunities due to a lack of background knowledge on the topic.

> We do get exposure to patients later on as we're saying, and placement. It's just knowing what follow up questions to ask when you're taking histories from them because I have no idea.

UOGMS students primarily spend the first half of their degree learning theoretical knowledge to support later clinical placement learning so it is important that this period be utilised correctly to give them the correct theoretical groundings [26].

Emergency medicine settings were most often cited as providing exposure to recreational drugs, including about overdoses.

> Normally quite well covered in acute settings.

> I have had good teaching on overdoses of drugs whilst on placement.

This is positive, but issues related to recreational drugs can arise in a large variety of clinical settings, so it is important that this be emphasised more when teaching staff construct clinical placement experiences.

Variability in teaching standards

Variability in teaching standards was a recurrent theme, which students were worried about. Participants expressed a desire for more standardised teaching on recreational drugs in clinical placements, noting that students often get variable experiences.

> You [need a standard] because everyone has different placement experiences.

Clinical placements are inherently variable, which is part of their value. Nonetheless, the General Medical Council (GMC) provides guidance on the standards that clinical placement experiences for medical students. These "must be planned and structured to give each student experience across a range of specialties, rather than relying entirely upon this arising by chance" [27]. Unfortunately, there is no guidance on the ways in which to provide a consistent experience for students. Investigating this could provide insights with wide-ranging applications for medical education.

Teaching staff, such as vocational studies (VS) tutors, were noted to have variable approaches.

> I've seen the difference between vs tutors. [My first year one] mentioned that the we'd asked about recreational drugs and said that you might not want to always ask […] This year the GP was saying a lot that

> you need to always ask about it and don't pre-empt it by saying is it okay if I asked you about that because that encourages the idea that it's something to be to be ashamed of.

The variability seen between VS tutors is noteworthy as they are important early clinical figures who spend a large amount of time with students in their first two years (up to three hours a week for a whole academic year). They have a large impact on students, and the way they approach issues like the specifics of taking a patient's history is part of the hidden curriculum of values that students unconsciously absorb during their time in medical school. The hidden curriculum is oft noted to undermine the official curriculum [28]. Teaching staff attitudes on issues related to recreational drugs would be worthwhile to examine in an expanded study. More formal guidance and specific training sessions would also help teaching staff present a clear and consistent message on the topic.

Assessment was also noted to be variable.

> On OSCEs, sometimes it is a mark, sometimes it isn't, followed by smoking and alcohol, so it's not seen as an essential part of the history, whereas smoking and alcohol is.

Having consistent assessment standards is crucial. Students use assessment as a frame for learning, especially in medical degrees, where "tick-box culture" is rife [16]. The SMUG study found that assessment on recreational drugs was mostly focused on communication skills when interacting with patients with substance misuse problems. However, doctors require more than just good communication skills when dealing with patients who use recreational drugs, they must be able to deal with emergencies like overdoses, early detection of problematic use, linking use of recreational drugs with disease, as well as being able to do health promotion and give harm reduction advice. Moreover, the absence of assessment on those skills means that they will not be prioritised for learning [29].

Good practices in recreational drug teaching

Interviewed students viewed the inclusion of questions about use of recreational drugs in teaching of history taking positively.

> The fact that we're taught to ask it in general, because I've got a friend who's done medicine in Newcastle, and they're taught not to ask unless they suspect it.

This was contrasted with (anecdotal) evidence that this is not being done across the board in medical schools in the UK. This has not been investigated before and would be worthy of investigation in future studies. Although certain cohorts are more likely to have used recreational drugs, it is a simple question that can reveal a whole range of issues relating to physical and mental health.

Teaching on opioid drugs and general abuse of prescription drugs was noted to be of high quality.

> I think its strong on opioids just as that's also a medication we also use so cover.

> Good teaching re abuse of prescription drugs.

This is positive but shows the bias that is present. Opioid drugs are being used recreationally but their legitimacy for coverage in the medical curriculum seems to arise as an extension of their use in clinical practice.

The Medical Independent Learning Exercise (MILE) coursework on cannabis was praised.

> MILE Project was on cannabis which was a good chance to get an in depth knowledge of the drug.

The special study module "Social Determinants of Health" was also praised for its inclusion of the topic.

> I recently took part in the social determinants of health SSC which has been amazing in providing teaching and exposure to things like recreational drug taking, however I haven't received this teaching anywhere else and I think that's a huge oversight.

Ideas for improvement

Participants expressed a desire to be taught more background knowledge on recreational drugs to situate their clinical learning.

> A background knowledge on their effects and associated diseases would be useful.

Participants also expressed interest in receiving more VS and communication skills sessions on recreational drugs.

> I suppose maybe some more specific drug focus VS and communication sessions, because there's quite a few alcohol based ones, but not any specific one where someone actually comes and talks to you about this drug.

Participants also sourced ideas for special study modules. The comments fell into five groups:

Emerging therapeutic properties of recreational drugs

> Psilocybin in treatment of depression and other things being researched right now.

Management and health promotion for recreational drugs

> Effects of recreational drugs, overdoses and how to spot signs/treat them in a first aid situation.

> Presentations and management.

Research based

> Research based/qualitative

Understanding recreational drugs use and short/long-term effects (mental and physical)

> The long-term effects of continuous moderate use of recreational drugs.

> Why people might become addicted (psychological aspects) and how to help people with substance misuse problems.

Understanding substance misuse/addiction

> Getting more experience talking to people's who's lives are affected by drugs.

Reforming the medical curriculum on recreational drugs should be done with input from students, and sourcing special study module ideas from students will undoubtedly generate more engaging end-products.

Getting access to educational resources was also requested.

> It would be useful for the university to signpost resources like Drugscience and GDS and Crew for people to go look up in their own time.

Educational resources are important to support learning. DrugScience, Global Drugs Survey, Crew 2000 (a Scottish harm reduction initiative), and Drugs and Me all provide high quality evidence-based resources, which are meant for a varied audience and could also be of value to patients [30-33]. The

"Fast Factsheets" created as part for medical education of the SMUG study also have high quality information on a number of topics related to recreational drugs.

A participant had in fact attempted to have Crew 2000 leaflets placed in the medical school library but was unsuccessful.

> My attempts to have harm reduction information leaflets from Crew placed in the library have so far been unsuccessful.

The creation of a database of common recreational drugs with information on them was suggested.

> We have the 50 drugs database on moodle and you could have just the twelve drug database of the illegal ones, with the same sort of ideas.

A similar resource already exists for therapeutic drugs, the "50 drugs" database, which was created by students during an SSC. This could easily be put into action by creating a special study module.

Finally, students expressed the desire to the topic taught in a more holistic and patient-centred manner.

> Healthcare professionals should not be quick to judge and point fingers at recreational drugs when patients present with specific problems. If you were to introduce recreational drug teaching into the curricula, as a solution to this problem, it would be better if it wasn't approached in such a paternalistic manner, where it is looked down upon, as it is currently in society.

This is crucial and aligns with a general shift in the practice of medicine [34].

Recommendations

Following from the analysis of the focus group transcript, recommendations are outlined below. These aim to improve UOGMS recreational drugs teaching but also to generate further data to construct a compelling case for a larger nationwide investigation and reform of recreational drugs teaching in Scottish medical schools.

1. Replicate SMUG study phase 2 at UOGMS

The SMUG study provided a useful framework for understanding medical school curriculums. Mapping learning outcomes and interviews with teaching staff will help provide visibility on the curriculum as a whole and link back to the student perception put forward in this study. Special attention should be paid to avoid alcohol and tobacco being too heavily focused on. The curriculum implementation toolkit and fast factsheets created as part of the study are invaluable and pave the way towards a common standard of medical education on recreational drugs. Use of a local academic champion was noted as a vital driver and is supported by independent research [35]. The SMUG project did not have any external checks for accuracy of curriculum mapping, nor any formal evaluation of the effectiveness of the research. They noted that future studies should have internal reliability checks and an evaluation process.

2. Make use of third sector resources

Several third-sector providers have a wealth of high-quality evidence-based resources which should be leveraged to support student learning.

3. Increase use of PBL, VS, communication skills, and special study modules for recreational drug teaching

These are all interactive learning techniques requested by students which are integral parts of medical education at UOGMS. These have additionally been shown to be effective in recreational drug teaching [36].

4. Investigate stigma related to recreational drugs and PWUD

Reforming the curriculum is not enough to produce better outcomes. Stigma towards recreational drugs and PWUD is a barrier which must be overcome.

5. Review assessment on recreational drugs

How we assess medical students is key to ensuring good learning outcomes and must be investigated.

6. Create guidance and organise training for educators

This will help create consistency in the learning outcomes, especially from informal learning and clinical placements, which are harder to control than lectures or PBL. Consulting with third sector organisations will help ensure that this training integrates harm reduction with holistic and user-centred values.

7. Integrate more learning outcomes for clinical placements

Variability of placement experiences and lack of diversity of settings where recreational drugs were discussed in clinical placements was a common theme and should be addressed. Standards should be created to ensure consistency. Third sector organisations will again be able to add value both for the framework and in securing/creating high quality placement experiences.

8. Review GMC learning outcomes to integrate harm reduction

Integrating harm reduction principles is of utmost importance, clinicians do not know enough about it, and many preventable deaths occur each year, for example with fatal opioid overdoses where naloxone is not used [37,38].

Limitations

This study was limited due to time constraints on the project and so was focused on recreational use of illicit psychoactive drugs, but a future study should consider all aspects of substance use teaching, including alcohol and tobacco, as they have many parallels.

This study provides initial and early, yet valuable, insight for further investigations of medical education on recreational drugs in Scotland. It is likely that the study was affected by self-selection bias [39], but it is unlikely that it could be conducted in a way that would eliminate this (e.g. random sampling).

This study was based on self-reported students' perception of knowledge and teaching. It is a useful measure but in future designing tools to assess student knowledge would give more concrete answers on preparation for practice. This could also be compared to real assessment data.

CONCLUSION

This study found that students feel they have incomplete knowledge about recreational drugs and that this is due in large part to inadequate and insufficient teaching on the topic. Notably, a lack of placement experiences, special study modules, and highly variable teaching standards led to inconsistent student experiences. Interestingly, students seem to be filling the gap themselves due to personal interest, but it remains the responsibility of the medical school to cover learning objectives. This study was limited to the UOGMS and so the findings may not applicable to other medical schools. However, further research, alongside the findings from this study, in other Scottish medical schools would deepen our understanding of limitations in the curriculum and inform how teaching should be updated. Integrating harm reduction principles into medical school curriculums will enable the next generation of clinicians to adequately support underserved

patients. To do so, however, requires high level change from leading institutions such as the General Medical Council.

ACKNOWLEDGMENTS

The author would like to thank Dr Camille Huser from the School of Medicine, University of Glasgow who supervised this project; and Ms Christine Goodair from the International Centre for Drug Policy, St. George's, University of London for her advice; as well as Ewan Hannaford who kindly provided feedback on the manuscript.

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APPENDIX

Focus group questions

1. Do you feel adequately prepared to receive an affirmative response regarding drug use during a history taking?
   a. How so?
   b. Are there recreational drugs that you are more/less prepared to discuss?
2. Do you feel that the teaching that you've received on issues surrounding recreational drugs has been sufficient?
   a. If not, where is it lacking?

   b. Have you been taught about the different classes of recreational drugs?

   c. Do you think alcohol and smoking tobacco are more emphasised?

   d. What is being done well?
3. Do you feel adequately prepared to do health promotion regarding recreational drug use?
   a. Including about substance misuse/addiction?
4. Do you feel adequately prepared to impart medical advice regarding links between recreational drug use and illness?
5. How would like to be taught on these issues?
   a. Have you been exposed to any SSCs on the issue?

   b. Do you feel you need more practical experience with patients?