ABSTRACT

Objectives

* To explore the attitudes and opinions of student midwives toward drug use before educational intervention.
* To measure the attitudes of student midwives toward substance using pregnant women before and after educational intervention.
* To explore the role of the education on attitude change toward pregnant drug users following educational intervention.

Design

The research used case study methodology. It was conducted in 3 phases; Likert style questionnaires (Jefferson Scale of Physician Empathy and Medical Condition Regard Scale), Virtual Learning Environment discussion board analysis and semi-structured interviews.

Setting

The ‘case’ was a single delivery of a university distance-learning module ‘Substance Misusing Parents.’

Participants

The participants were 48 final year student midwives across eight NHS Trusts in the UK.

Findings

The general empathy levels showed no significant change (p=0.539), but empathy toward pregnant drug users statistically improved following the education (p=0.012). Furthermore, students’ experiences of the education demonstrated the importance of sharing and reflecting on practice with peers; the mode of delivery; the experiences of drug users, both positive and negative; and making sense of these experiences, thus bridging the ‘theory-practice divide,’ as key in influencing this change.

Key Conclusions

The study has provided new insights into, the position of student midwives in the UK in terms of their attitudes toward pregnant drug users. It has also provided insight into the required nature of education aimed at altering attitude toward drug use; demonstrating the importance of critical reflection, offering e-learning as an effective model for education design. It has furthermore, confirmed the work of others regarding stigmatisation of drug users in practice and the importance of service user input to education.

Implications for Practice

This research demonstrates the positive potential of education in changing attitude and offers suggestions for effective methods of educational delivery to help reduce stigma in midwifery and other areas of practice.

Key Words

Substance Misuse

Pregnancy

Midwives

Attitudes

Education

INTRODUCTION

Overview of the problem

Alcohol and drug misuse are globally recognised public health concerns (World Health Organisation (WHO), 2014). An estimated 5 per cent of the global adult population, used drugs at least once in 2015 (United Nations on Drugs and Crime, UNODC Report, 2017). Further, the association between substance use and physical harm has long been demonstrated (Watt et al., 2006), with both alcohol and substance use being directly attributed to up to 50% of hospital admissions (Cape et al., 2006). An increasing emphasis is therefore placed upon the role of health professionals in providing effective services and interventions to support drug and alcohol users (Rasool & Rawaf, 2008).

It is estimated that 5% of births in the UK are to women using illicit substances (Crome & Kumar, 2007). Providing accurate statistics however is difficult for numerous reasons, including feelings of shame, denial and stigma experienced by the drug user; lack of awareness and knowledge among professionals in antenatal services; the presence of co-morbid psychiatric disorders; and socio-cultural barriers that may prevent engagement with care (Day & George, 2005).

Manning et al., (2009) conducted a secondary analysis of five UK household surveys to update, improve and broaden previous estimates (which were based on extrapolations of treatment data), of the numbers of children living with a parental substance user. Their findings estimated that 3.4 million children were living with binge drinkers and almost 1 million with drug users. Furthermore, they suggested that the numbers of drug users were likely to exceed this, as their data was extracted from household surveys, in which illegal behaviours are notoriously underreported.

Kelleher and Cotter (2009) suggest that detection of substance use amongst health professionals is low and they estimate that up to 75% of substance users go undetected. This figure represents a significant challenge for Health Care Professionals (HCPs) and is suggestive of underlying barriers. Chappel & Schnoll (1997) linked professionals’ poor knowledge and attitudes toward substance users and their consequential failure to identify them, and anecdotal evidence suggests the situation remains today.

Impact on Pregnancy

Although the number of pregnant women known to be using substances is relatively low, it remains a serious problem for the individual, their family, society and their unborn child (Leggate, 2008). Many mothers who use substances do not engage fully with maternity services, often having their first encounter with a midwife during labour (Hepburn, 2004). Pregnant women with drug and alcohol problems risk poorer maternal and neonatal outcomes (Hooks, 2015). These include miscarriage, pre-term birth, intrauterine fetal death, placental insufficiency, eclampsia, septic thrombophlebitis, post-partum haemorrhage, fetal distress, low birth weight and malformations (Corse & Smith, 1998; Huestis & Choo, 2002).

The described physical and psychological impacts are exacerbated by external factors including socio-economic, environmental or cultural inequalities (Social Care Institute for Excellence, (SCIE) 2005). Appropriate care, treatment and support can bring stability, by providing support for the substance misuse and the underlying socioeconomic problems (Hooks, 2015).

Pregnant Drug Users Experiences

Despite the risks, women who use drugs often enter antenatal care late in pregnancy, and frequently miss appointments (NICE, 2010: Hepburn, 2004). It is suggested that women are concerned about the social and legal consequences of their drug use (Roberts & Nuru-Jeter, 2010). Furthermore, pregnant drug-using women report being subjected to condemnatory remarks and stigmatisation by HCPs presenting a barrier to them accessing care (Radcliffe, 2010). This stigma is perpetuated by general society and users frequently describe how they try to hide their drug user status at all costs, often to the extent of avoiding treatment (Lloyd, 2010).

Sharing her experiences of working in Glasgow’s maternity services, obstetrician, Mary Hepburn (2004) noted that pregnant illicit drug users are often alienated having less support financially, socially and from social and health care. DeVille and Kopelman (1998) believe that pregnant substance users experience increased criticism of their parenting capacity. Whilst dated, this view is similarly reflected in Radcliffe’s (2010) study of substance using women’s experiences of maternity care and Taplin and Mattick’s (2011) Australian study identifying the disadvantage faced by female substance users.

Health Care Professionals perceptions

Concurring with the sense of judgement felt, McLaughlin and Long (1996) found that the majority of nurses interviewed felt that drug users constituted a threat. In addition, Lee et al., (2013) interviewed 15 midwives, who reported that they lacked time, resources and knowledge and did not feel confident dealing with pregnant substance users. Furthermore, the midwives made stereotypical assumptions about the background of substance users, thus reinforcing the concept of HCPs’ prejudice (Lee et al., 2013). These stereotypical misconceptions held by HCPs can lead to stigmatising behaviours and substandard care provision.

The role of Education

Stigma exhibited by midwives, has been attributed to poor knowledge and education around drugs and alcohol (Lee et al., 2013). Education has been suggested as a means to reduce stigma and improve attitudes toward drug users, both pregnant and non-pregnant (Boyle et al, 2010; Jenkins, 2013). However, there is a paucity of research measuring the effectiveness of education for altering attitudes toward drug users and even less for pregnant drug users. The few existing studies fail to explore the nature or type of education and they are mostly quantitative in design, highlighting the need for this study.

Despite the suggestion that education is needed, there continues to be a void for HCPs in this area, including midwives. Whilst a search of the literature showed no reference to the drug and alcohol content of midwifery education, a wider search revealed a limited number of reviews of drug and alcohol content in nursing curricula in England (Rassool, 2009; Rassool and Rawaf, 2008; Holloway and Webster, 2013; Cund, 2013). All of these studies demonstrate that alcohol and drug education is inadequate. There appears to be no requirement for mandatory content in this area (Holloway and Webster, 2013). The evidence purports that without such interventions, the challenges to providing effective care in this field will continue.

The objectives of the study were therefore:

* To explore the attitudes and opinions of student midwives toward drug use before the educational intervention.
* To measure the attitudes of student midwives toward substance using pregnant women before and after an educational intervention.
* To explore the role of the education on attitude change toward pregnant drug users following the educational intervention.

METHODS

Design

The study was conducted using a case-study design, following Yin’s interpretation (Yin, 2014). This involved an in-depth exploration of the complexity of various interactions that existed in the context of a single delivery of a distance-learning module (educational intervention): Substance Misusing Parents (SMP).

The Educational Intervention

The education intervention was a pre-existing university module. Whilst there had been standard university module evaluation following deliveries prior to the study, these had related to the students satisfaction with the education content and university processes, rather than the nature of the education and its impact on their attitudes toward drug using pregnant women.

The case involved a single cohort delivery of the module, consisting of third year student midwives who selected the module in year three as an option (48 students), all were invited to participate. The modules purpose was for students to gain experience, knowledge and understanding of the reality of some of the issues associated with substance misuse and the effect on the lives of women and their families.

The 15-week module was taught as distance learning (online) using the university learning management system, virtual learning environment (VLE), in conjunction with tutorial support. Students were required to undertake one section per week, including an e-activity (posting a contribution to a shared discussion board reflecting on their learning and interacting with peers).

Data Collection

Quantitative and qualitative data was collected over a 13-month period. All participants were purposively selected and invited to take part, because they had chosen the module. All participants were females, aged between 20 and 48 (average 29 years old), as this was the cohort demographic.

There were three phases, completed sequentially:

Phase One – two psychometrically tested attitude scales were completed before and then after the module delivery. The first was to determine general empathy levels (Jefferson Scale Physician Empathy (JSPE) (Hojat, et al, 2001)). The JSPE-HP required the students to answer 20 questions using a seven point Likert scale (1 = strongly disagree to 7 = strongly agree). Ten of the 20 questions were negatively worded in order to decrease acquiescence responding and these were reverse-scored after. The scale had a range of scores 20-140. A higher score represented a higher level of empathy.

The second scale measured regard toward substance misuse in pregnancy compared to reduced fetal movements in pregnancy (reduction in movement, or perceived movement of the unborn baby; Macdonald et al., 2011) (Medical Condition Regard Scale (MCRS) (Christison et al., 2002)). Substance misuse in pregnancy was the nature and focus of the study and reduced fetal movements was a condition that is not associated with negative attitudes from midwives and generally attracts empathy (Macdonald et al., 2011). The MCRS was developed to determine the attitudes held toward specific medical conditions (Christison et al., 2002) and allow comparison between a variety of conditions. The respondents answered eleven questions using a six point Likert scale (1 = strongly disagree, 6 = strongly agree), with five of these questions being negatively worded to reduce acquiescence in response.

Both scales were already established to have proven reliability and validity. Each was administered before and then after completion of the module (n=40 and n=29 respectively before and after completion of questionnaires).

Phase Two - in-depth semi-structured interviews to explore students’ views of both the educational intervention and of any changes in their views whilst undertaking the module. 10 students were recruited based on their change in scores for Phase One (n=10). The participants represented a range of scores. Two had a negative change (although minimal) from the matched questionnaires and the remaining eight were selected from across the range of positive change. This allowed comparison to see if the qualitative comments were related to change in score, although at interview none of the participants were informed of their questionnaire scores, to limit bias in response.

The interviews were conducted after the module conclusion, in the students’ final semester of training. This meant that the students had completed the module with time to reflect on its content, what it had meant to them and facilitated an in-depth conversation about their experiences of the module.

Phase Three – collation of a small part of the students’ narratives, or ‘discussion posts’ (from the university’s VLE). Specifically the students first post at the module start, looking at ‘experiences and attitudes’ around substance use, these were collated for all students who had consented (n=40). The purpose of these posts was to attempt to capture the participants’ qualitative ‘prior’ experiences and attitudes toward substance misuse before they undertook the module. The students were directed to compose a maximum of 300 words, reflecting on anything in their personal experience, together with attitudes that they had encountered, related to substance misuse prior to starting the module. These were collected after the module conclusion.

Data Analysis

Phase One – the data from the attitude scales were analysed using SPSS. Initially, simple descriptive statistical analysis was carried out ascertaining the mean values and ranges for the participants and cumulatively for before and after the module (Q1 and Q2) for each of the attitude scales used; JSPE, MCRS (substance misuse SM) and MCRS (Reduced Fetal Movements FM). The cumulative scores for individual students were then compared for the various scales pre and post module, using paired t-tests with a significance value set at less than 0.05.

In summary, paired t-tests were used to compare means for:

* JSPE before and after the module
* MCRS SM before and after the module
* MCRS FM before and after the module
* MCRS SM compared to MCRS FM before the module
* MCRS SM compared to MCRS FM after the module

Phase Two - The Framework method of analysis was used to analyse the interview data. This is a systematic, flexible approach to analysing qualitative data, developed by Ritchie and Spencer (1994). It is essentially a method of thematic or qualitative content analysis (Gale et al, 2013) using a defining ‘matrix’ to reduce, present and group the data, looking for similarities and differences, ready for analysis.

Phase Three - The VLE documents were analysed using content analysis according to Elo and Kyngas (2008). This was used to build a model of the concepts that described the students’ experiences and attitudes toward substance use and pregnant substance users (where detailed) at the start of the educational intervention.

RESULTS

The approach to the study was a single case study using different tools for data collection and therefore the findings of each phase are presented here separately, however the findings are then drawn together and discussed as a ‘whole’ case in the discussion.

Phase One

Attitudes quantifiably improved post education when compared to beforehand. The findings from the questionnaires demonstrated that there was a significant difference (p < 0.05) in students’ attitude toward substance misuse in pregnancy pre and post intervention (MCRS SM p= 0.012 Table 1 & 2), but not their general empathy levels (JSPE-HP p = 0.539 Table 3), or their attitude toward reduced fetal movements in pregnancy (MCRS FM p = 0.646 Table 1 & 2).

**Table 1. Data From before and after the module for MCRS SM and FM**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scale** | **Before Module Mean Score** | **Before Standard Deviation** | **After Module Mean Score** | **After Standard Deviation** |
| **MCRS SM** | 50.79 | 7.00 | 53.55 | 5.33 |
| **MCRS FM** | 56.41 | 6.72 | 57.00 | 4.79 |

 |

**Table 2.** **Comparison of matched participant group mean MCRS scores using paired t-test**

|  |  |  |
| --- | --- | --- |
| **Mean Scores Compared** | **Significance Value (p)** | **Significant Difference** |
| **Pre Module MCRS SM and MCRS FM** | 0.000 | Yes |
| **Post Module MCRS SM and MCRS FM** | 0.009 | Yes |
| **Pre Module MCRS SM and Post Module MCRS SM** | 0.012 | Yes |
| **Pre Module MCRS FM and Post Module MCRS FM** | 0.646 | No |

**Table 3. JSPE Results Pre and Post Test (Matched Participant groups)**

|  |  |  |
| --- | --- | --- |
|  | **Mean Score** | **Standard Deviation** |
| **Questionnaire One** **(Before module)** | 114.03 | 12.97 |
| **Questionnaire Two** **(After module)** | 115.27 | 6.50 |
| **Paired t-test****(Before and After Module)** | Significance (2 tailed) 0.539 |

Phase Three

Phase Three (VLE posts) was intended to represent the students views, attitudes and experiences around substance use at the module start. The findings revealed that there were a range of views held by students which were influenced by a variety of factors, including personal and practice experiences (experiential knowledge) and to a far lesser extent theoretical knowledge and knowledge of written practice guidance (other knowledge).

Whilst the students started to make sense when evaluating their views, they failed to go into detail and depth or have the theoretical knowledge to fully explore how they felt, or why. It was clear that a strong element of their understanding and views came from practice; mentors’ views and their own encounters. The findings are summarised in Table 4.

**Table 4. Summary of VLE Findings**

|  |  |
| --- | --- |
| **Experiential Knowledge**  | **Examples (bold are referred to in Discussion)** |
| **Practice experiences**(attitudes, opinions, experiences, practice examples, or knowledge based on practical examples) | **Negative,** mentors attitudes, or practice examples. Or women’s behaviour, poor behaviour, non-disclosure, sick babies. | ***‘My midwife … asked her if she knew why it was ‘bad’ and that she needed to stop. She began to treat this normal woman like a naughty child, and for the rest of the booking seemed dismissive of her … she had simply scorned her like a child and belittled her.’******‘She was extremely charming, and made every effort to distract the midwife and myself from the issue of her alcohol consumption.’***  |
| **Positive,** mentors attitudes or examples | ***‘She [substance misuse specialist] opened my eyes into a world I didn’t realise existed. … We also visited women who were out the other side and over their addictions and onto second pregnancies and this was amazing to see. Her experience and knowledge was phenomenal.’*** |
| **Reflection**, students reflected on practice experiences | *‘I know I had judged the woman as I felt repulsed by her on the postnatal visit, where was my empathy?’* |
| **Personal experiences**(included attitudes, opinions, experiences, reasons for use, personal examples, knowledge based on personal experiences and encounters) | **Society/media** influences on attitudes | *‘A lot of the education and media around substance misuse in pregnancy focuses on the negative effects it has which although it is true and does educate people of the effects, it often seems like a scare tactic.’*  |
| **Family**,  |  *‘I have recently discovered that a close family member has been taking cannabis … what I do know is that it has changed the person to become a liar and untrustworthy and I dread to think what it could lead to.’* |
| **Peers,** friends positive and negative | **‘*a couple of my friends smoke marijuana and have done for years. Although I do not partake myself, it does not offend me.*’** |
| **Professional**, from previous employment | *‘my own past experiences probably helped me to have an empathetic and understanding attitude.’* |
| **Anomalies,** no obvious attribution to source | ***‘it is easy to get angry at these women and judge them.****’* |
| **Other knowledge** |
| **Theoretical**(included knowledge from university, from literature/books) | **Reflection** Based on some degree of theoretical knowledge | *‘although it must be hard in some circumstances not to judge. 66% of female substance misusers have psychosocial issues and mental health problems.’*  |
| **Module** knowledge from previous academic content, or expectations of this module | *‘My IBL presentation in the first year was on alcohol during pregnancy … I was actually shocked when I looked into the subject in detail. I feel we do not give enough information to women about the teratogenic effect of alcohol.’**‘I look forward to this module, and gaining an insight into how we alter our role as ‘experts in normality’ to accommodate for women with more complex social requirements.*’  |
| **Guidelines**(practice, national or local) | **Knowledge** gained from guidance on practice | *‘I have found there to be limited information available to professionals regarding the use of cannabis in pregnancy and the effects to the neonate.’* |

Phase Two

This phase explored the students learning, if they felt they had changed and how they felt the educational intervention (module) had facilitated this. The main categories arising from the framework matrix were (see Table 5):

* Student Attitudes Toward Substance Misuse
* Student Practice Experiences
* Interaction with Peers
* Impact of Knowledge Gain
* Method of Module Delivery

The findings (Table 5) indicated that the students found the module beneficial in terms of not only improving their knowledge around substance use and the effects and reasons for use, but also challenged their thinking and attitudes toward substance use and users. Furthermore, they stated that they had also gained skills to give them confidence in practice when encountering pregnant substance users.

Additionally, students commented on the distance learning pedagogy. They stated that the approach enhanced their depth of learning and the sense of community they felt learning alongside peers. They further, suggested that the ‘learning skills’ acquired were transferable to other areas of education and practice.

There was no difference in the sentiment of responses given from any of the participants and the findings did not appear to be related to the specific change score in the questionnaires.

**Table 5. Summary of Interview Findings**

|  |  |  |
| --- | --- | --- |
| **Main Categories** | **Codes** | **Examples (P= Participant No./ Bold quotes referred to in Discussion)** |
| **Student Attitudes Toward Substance Misuse** | **Self-Reflection** on change through module | *‘Because I went into it being so judgemental with my views towards drug users. I came out of it a really different person.’ (P3)*  ***‘I’ve changed as a person. I’ve grown in confidence as well and as a midwife … that’s what changed because I didn’t realise how much judgement around substance misuse issues can affect women.’ (P4)*** |
| **Judgements** (students reflecting on how they felt before the module) |  ‘***I was so annoyed with her that I judged her on her substance misuse rather than thinking, she really needs help. She’s taking this for a reason.’(P4)***  |
| **Origins of Attitudes** | ‘*Attitudes came with me from previous experiences and roles. Though … I think maybe I had quite a narrow view about it.’(P4)* |
| **Impact of Service User Input** | **‘*The Swansea love story was heart breaking and really moving. I found that really, really eye opening and useful … The reasons behind the drug use were really powerful. And it’s such a vicious circle. They just can’t get out of.’(P2)*** |
| **Student Practice Experiences** | **Practice Guidance/Constraints** | *‘All vulnerable women are lumped together but their needs are very different. There’s no proper guidance: no policy’(P8)* ***‘Time demands are too great. You are attending a discharge planning meeting for women, you maybe met twice. I don’t think that’s appropriate ...’(P6)***  ***‘She was being seen by our drug and alcohol midwife, … but there just wasn’t a proper plan in place or anything.’ (P2)*** |
| **Knowledge Base and Training needs** (of Midwives in practice) | ‘*I think it’s pretty rubbish (knowledge) actually in terms of what they know.’(P1)* ***‘they’re [pregnant substance users] getting sub optimal care really and midwives are missing the signs and symptoms that could that could prevent things.’(P10)***  |
| **Staff Attitudes** (positive and negative) **and Avoidance of Care** | **‘*They feel empathy for the woman. The woman is very much the focus and the first concern.’ (P6)******‘My mentor … asked her if she knew why it was ‘bad’ and that she needed to stop. She began to treat this normal woman like a naughty child, and for the rest of the booking seemed dismissive of her … she had simply scorned her like a child and belittled her.’(P1)****‘midwives shy away from trying to help because they don’t know how to don’t know what they’re supposed to do.’(P7)*  |
| **Interaction with Peers** | **Sharing of Learning Resources** (online) | *‘The module was good to be able to share guidelines where some trusts were lacking them.’(P5)**‘it was really interesting to read the other posts … because people chose different subjects. Some of the services they found, other references they might find were different to the ones that I found and that all helped with my learning.’(P8)* |
| **Sharing of Experiences** | ***‘one was her personal experience and personal view and then other people talked about difficulties they had had in placement with heroin users and staff, and with difficult families and family members because of it. It was good to get both sides.*’(P3)** ***‘everybody works in a different area and people see things from different perspectives … They’re writing it from their thoughts and feelings. This isn’t the same as research evidence.’(P9)*** ***‘we were able to interact with each other and find out about each other’s experience.’(P5)*** |
| **Challenge by Peers** | *‘It made you ensure that it [your discussion post] was balanced and well considered. It makes you step up your game a bit more because other people are going to be doing to your work, what you’re doing to theirs, which is critiquing it.’(P6)* |
| **Impact of Knowledge Gain** | **Practical and Theoretical Knowledge Gain** | ‘*my knowledge has grown especially around the different types of substances that people use and how it affects them and how it could affect their baby.’(P4)* ***‘with knowledge and training you are more empathetic to them and more aware of the underlying needs. You’re not just like, what are they doing? But you … think why are they doing that?’ (P7)*** |
| **Why People Use – knowledge gain** | *‘I’m perhaps better informed about how to provide care for them because I understand where they’re coming from.’(P6)*  |
| **Theory-Practice Gap** | ***‘(I was) able to reflect on a ‘horrible’ experience in practice in the module … I treated this module very much about reflecting upon the scenario … it was so problematic for me that I needed to make sense of it.’(P4)*** ***‘The theoretical knowledge helped me to know what to expect in practice.’ (P9)******‘It also taught me to look at my attitude around things and challenge my views not just in relation to substance misuse. It’s given me like a model for way of dealing with things appropriately when I come across something I don’t know about ...’(P6)*** |
| **Method of Module Delivery** | **Flexibility and Scope of Distance Learning** | ***‘being online was really good … because it meant you could do it whenever you wanted. It was much more flexible. So for me when my husband was at work and the children at school … and to do it at my own speed.’(P3)*** *‘I really enjoyed doing this online and the setup of it … it worked really well and you could go back and look at things again if you didn’t understand it or you needed to read up on it again. All of the links and things are there for you to go back and look at whenever you want.’ (P1****)***  |
| **Wider Research/Writing Skills** | *‘it teaches you a different way of doing things … if I came across something I would be better prepared to deal with it and I would know where to look … rather than just googling it. I have gained Independent learning skills.’* (P6) **‘(I have learnt) *how to research properly and how to write a reasoned evidence-based argument concisely.’(P8)*** |
| **Community of Learning** | *‘it made you feel … Part of the community rather than on your own …’ (P1)****‘there was learning from others, different Trusts and choices of substance and also sharing of others views.’ (P3)*** |

Overall Study Findings

The themes that emerged from the overall case study, so Phases One, Two and Three are outlined in Table 6.

**Table 6. Themes from combined data**

|  |  |
| --- | --- |
| **Theme** | **Includes** |
| **Attitudes toward Substance Misuse** | Personal Attitudes Attitudes seen in Practice |
| **Knowledge of Substance Misuse** | Experiential Knowledge – Practice and personalTheoretical Knowledge |
| **Change** | ReflectionTheory-Practice Divide |
| **Mode of Delivery** | Method of DeliveryCommunity of Learning – Reflection and Challenge |

DISCUSSION

Change

The findings from the questionnaires demonstrated that there was a significant difference in the students’ attitude toward substance misuse in pregnancy pre and post educational intervention (Table 1 & 2), but not in their general empathy (Table 3), or attitudes toward reduced fetal movements in pregnancy (Tables 1 & 2). Thus, it is reasonable in part at least to attribute the undertaking of the module to the noted changes.

Similarly, the qualitative findings support this change and indicate that this was facilitated through consideration and challenge of views, position, thoughts and reflections on practice and personal situations encountered. Prior to the module the students views were largely similar to those expressed by society (Schomerus et al., 2011; Taplin & Mattick, 2011; Radcliffe, 2010);

‘*a couple of my friends smoke marijuana … Although I do not partake myself, it does not offend me.*’

And;

*‘it is easy to get angry at these women and judge them.’*

Whereas, it was overtly apparent, that all of the students interviewed following the module described a journey of self-reflection, or discovery and recognised a shift in their views, or attitudes;

*‘I’ve changed as a person. I’ve grown in confidence … as a midwife … I didn’t realise how much judgement around substance misuse issues can affect women.*’

An interesting aspect of this study, which adds a unique element to the research base, was the concept of students being able to identify with, or own the negative stereotypical views that they held. The study concurred with the work of Goffman (1963) that the identity demands placed on substance using pregnant women (and consequential stigmatisation) were initially unconscious. For example, none of the students referred to the effect of society, or media upon their *own* view prior to the module, instead only referring to its effects on other third parties: they did not often use terms such as ‘I’ and where they did, they did not identify if the view they were expressing related to themselves. Following the module however, most students recognised some negative attitudes or behaviours in themselves and reflect that this was not appropriate in practice;

‘*I was so annoyed with her that I judged her on her substance misuse rather than thinking, she really needs help. She’s taking this for a reason.’*

Worthy of further investigation is the suggestion that there may be a reluctance (or denial) in identifying with stereotypical views in oneself until actively asked to reflect and re-consider them, as directed throughout the module. If this is the case, the implications for research in this field and for the findings of previous studies, seeking individuals to self-report their attitudes, need reconsideration.

A distinct driver for students reporting a change in confidence and knowledge during this study was the opportunity to reflect, whether on practice examples, or challenging their own views and opinions;

*‘(I was) able to reflect on a ‘horrible’ experience in practice in the module … I treated this module very much about reflecting upon the scenario that I had encountered … it was so problematic for me that I needed to make sense of it.’*

The education appeared to bridge a gap between theory and practice. Interestingly, this bridging was achieved regardless of whether the theory or the practice was undertaken first, highlighted by students reflecting on past practice experiences whilst undertaking the module (above) and similarly making links to their future practice;

*‘The theoretical knowledge helped me to know what to expect in practice.’*

It was the theory and the practice examples combined, which increased the depth of learning and so it appears this combination is required to maximise attitude change.

Following the module all of the students discussed examples of practice, where they had reflected in light of the new knowledge and evidence base they had;

‘*with knowledge and training you are more empathetic to them and more aware of the underlying needs. You’re not just like, what are they doing … you’re more … why are they doing that? …*’

Of particular importance for future education development, is that the experiences (both personal and professional) did not need to be the students’ own experiences; third party accounts were similarly noted to be of value and this should be considered when designing future SM education;

‘*we were able to interact with each other and find out about each other’s experience.’*

Mode of Delivery

Regarding the method that education should take, key aspects regarding the quality and depth of learning was the opportunity to reflect through the sharing of experiences. This reflection was facilitated through a collaborative approach and this learning led to change in the students’ empathy. Pedagogically the aim of the collaborative learning was to engage learners in active construction of knowledge through peer-peer dialogue. The learners became co-constructors of the new knowledge (Haythornthwaite & Andrews, 2011), which is what the students described in this study;

‘*there was learning from others, different Trusts and choices of substance and also sharing of others views*.’

In the current austere working climate, the benefits of e-learning seem to offer a creative solution to education delivery; providing the cost saving benefits afforded by flexibility and freedom. This approach holds value, not just for education around drug use, but other areas that are known to be subject to stigmatising attitudes such as obesity, mental health and domestic abuse. Similarly, the students drew parallels to other areas. They recognised the transferability in the skills they gained;

*‘It also taught me to look at my attitude around (other) things and challenge my views not just in relation to substance misuse. It’s given me like a model for … dealing with things appropriately when I come across something I don’t know about …’*

The students also enjoyed the flexibility that an online module affords whilst continuing with their other studies, family life and practice placement;

*‘being online was really good … you could do it whenever you wanted. It was much more flexible. So for me when my husband was at work and the children at school … and to do it at my own speed.’*

Furthermore, the students reflected upon writing development and appraising skills for lifelong learning;

‘(I have learnt) *how to research properly and how to write a reasoned evidence-based argument concisely.’*

Knowledge of Substance Misuse

Pre-module, the students described knowledge coming from reflection in practice, rather than based upon theoretical knowledge. Many of their statements began, *‘I have noticed …’, ‘I have seen …’, ‘some midwives have …’*, ‘*in practice …’* and so on. Thus, most of the views were from experiential knowledge, not evaluation of literary or theoretical evidence. The consequence of this was that their views were not necessarily evidence based, or accurate. Following the module, the participants recognised the limitations of this themselves;

*‘everybody works in a different area and people see things from different perspectives ... They’re writing it from their thoughts and feelings. This isn’t the same as research evidence.’*

Attitudes toward Substance Misuse in Practice

The study added to the body of knowledge regarding students’ perceptions of the clinical environment and what they felt effected this. The students particularly identified poor care and substandard, stereotypical views being expressed by professionals;

*‘My mentor … asked her if she knew why it was ‘bad’ … She began to treat this normal woman like a naughty child, and for the rest of the booking seemed dismissive of her … she had simply scorned her like a child and belittled her.’*

These findings were similar to previous studies in this field (Klee et al 2002; Neale et al, 2008). Pre-module, the students’ views appeared to mirror those of their clinical mentors;

*‘She was extremely charming, and made every effort to distract the midwife and myself from the issue of her alcohol consumption.’*

Post-module however, students described the attitudes they witnessed as affecting the care given and reflected on the detrimental impact upon women;

‘*they’re (women) getting sub optimal care really and midwives are missing the signs and symptoms that could prevent things.*’

The findings raise concerns about student midwives training because they spend a significant proportion of time in the clinical setting. Whilst this study did not evaluate the impact of the practice views that students were exposed to, the findings suggest that these effected the way students framed substance using pregnant women themselves prior to the module. When mentors are practicing in an evidence based, non-judgmental way, this does not pose any concern and in fact is likely to be beneficial to learning, however when they are not (which was indicated in this research) the implications to development of students could be significant.

It was interesting that following the module all students were able to recognise the challenges faced in practice, whereas prior to the module many were not able to. Following the module, they made reference to a lack of guidance, but also to other organisational constraints, such as time, workload pressures and financial cutbacks all of which they felt impacted on the standard of care that was provided, highlighting implications for changes needed in practice;

‘*Time demands are too great. You are attending a discharge planning meeting for women, you maybe met twice. I don’t think that’s appropriate ...’*

This mirrors the findings of previous studies looking at the challenges in substance use care (Lee et al., 2013; Jenkins, 2013). Of note was that the students even felt this to be the case sometimes where there were specialist substance misuse specialists employed, which is contrary to some previous research (Leggate, 2008);

 ‘*She was being seen by our drug and alcohol midwife, but … there just wasn’t a proper plan in place or anything.’*

There were of course some examples of good attitude highlighted pre and post module, confirming the findings for example of Jenkins (2013), however these were very much in the minority. These positive attitudes were all attributed to better knowledge or experience, in line with this and previous research (Lee et al., 2013);

*‘She [mentor] opened my eyes into a world I didn’t realise existed. … We also visited women who were out the other side and over their addictions … this was amazing to see. Her experience and knowledge was phenomenal.’*

Post educational intervention, the students’ views appeared to be much more secure and independent and based in their own learning. One aspect was in relation to understanding the lives of users. Reflecting specifically on an input called ‘Swansea Love Story’ (Swansea Love Story, 2009), which is a TV documentary following the real lives drug users, the students commented;

 *‘The Swansea love story was heart breaking and really moving. I found that really, really eye opening and useful … The reasons behind the drug use were really powerful. And it’s such a vicious circle, they just can’t get out of.’*

The role of service user input and stories was an important aspect of this education and unlike previous studies, this study suggested that there was benefit in both positive and negative service user experiences being expressed. This finding concurs with Livingston et al., (2011) systematic review of interventions, which concluded that an effective strategy to reduce social stigma was communicating stories of those with substance use disorders. In a similar way to the students sharing of reflections and practice experiences, the students gained as much from second hand accounts as those directly from service users themselves and spoke equally highly of both;

*‘one was her [another student] personal experience and personal view and then other people talked about difficulties they had had in placement with heroin users and staff, and with difficult families and family members because of it. It was good to get both sides.*’

CONCLUSION

The findings of this case study provide insight into the effect and place of a tailored education intervention in improving student midwives attitudes toward pregnant drug use. Through a combination of questionnaires, VLE post analysis and semi-structured interviews the effect of and exploration of the educational impact took place. Whilst there was overlap in what the students expressed before and after the module, in the VLE posts and interviews, there was a definite change in attitude expressed, which was confirmed by the questionnaires. Further to the anticipated outcomes relating to attitude change in relation to the module content, there were also definitive comments made pertaining to the mode of delivery of the educational intervention and the potential usefulness of this.

Interventions designed to offer service user perspectives, as was the case in this module, provide an opportunity at least to ‘demystify’ perceptions of the motivation and influences behind drug use and in doing so potentially help to alleviate fears.

Overall, this is an important study, which identifies that educational intervention can positively influence student midwives’ views of pregnant drug users. The study has provided new insights into the position of student midwives in the UK in terms of their attitudes toward pregnant drug users; the required nature of education aimed at altering attitude toward drug use; the importance of critical reflection in substance use education; and e-learning as an effective model for education design in the field of substance use and attitude change.

Furthermore, this study confirms the work of other researchers by showing; that the origin of attitudes relating to drug use are wide and varied; stigmatisation of drug users occurs in practice and negatively effects their care; service user input is an important aspect of education delivery; and that educational intervention can improve confidence in caring for individuals with substance misuse problems.

RECOMMENDATIONS FOR PRACTICE

Alongside recommendations to tackle the issues of stigma at societal level and further research following on from these findings. The main recommendations for practice arising from this study are related to both clinical and educational practice.

For clinical practice, recommendations include training for all midwives to improve knowledge and reduce stigma, and improved clinical guidance to support decision-making, appropriate referral and support.

Educational recommendations include mandatory drug and alcohol education in undergraduate midwifery curricula, which includes:

* An overview of drugs and their effects
* Challenge of societal norms and attitudes
* Reflection on experiences
* Service user Input

Furthermore, this education needs to provide opportunity for interaction with peers and facilitate a rhetorical rather than didactic teaching approach. Given the many benefits outlined in this study, the author recommends considering e-learning as a pedagogical approach.

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