**Sexual health experiences, knowledge and understanding in low SES female teenagers: A diary approach**

Dr Kerry McKellar, Dr Elizabeth Sillenceand Dr Michael A Smith

*Psychology and Communication Technology (PaCT) Lab, Department of Psychology, Faculty of Health and Life Sciences, Northumbria University, Northumberland Building, Newcastle upon Tyne, NE1 8ST, United Kingdom.*

**Corresponding Author:**

Kerry McKellar,

**Email:** [Kerry.l.mckellar@northumbria.ac.uk](mailto:Kerry.l.mckellar@northumbria.ac.uk),

**Tel:** +44 (0)191 227 3716

**Postal Address:** Psychology and Communication Technology (PaCT) Lab, Department of Psychology, Faculty of Health and Life Sciences, Northumbria University, Northumberland Building, Newcastle upon Tyne, NE1 8ST, United Kingdom.

*We confirm that the authors have no potential conflicts of interest, real or perceived to declare. The authors acknowledge that the study was supported by funding from Northumbria University. The corresponding author confirms that everyone who has contributed significantly to the work is acknowledged.*

**Abstract**

**Introduction:** Understanding how teenagers think about sexual health and assessing the ways in which they engage with sexual health information are important issues in the development of appropriate sexual health education programmes. Sexual health education programs in the UK are inconsistent and is not possible to assume that teenagers’ information needs are being met by such programs. Teenagers often feel uncomfortable discussing sexual health making it difficult to assess teenagers’ understanding and engagement with the topic. **Methods:** we used qualitative diaries to explore how thoughts about and exposure to sexual health information features in teenagers’ day-to-day lives. Thirty-three low SESfemale teenagers aged 13 and 14 from schools in the UK kept a daily note of any sexual health related thoughts and feelings, and any sexual health information they encountered. **Results & Conclusions:** Thematic analysis indicated three themes (1) *Knowledge gaps and a desire for factual information* (2) *The social and emotional context of sexual health and (3) limited access to reliable information.* Teenagers showed poor understanding of the biological aspects of sexual health and were concerned about the social and emotional context of sexual health. The teenagers’ did not actively seek out sexual health information and access to information resources was limited. Although teenagers showed gaps in their knowledge they were curious about sexual health and were open to receiving sexual health information. Being aware of the ways that low SES female teenagers are thinking about sexual health is useful in developing education programs and other resources that will help fill gaps in knowledge and understanding.

**Key words: Sexual health, diary method, teenagers, sexual health information.**

**Introduction**

Access to comprehensive sexual health information, covering all areas sexual health including STIs, pregnancy and healthy relationships are important as teenagers with increased sexual health knowledge are more likely to delay first sexual initiation and have greater confidence in using condoms (Kellam, Wang, Mackenzie, & Brown, 2014; McElderry & Omar, 2003; Weinstein, Walsh, & Ward, 2008). For teenagers in the UK, the main source of sex education is school based education programmes, which focus on providing sexual health information and have a focus on delay rather than abstinence (Hadley et al., 2018). Sex education is an important subject in schools, but remains inconsistent. For example, in Britain, sex and relationship education (SRE) is a non-assessed subject (UK Department of Education and Employment, 2000) and it is only compulsory for local authority maintained schools to teach basic biology and reproduction (Schulkind, Hurst, Biggart, & Bowsher, 2015). Furthermore, academies and public schools do not have to teach this, and sex education in these schools vary from extensive sex education to no sex education (Long, 2017). In a 2002 review, over a third of schools’ SRE was judged outdated and in need of improvement (OfSTED, 2002). Furthermore, in a recent 2017 review it was found that even though there have been changes in attitudes towards gender and sexuality, such as increased gender equality (Mercer, Tanton, Prah, 2013), the UK’s SRE provision was still outdated as the Government had not issued any new guidance on sex education in the previous 17 years (Pound, 2017). A review of Australian programs found that school-based education programs were trusted by students but focused too heavily on the biological aspects of sex rather than the social aspects of sexual relationships, such as intimacy and love (Johnson et al., 2016). In Germany, reviews have found that school-based sexual health education does not cover enough inclusive sexuality such as lesbian, gay, bisexual and transgender (LGBT) issues (Geganfurtner & Genhardt, 2017). Therefore, even though sex education is important for teenagers and is regarded as a trusted source of information, it remains inconsistent in schools.

In the context of the current study, teenagers in the UK are becoming sexually active at an earlier age (Mercer et al., 2010). A large survey in Britain found that although the average age of first heterosexual intercourse was 16, nearly a quarter of girls had sex before they were 16. Furthermore, half of the girls said they wish they had waited longer to have sex, and were twice as likely to say this if they were under age 15 at first sexual initiation (FPA, 2016). The recommended standard for sexual health provision in the UK, is to provide individuals with safe sex information and access to free contraceptives (Medical Foundation for AIDS & Sexual Health 2005), and for teenagers to have access to free contraceptives throughout the UK. Sexual health professionals are ideally placed to provide SRE but are not easily accessible in the eyes of teenagers and so are viewed in a less positive light than other potential sources of information (Westwood & Mullan, 2009). Also, sexual health professionals believe that teenagers do not have the confidence to speak to them about sex (McKellar, Little, Smith & Sillence, 2017).

Therefore, in the UK the main source of sex education is school-based education. In the UK, SRE in schools is provided primarily by teachers (Walker, 2001), and focuses on providing sexual health information and delay rather than promoting abstinence, however, teachers often report having insufficient sexual health knowledge around STIs and emergency contraception to effectively deliver the subject (Westwood & Mullan, 2007). Teenagers in the UK also believe their teachers lack expertise in the area and worry about privacy and confidentiality when discussing sexual health with teachers (Pound, 2017). An example of the narrow perspective of current SRE was highlighted by a recent study that found 4 out of 10 schoolgirls in England aged 14–17 years reported having experienced sexual coercion (Barter et al., 2016), yet did not understand coercion as they are currently not taught fundamental information such as consent. We know that SRE in UK schools is inconsistent and lacks the holistic approach taken in other countries such as the Netherlands where sex is much more openly talked discussed and taught at an earlier age (Fine & McCllenand 2006; Schalet, 2011).

Given the inconsistencies in the teaching and delivery of formal sexual health education in the UK it also remains unclear as to where else teenagers may go to seek their sexual health information. Research conducted in UK has found that parents do not often talk to their children about sexual health, because they feel embarrassed and lack sufficient knowledge themselves (Turnbull, van Wersch, & van Schaik, 2011).

Access to sexual health information is particularly important for lower socio-economic status (SES) female teenagers as previous research has shown that females from lower SES areas engage in sexual activity at a younger age, and have higher rates of underage pregnancies and STIs compared to teenagers from higher SES areas (Karakiewicz, et al 2008; Langille, Hughes, Murphy & Rigby, 2005). A reason for this is the decline in comprehensive sexual health programs in low SES areas (Santelli, Lindberg, Finer & Singh, 2007) meaning that is difficult for low SES female teenagers to access reliable sexual health information.

Despite the obvious importance of good SRE programmes, teenagers often regard the media as a more useful source for learning about sex and relationships (Buckingham & Bragg, 2004) with teenagers from low SES backgrounds most likely to search for sexual health information online (Zhao, 2009). While sexual health information is available online, there is currently little understanding of the sexual health information needs of female teenagers, what information they have already, their sexual health concerns and their access to information resources.

In this study, we aim to begin a process of exploration to gain a better understanding about the ways in which thoughts and concerns about sexual health information feature in teenagers’ day-to-day lives. We also aim to investigate how teenage girls encounter sexual health information, and how they reflect on their knowledge and experience of sexual health issues during the course of their everyday lives. Understanding these issues is important in order to inform the development of appropriate sexual health education programs that are tuned into the way that low SES female teenagers are thinking about sexual health, and to plug the most important gaps in their knowledge and understanding.

Teenagers can feel apprehensive talking about sexual health parents, health professionals or with peers (Buzi, Smith, & Barrera, 2015) and this means it can be difficult to assess their understanding of sexual health, and to identify their key concerns and priorities. In this study, we use qualitative diaries as a way of examining teenagers’ thoughts around sexual health information. Diary studies are appropriate for teenagers. They are familiar with diary keeping and diaries are perceived as a more confidential way of recording sexual health information than face-to-face methods (Fitton et al., 2016). Previous diary studies have provided rich and valuable sexual health data(Hoffman, Sullivan, Harrison, Dolezal, & Monroe-Wise, 2006; Kiene, Barta, Tennen, & Armeli, 2009)*.* Diaries allow teenagers to note any sexual health information encountered each day, which provides a more detailed and accurate record of the day relative to retrospective self-report. An advantage of using a diary method is the perceived privacy and confidentiality. In previous diary studies, teenagers have completed the diary in a school setting, however, in this study pupils were encouraged to complete their diary entry at home, therefore, ensuring confidentiality (Dalenberg et al., 2016). Diary methods with teenagers produce accurate reports of sexual behaviour, especially as diary studies record ‘real-time’ thoughts and feelings in relation to the assigned topic (Dalenberg et al 2016; Kiene, Barta, Tennen, & Armeli, 2009; Nezlek, 2011). In summary, using a diary method we aimed to explore how thoughts and concerns about sexual health information feature in teenagers’ day-to-day lives.

**Methods**

**Participants**

Thirty-three female pupils, from two school year groups were recruited to take part in this study. Participants were all aged 13 and 14 years old (Mean =13.6, SD=.48) and were from two schools in the North East of England, which were large academy based schools which are state funded schools in England. The existing sexual health sessions in both schools included 1 hour of sexual health education in Year 7 and 8. The Sessions focused on reproductive talks and the teachers had no previous sexual health education or professional experience. There were no sexual health drop-in services available at either school. Eleven of the participants reported that they were in heterosexual romantic relationships, with a single partner and had been with their partners between 1 and 12 months. For all participants who reported that they were in a relationship, their partners were the same age or no more than two years older than the participants. Six participants reported previously having sex with condom and three participants reported having sex without a condom. Therefore, the sample was representative of both teenagers who were sexually active and non-sexually active, 24% of the sample were sexually active which is representative of sexually active teenagers in England, in the latest NATSAL survey 25% of teenagers had their first sexual experience before the age of 16 (Mercer, 2016). See table 1 for full overview of previous sexual behaviours. All participants were from low SES backgrounds measured by parental income (less than £16,190 per year) and parental education (less than tertiary education). It was in the teachers discretion how many pupils they asked to take part in the study based on other school commitments and time allowances, and parents did not have to provide a reason if they did not want their daughter to take part in the research. Three pupils dropped out of the study before completion, therefore full data was available for N=30 participants.

Table 1: Overview of previous sexual behaviours for the age in which participants reported having first experience with each behaviour. Frequencies and (percentages) are reported for each behaviour.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Age | Experienced < 13 years  n (%) | Experienced at 13 years  n (%) | Experienced at 14 years  n (%) | Experienced total  n(%) |
| Kissing | 16 (59.3%) | 8 (29.6%) | 0 | 24 (88.9%) |
| Touching a partners genitals | 3 (11.5%) | 9 (34.6%) | 0 | 12 (46.1%) |
| Being touched on genitals | 1 (3.8%) | 9 (34.6%) | 1 (3.8%) | 11 (42.2%) |
| Giving oral sex | 2 (7.7%) | 7 (26.9%) | 1 (3.8%) | 10 (28.4%) |
| Receiving oral sex | 0 | 4 (15.4%) | 2 (7.7%) | 6 (23.1%) |
| Sex with a condom | 1 (3.8%) | 3 (11.5%) | 2 (7.7%) | 6 (23.1%) |
| Sex without a condom | 0 | 1(3.8%) | 2(7.7%) | 3 (11.5%) |

**Materials**

Participants kept a four-week paper-based diary. The diary asked participants to discuss “*Any thoughts and feelings of anything to do with sexual health, you have had today. This could be anything to do with sexual health or sexual health intervention programs.*” This prompt encouraged participants to be as open and broad as possible with respect to their thinking around sexual health. This allowed us to note the types of sexual health information participants thought about and the types of sexual health information participants want to know. We purposefully avoided prescribed topics for them to discuss nor presented a fixed format for them to use. The second part of the diary asked teenagers to write *“Any information you have had about sexual health or sexual health intervention programs.**This could be anything to do with someone talking about sexual health or sexual health intervention programs. Or any information you have heard or seen about sexual health or sexual health intervention programs.”* It was verbally explained to participants that this involved any sexual health information, such as a formal sexual health talk at school or searching for sexual health information themselves. This question allowed us to assess how often participants were targeted with sexual health information over a four-week period and to explore whether this information met their needs.

**Procedure**

The study was approved by (blank for review) ethical review board. Parental consent was sought using an opt-out procedure. The schools sent home parental letters explaining the study, and parents informed the schools if they did not want their daughters taking part in the research. Participants gave their consent to take part in the diaries on the testing day. First, participants completed an online demographic questionnaire at school. This asked participants about their previous sexual behaviour, parental education background, age and school year. The researcher then introduced the diary to the participants and asked them to complete diaries at home over a four-week period. A locked box was placed in the schools’ reception area and participants ripped out the page of the diary, folded it and placed it in the locked box every day. Throughout the four weeks, teachers reminded the pupils to complete the diaries. At the end of the four weeks, participants were thanked for their time and fully debriefed. It was verbally explained to participants that their data would be treated confidentially, and no names would be associated with the diaries. Participants were also told that their school would be provided with a general summary of the results, but their individual data would not be disclosed. Participants were also given a paper-based debrief sheet to take away with them. Participants had the opportunity to ask questions after the research, no participants expressed any concerns about confidentiality or privacy.

**Analysis procedure**

Thematic analysis was used to analyse the diaries, in order to find similar themes across all of the diaries (Braun & Clarke, 2006). In total 234 diary pages were collected. The diaries were read and re-read and any initial ideas related to the research questions were noted down. The diaries were categorised into topic areas and a count of each topic area was made, to ensure that each theme had an adequate amount of data to support it. This then allowed us to explore inductively the nature of participants’ concerns. Initial codes in each of the topic areas were then identified. In the next stage each of the codes were incorporated into a theme, and the themes were able to explain a larger part of the data. These themes were aided by a thematic map, which allowed us to visualise the links between the themes, and to ensure that each theme had enough data to support it. Coding was then repeated to ensure no important codes or information had been left out at earlier stages. Each of the three themes were then named and defined.

**Results**

Analysis of the diary entries indicated three main issues around (1) *Knowledge gaps and a desire for factual information* (2) *The social and emotional context of sexual health and (3) limited access to reliable information.* The first theme captures teenagers’ current level of understanding and discussion around sexual health, their knowledge gaps and their concerns and questions. The second theme highlights how the social and emotional context of sexual health is present in the teenagers’ day to day lives. The final theme captures the extent to which the teenagers actively engaged with seeking out sexual health information over the four-week period. Overall, the three themes highlight the teenagers’ overall engagement with sexual health information. The themes are illustrated with extracts from the diaries.

**Knowledge gaps and a desire for factual information about sexual health.**

The diaries indicated that teenagers were curious about sexual health but lacked knowledge and displayed misconceptions across a range of issues. For example, teenagers displayed interest and uncertainty around sexual health in seven main categories; sexual intercourse in general, pregnancy, STIs, contraception, oral and anal sex and slang term clarification. In each category, participants expressed their lack of knowledge by writing questions in the diaries. These questions showed that teenagers lacked some knowledge around sexual intercourse and reproduction but also that they wanted to know more about these issues and that sexual health concerns and queries were apparent in their daily lives. The teenagers had lots of unanswered questions about sex in general - how to have sex and how long to have sex, showing a general lack of understanding about sexual intercourse. These general sexual health questions showed that teenagers are thinking about sex but at the same time have gaps in their knowledge and show misunderstandings about the topic.

*How long do you have sex for?*

*Can you have sex on your period?*

This low level of sexual health knowledge was also apparent in relation to pregnancy. Questions about pregnancy centred on participants worrying that they could be pregnant and how they could become pregnant. As well as showing a general confusion about the ways to become pregnant, the diary entries indicate that pregnancy is one of the main sexual health concerns for female teenagers.

*If your* [sic] *pregnant how do you know?*

*How long do you have sex before you are pregnant?*

In addition, teenagers worried that they may become pregnant from having oral or anal sex. This showed a more concerning lack of knowledge around the biological aspects of sex and pregnancy.

*If you have anal and the boy ejaculates inside me can I get pregnant?*

*If someone cums* [sic] *in your mouth can you get pregnant?*

Oral and anal sex were frequently discussed throughout the diaries. It was clear from the diary entries that participants had some understanding of oral and anal sex and that while some participants were sexually active, there are still misunderstandings around this topic.

*How do you give suckys* [sic]

*If you have anal does it class losing your virginity?*

Teenagers wanted to know more about methods of contraception. Teenagers had some understanding of contraception and contraceptive methods such as condoms and the oral pill. However, teenagers still wanted to know more about these methods and participants were unsure about which methods would be best suited to them. The questions showed that while teenagers had heard of some contraception methods, they were less certain about the relative benefits of each type of contraception. Many of the diaries mentioned condoms splitting and teenagers believed that condoms were not fully effective. There was a general agreement in the diaries that teenagers did not believe that condoms were the best method of contraceptive, but were not sure what alternative would be suitable.

*Should I use protection or go on the pill?*

*Can you feel a condom split?*

Teenagers were also worried about different types of STIs. Teenagers have some STI knowledge; however, they showed misunderstandings about how they might contract an STI and how to protect themselves from an STI. There were no diary entries in relation to STI treatments or treatment clinics, only questions relating to contracting STIs. Although teenagers knew about condoms in relation to contraception, they were unaware of using condoms to protect against STIs.

*Can you get an STI off a blowjob?*

*Do you definitely get an STI if you have sex with someone who has one?*

Lastly, teenagers had misunderstandings around appropriate terminology. Teenagers had heard many different slang words, but they were not sure what the words meant. If there are inconsistencies in formal sexual health education, then it is not surprising that teenagers are unsure of appropriate terminology and even slang words for this terminology. This can lead to confusion for teenagers.

*My boyfriend asked to “lick my muff” what does that mean?*

*Someone asked me to give them a sucky what does that mean?*

***The social and emotional context of sexual health***

Despite showing some gaps in in their knowledge about common sexual health issues, the diary entries show that teenagers are aware of the social and emotional implications of sexual health issues and the worry that these issues can generate. It was clear from the diary entries that teenagers did discuss sex with their friends. In fact, these discussions on sexual health were the only ones reported in the diaries. However, these exchanges typically focussed on a broader discussion of the social and emotional implications of having sex in particular judgements associated with sexual activity. Despite a lack of basic sexual health information, it was clear that some of these teenagers and the friends they referred to were sexually active. The diaries typically included references to the sexual activities of ‘their friends’ rather than commenting on their own behaviour but this gave the teenagers a chance to reflect on their concerns about sexual health and highlights how sexual health and sexual activity is discussed between peers of this age group. Teenagers will readily discuss the sexual health issues of others.

*One of my friends has sex and never used a condom and we were all talking about it.*

*My friend got drunk at the weekend and can’t remember if she had sex.*

*Me and my friends talk about sex quite often as a joke, but sometimes they tell me stuff that really surprises me. One of my girl friends told me yesterday she’d lost her virginity and who she lost it to. I just don’t understand why girls aren’t proud to be virgins.*

When discussing the sexual experiences of their friends the participants often used shaming words. Teenagers would name and ‘shame’ their friends if they had sex with someone – a process that appeared to be commonplace. This naming and shaming was a source of anxiety for participants and they were worried they might be shamed themselves. It was clear that the language used around sex was important within social structures and that whilst there was a sense of shame associated with girls for having sex, being a virgin was not seen as something that girls felt able to publicise or discuss. It was clear that participants were aware that females were often shamed for having sex, and this led to confusion about the notion of acceptable behaviour and further discussion about the ways in which sexual health is portrayed by friends and by society as a whole. The entries give an insight into teenagers concerns over how they and other girls are perceived.

*If I have sex does it make me a slag? What number of people do you have to have sex with to be a slag?*

*When people in my class talk about sex they don’t really worry about the consequences they just think it looks good that they have lost their virginity under the age of 16. But really its* [sic] *not and a lot of girls in my year get called slags.*

Teenagers were unsure as to whether they should be having sex at their age and wondered whether it would be considered ‘wrong’. It was clear from the diaries that while participants were unclear about the some basic regarding STIs and pregnancy they nevertheless worried about these issues. Likewise, they also worried about sexual health issues in relation to the wider issue of relationships in general. Some teenagers, for example, discussed sex in the context of relationships and others were concerned about the link between attachment to others and sexual activity.

*Is it okay if I have sex and do things with my boyfriend after a 2-year relationship?*

*Why do you get attached to someone when they take your virginity?*

These examples illustrate that for these teenagers their thinking around sexual health issues is not confined to biological knowledge about sexual intercourse but is situated within a growing awareness of the social and emotional context of sex.

**Limited access to reliable information**

In the majority of diaries, teenagers indicated that they had not seen any sexual health information. Over a four-week period, teenagers in this study were not directly targeted with any sexual health information. Given their general lack of basic biological knowledge, it is likely that teenagers had not previously received comprehensive sexual health sessions in school. In the diaries, the teenagers acknowledged their lack of formal sexual health education, and stated that they would like more sexual health sessions. Teenagers were aware that they do not know a lot about sexual health or their own bodies.

*I need more sexual health lessons in school I don’t hardly know out* [anything]

*Today I was talking to my friends […] about sexual origins and [name] didn’t even know the parts of the vagina. I don’t want to name and shame but I think schools need to teach sexual health/sex ed more and explain so people know their own bodies*

While teenagers stated a desire for more sexual health information, there was no evidence in the diaries that they actively sought out this information at any point over the four-week period. No-one actively sought information online, looked up the answers to sexual health queries, sought information from a clinic or healthcare professional or asked a trusted other for information or advice about sexual health. The sexual health information that teenagers did come across was almost coincidental to their daily lives. For example, teenagers may have seen a poster about sexual health or seen a television show that featured some sexual health information For example:

*I saw a condom poster in the chemist*

*Me and my sister watch embarrassing bodies [television programme] every Thursday and last time we watched it was about vaginas*

While some teenagers also stated that they had come across some sexual health information through advertisements while browsing on social media, none of the teenagers in this study had actively searched for sexual health information.

As the sources of information within the diaries were limited, there was very little discussion about the types of information participants preferred. However, a few of the diaries mentioned that participants were aware of a confidential text messaging service for sexual health advice. Teenagers commented that they liked the sound of this because it was confidential. It is known that teenagers are reluctant to speak to someone reliable, for example, a teacher or sexual health nurse directly but they are happier to access this information in a confidential way.

*I understand that you can get chlamidia (Sic) test in {town name} centre they then send you a text conferming (sic) if you have or haven’t got an STI/STD. I think this is clever and confidential.*

**Discussion**

This diary study has provided an insight into the ways in which thoughts about and exposure to sexual health information feature in teenagers’ day-to-day lives. This insight is valuable as it provides a starting point for considering not only the future provision of SRE in schools but also ways in which we can start to think about the provision and delivery of sexual health information for teenagers more broadly across a range of settings. Firstly, the diary highlights the fact that teenagers have fundamental and straightforward unmet information needs with regard to sexual health. Teenagers have numerous misunderstandings about the biological aspects of sex, particularly with respect to pregnancy, STIs, contraception, slang terminology, oral and anal sex. Given the age of participants, it would be reasonable to expect that 13 and 14 year olds would have some sexual health knowledge from SRE taught in schools (Long, 2017) but this doesn’t appear to be the case.

Despite the gaps in their understanding, however, teenagers demonstrated a clear desire to know more about sexual health and their own bodies through the questions they asked in the diaries. Teenagers taking part in the study used the diaries as a tool to ask questions about the topics and issues that concerned them. Participants expressed open questions in the safe, confidential environment provided the diary. Finding ways to allow teenagers to ask sexual health questions in a private and confidential manner is important. Going forward, online resources may have a more important role to play in this respect (Zhao, 2009; McKellar et al, 2017). It is also important to note that some girls in this study were sexually active but their knowledge was limited. This finding highlights the key role of SRE as an early intervention before age 13 to ensure that girls are equipped with adequate sexual health knowledge before reaching an age where they might become sexually active.

Although teenagers may not have a strong grasp on the biological aspects of sex, they did recognise the social and emotional context of sexual health. The fact that these discussions feature in the diaries highlight the confusing landscape for teenagers. Having sex before the age of 16 is a confusing concept for teenagers as they openly talk to their friends about sex, yet, they worry about the shaming that could come from engaging in the activity. We know that peer communication and popularity are huge influences on sexual health (Allen, Porter, & McFarland, 2006; Bobakova, Geckova, Klein, van Dijk, & Reijneveld, 2013; Neppl, Dhalewadikar, & Lohman, 2015; Prinstein, Meade, & Cohen, 2003), but the double standards between peers speaking openly about sex and also shaming peers who have had sex causes confusion for teenagers. While teenagers discussed sex in the context of relationships, the picture here was more complex. Some teenagers, for example, worried about becoming emotionally attached to their sexual partners and others indicated they wanted to wait to have sex, in case they became attached to their partner. This may indicate that female teenagers are seeking more short-term relationships, (Manlove, Welti, Wildsmith, & Barry, 2014) but also highlights the need to provide a more holistic approach to sexual health information – one that helps teenagers navigate the social and emotional aspects of sexual relations. In the UK, SRE is to become a compulsory subject by 2019 (Sellgren, 2017). This research has highlighted a need for comprehensive knowledge of sex and relationships. It is important that SRE programs are designed to help teenagers understand and discuss the emotional and social aspects of sexual health including relationships and consent. Sexual health programs should also recognise the anxiety around the stigma and shaming of females who do engage in sexual intercourse. While sexual health interventions have an important role to play here in supporting psychological wellbeing, the role of the media and societal attitudes towards sex are also vital in fostering a more positive climate for discussing sexual health in general. Currently, sexual health professionals believe teenagers see sex as a taboo topic, and one that is not openly discussed in the UK (McKellar et al., 2017).

The teenagers’ misunderstandings around the biological aspects of sex together with the complexity of their social and emotional responses to different sexual health issues further highlights the need for good access to sexual health information. However, over the four-week period of this study, teenagers had very limited exposure to sexual health information. Certainly, the teenagers in this sample had no direct sexual health interventions targeted at them and teenagers did not actively seek sexual health information themselves. If they did encounter sexual health information it was almost accidentally, via posters, TV and social media adverts. The first two themes highlighted that teenagers’ are thinking about and discussing issues related to sexual health as part of their daily lives. Despite this, there is little active targeting of sexual health information and even chance encounters with reliable information were limited and ad hoc. It may be that for some of the teenagers in the study, they may not feel the need to seek out answers to specific concerns and questions until they are engaging in sexual activity themselves. However, given the gaps in their general biological knowledge it would seem important that sexual health education programs are equipping girls with the information they need before they become sexually active.

Understanding these issues is important in order to inform the development of appropriate sexual health education programs that are tuned into the way that low SES female teenagers are thinking about sexual health, and to plug the most important gaps in their knowledge and understanding. Our study supports previous findings (Buzi, Smith, & Barrera, 2015; McKellar et al., 2017) that teenagers in the UK are uncomfortable talking about sexual health with adults especially and want to access sexual health services in a confidential way. This could be achieved through digital services, as the teenagers in this sample expressed an interest in a confidential text messaging service. Digital services could equip teenagers with the fundamental sexual health knowledge that they are currently missing and provide a clear social and emotional context to minimise concern in a convenient and confidential way. There are currently many freely available sexual health websites and apps that cover a more holistic view of sexual health (Gibbs et al., 2016; McKellar, Sillence & Smith, 2017), however, as the teenagers in this study were not accessing these resources it’s important that they are advertised appropriately to teenagers, for example, through schools. The findings here highlight a continuing problem with regard to the provision of sexual health information in low SES areas. Santelli, Lindberg & Finer (2007) noted a decline in comprehensive sexual health programs in low SES areas (Santelli, Lindberg, & Finer, 2007) indicating that teenagers from such areas are going to encounter more difficulties in accessing reliable sexual health information in comparison to their counterparts on higher SES areas. Digital interventions would be a cheap and effective way to deliver sexual health advice in lower SES areas without having to rely upon funding for costly programs. It’s likely there would be similar findings with respect to the social and emotional contexts, therefore, this should be explored with high SES groups as well, to see if a digital intervention could benefit all SES groups.

**Limitations and future directions**

The diary method has allowed participants to disclose their sexual health thoughts in an anonymous way. Because of this, participants were very honest and open with respect to the information they provided. Although an interview approach may have yielded richer data, teenagers may have been very reluctant to answer questions from and adult interviewer on sexual matters (Timmerman, 2004, 2009). Given the relatively short nature of many of the diary entries (for example, single sentences) it may be useful in future diary studies to use further questions to encourage the participants to expand upon their answers. The anonymous method used in the diaries meant that participants could not be matched with the previous sexual behaviours questionnaire. This meant that it was not possible to compare sexually active and non-sexually active teenager, in regards to their knowledge and sexual health information seeking practises. In this sample, 24% of the participants reported having sex with a condom and 12% reported having sex without a condom**.** Given thatprevious research has identified that sexually active teenagers are more likely to seek sexual health information than non-sexually active teenagers (Jones & Biddlecom, 2011), it would be interesting for future research to compare the information seeking practises of sexually active and non-sexually active teenagers. This information would provide insight into the most effective ways to target teenagers with sexual health information.

The limited sample size of teenagers from two schools in the North East of England may not be representative of all teenagers in the UK. While this study has examined how sexual health features in teenage girls’ everyday lives; more work is needed to explore this with larger samples over a longer timeframe. Previous studies have found that there may be interesting implications for running diary studies for longer periods, (Dalenberg et al., 2016) and could explore the use of online diaries to foster an increased sense of confidentiality among teenagers (Buzi, Smith and Barrera, 2015). Allowing teenagers to keep diaries about their daily lives in general, rather than focusing solely on sexual health would also allow for a clearer understanding of the importance of sexual health in relation to other teenage concerns.

**Conclusion**

This study indicates that sexual health is something that plays a part in UK teenagers’ everyday lives. The female teenagersfrom low SES areas have sexual health worries and questions and have gaps in their basic knowledge of sexual health around sexual intercourse and reproduction. Importantly, over a four-week period, teenagers were not targeted with comprehensive sexual health information and did not actively seek out information themselves. The sexual health information that teenagers do encounter is through posters, the internet and television. In addition, peers are a huge influence on sexual health decisions and teenagers worry about the potential negative social and emotional implications from having sex. This study indicates that teenagers from low SES areas need to be able to access reliable sexual health information in a convenient and confidential way and that SRE information needs to provide a clear social and emotional context to minimise concern and promote positive peer influence.

**References**

Allen, J. P., Porter, M. R., & McFarland, F. C. (2006). Leaders and followers in adolescent close friendships: susceptibility to peer influence as a predictor of risky behavior, friendship instability, and depression. *Development and Psychopathology*, *18*(1), 155–172. https://doi.org/10.1017/S0954579406060093

Bobakova, D., Geckova, A. M., Klein, D., van Dijk, J. P., & Reijneveld, S. a. (2013). Protective and risk factors of early sexual initiation in youth subcultures. *The European Journal of Contraception & Reproductive Health Care : The Official Journal of the European Society of Contraception*, *18*(4), 242–50. https://doi.org/10.3109/13625187.2013.798408

Braun, V., & Clarke, V. (2006). Braun, V ., Clarke, V .Using thematic analysis in psychology., 3:2 (2006), 77-101. *Qualitative Research in Psychology*, *3*, 77–101. https://doi.org/10.1191/1478088706qp063oa

Buckingham, D., & Bragg, S. (2004). *Young people, sex and the media. New York: Palgrave Macmillan.*

Buzi, R. S., Smith, P. B., & Barrera, C. (2015). Talk With Tiff: Teen’s inquiries to a sexual health website. *Journal of Sex & Marital Therapy*, *41*(2), H. https://doi.org/10.1080/0092623X.2013.857375

Dalenberg, W. G., Timmerman, M. C., Kunnen, E. S., & Van Geert, P. L. (2016). Young people’s everyday romance and sexual experiences in relation to sex-related conversations with parents: a diary study in the Netherlands. *Sex Education*, *16*(6), 692-706.

Hoffman, S., O. Sullivan, L. F., Harrison, A., Dolezal, C., & Monroe-Wise, A. (2006). HIV Risk Behaviors and the Context of Sexual Coercion in Young Adults Sexual Interactions: Results From a Diary Study in Rural South Africa. *Sexually Transmitted Diseases*, *33*(1), 52–58. https://doi.org/10.1097/01.olq.0000187198.77612.d8

Jones, R. K Biddlecom, A. E. (2011). Is the internet filling the sexual health information gap for teens? An exploratory study. *Journal of Health Communication*, *15*(2), 112–123.

Kellam, S., Wang, W., Mackenzie, A., & Brown, C. (2014). The impact of the Good Behavior Game, a universal classroom-based preventive intervention in first and second grades, on high-risk sexual behaviors and drug. *Prevention*. Retrieved from http://link.springer.com/article/10.1007/s11121-012-0296-z

Kiene, S. M., Barta, W. D., Tennen, H., & Armeli, S. (2009). Alcohol, helping young adults to have unprotected sex with casual partners: Findings from a daily diary study of alcohol use and sexual behavior. *The Journal of Adolescent Health*, *44*(1), 73–80. https://doi.org/10.1016/j.jadohealth.2008.05.008.

Long, R. (2017). Sex and Relationship Education in Schools (England). Retrieved from http://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN06103

Manlove, J., Welti, K., Wildsmith, E., & Barry, M. (2014). Relationship types and contraceptive use within young adult dating relationships. *Perspectives on Sexual and Reproductive Health,* *46*(1), 41–50.

McElderry, D. H., & Omar, H. A. (2003). Sex education in the schools: What role does it play? *International Journal of Adolescent Medicine and Health*, *15*(1), 3–9. Retrieved from http://www.scopus.com/inward/record.url?eid=2-s2.0-0038499538&partnerID=40&md5=ca7cd84e0d64a2c8118d86492b9bbae3

McKellar, K, Little, L, Smith, M and Sillence, E. (2017). Seeking sexual health information? Professionals’ novel experiences of the barriers that prevent female adolescents seeking sexual health information. *International Journal of Adolescent Medicine and Health*, 2191–0278 (in press).

|  |
| --- |
|  |
| McKellar, K., Sillence, E., & Smith, M. A. (2017, July). Exploring the Preferences of Female Teenagers when Seeking Sexual Health Information using Websites and Apps. In *Proceedings of the 2017 International Conference on Digital Health* (pp. 43-47). ACM. |
|  |  |

Morrison, D. M., Gillmore, M. R., Hoppe, M. J., Gaylord, J., Leigh, C., Rainey, D., … Rogers, M. (2009). c Adolescent Findings Drinking from a Daily and Diary Sex : Study. *Perspectives on Sexual and Reproductive Health*, *35*(4), 162–168.

Neppl, T. K., Dhalewadikar, J., & Lohman, B. J. (2015). Harsh Parenting, Deviant Peers, Adolescent Risky Behavior: Understanding the Meditational Effect of Attitudes and Intentions. *Journal of Research on Adolescence*, n/a–n/a. https://doi.org/10.1111/jora.12212

OfSTED. (2002). *Office for Standards in Education: Sex and Relationships*.

Prinstein, M. J., Meade, C. S., & Cohen, G. L. (2003). Adolescent oral sex, peer popularity, and perceptions of best friends’ sexual behavior. *Journal of Pediatric Psychology*, *28*(4), 243–249. https://doi.org/10.1093/jpepsy/jsg012

Schulkind, J., Hurst, S., Biggart, R., & Bowsher, G. (2015). Sex and relationship education should be statutory. *The Lancet*, *385*, 2042–2043. https://doi.org/10.1016/S0140-6736(15)60984-9

Sellgren, K. (2017). Sex education to be compulsory in England’s schools.

Singh, A., Gibbs, J., Estcourt, C., Sonnenberg, P., & Blandford, A. (2017, July). Are HIV smartphone apps and online interventions fit for purpose?. In *Proceedings of the 2017 International Conference on Digital Health* (pp. 6-15). ACM.

Turnbull, T., van Wersch, A., & van Schaik, P. (2011). Parents as educators of sex and relationship education: The role for effective communication in British families. *Health Education Journal*, *70*(3), 240–248. https://doi.org/10.1177/0017896911398817

UK Department of Education and Employment. (2000). Sex and Relationship Education Guidance. *House of Commons Library*, (July), 1–34.

Walker., J. (2001). A qualitative study of parents experiences of providing sex education for their children: The implications for health education. *Health Education Journal*, *60*(2), 132–146.

Weinstein, R. B., Walsh, J. L., & Ward, L. M. (2008). Testing a New Measure of Sexual Health Knowledge and Its Connections to Students’ Sex Education, Communication, Confidence, and Condom Use. *International Journal of Sexual Health*, *20*(3), 212–221. https://doi.org/10.1080/19317610802240279

Westwood, J., & Mullan, B. (2007). Knowledge and attitudes of secondary school teachers regarding sexual health education in England. *Sex Education*, *7*(2), 143–159. https://doi.org/10.1080/14681810701264490

Westwood, J., & Mullan, B. (2009). Teachers’ and pupils' perceptions of the school nurse in relation to sexual health education. *Sex Education*, *9*(3), 293–306. https://doi.org/10.1080/14681810903059102

Zhao, S. (2009). Parental education and children’s online health information seeking: Beyond the digital divide debate. *Social Science and Medicine*, *69*(10), 1501–1505. https://doi.org/10.1016/j.socscimed.2009.08.039