Chapter 1

Introduction and background

Rationale for topic selection

This dissertation will investigate behaviour change interventions regarding sexually transmitted infections (STIs) in young people aged 16 to 24 years and identify how these interventions are undertaken in an attempt to promote safe sex by increasing condom use consistency and increasing education and knowledge about STIs.

The purpose of completing a literature review is to ascertain what information on the subject already exists, which can help to provide a foundation for recommending and implementing high quality care in future practice developments. A literature review is the best way to investigate this topic, as it outlines the need for further research about a subject, and prevents any repetition of mistakes from previous research undertaken (Hek et al, 2000; Garrard, 2007). A review of the literature consists of finding the appropriate subject materials, reading the information, analysing the findings and summarising the results about the topic (Hek et al, 2000; Garrard, 2007; Hart, 2001; Hek and Moule, 2006).

By reviewing the interventions that have been undertaken, assessments of any further actions needed to increase young people's knowledge and attitudes of STIs and HIV, increase their condom use consistency, and inform them about protecting themselves from STIs and HIV, can be made. Once the review is completed, recommendations for further research and interventions that are needed will be discussed.

Background information

As good sexual health is related to general wellbeing, it is important that young people are aware of how to care for their bodies, and protect themselves from contracting STIs and HIV. STI transmission in young people has become a

public health issue, and has a high profile in many of the Government health policy documents (HPA, 2008; RCN, 2007).

This research study will focus on young people aged 16 to 24 years, as this age group has the highest risk of contracting an STI, and the highest rates of STI transmission in the UK (HPA, 2008). This may be due to their risk taking behaviour, and "fun" and "outgoing" outlook on life, where many of them do not consider the implications that their actions now will have on them in the future.

In 2005, the Health Protection Agency (HPA) published a report detailing that many young people going on holiday were taking risks with their sexual health, as most did not use condoms, and many had multiple partners, which caused the prevalence of STIs to increase, due to large transmission rates (HPA, 2005). Jacobson (2005) stated she was extremely worried that young people are ignoring sexual health advice, or they do not know how to protect themselves properly, due to lack of sexual health education and advice. She also added that whilst young people are taking part in these risky sexual behaviours, the rate of STI transmission is continuing to increase rapidly, and the more young people who are being diagnosed and treated for an STI, the clearer the indication they are having unprotected sex and taking risks (Jacobson, 2005).

This issue needs to be addressed, as young people are being given advice about how to protect themselves against contracting an STI, but many choose not to listen, and continue to take risks with their sexual health, by not using condoms, or engaging in sexual activities with multiple partners who have not been screened for STIs.

Another factor in the behaviour of young people aged 16 to 24 years is that many are students, or have been a student, which can involve them taking risks that they would not normally take, as they can often discover "new found freedom" and a responsibility for themselves, which can promote risk taking behaviour, including unsafe sex with multiple partners, increasing the risk of contracting an STI (Jacobson, 2005). Studies have found that students, aged 16 years and above, are more likely to not use condoms and have more sexual partners than average

(RCN, 2006; DoH, 2001; Djuretic et al, 2001; HPA, 2008), implying that the student population are more likely to be involved in risk taking behaviour than the general population.

In recent years, the incidence of STIs among young people in the UK has risen considerably, and is continuing to rise (ONS, 2006; HPA, 2008). This highlights that young people need to be educated about the prevalence of these infections, how to stop themselves from contracting one, and how to get treatment should they think they have an STI.

These increases in STI prevalence have an impact on nursing care, as many more sexual health services are needed throughout the UK to educate, treat and advise young people about the effects an STI will have on their health and overall wellbeing. Many of these services are now being overstretched, due to the large amount of new patients requiring treatment (Djuretic, 2001), which means more nursing staff are required to manage the growing number of young people seeking treatment. This has a knock-on effect on the health service, as large amounts of money are being spent on the additional resources needed to treat the patients, and the employment of more nursing staff to provide the care needed (Djuretic, 2001).

The government have recognised that actions need to be taken to educate young people about good sexual health, and offer advice about contraception, screening and treatment. In 2003, the government introduced the National Chlamydia Screening Programme (NCSP), which was developed in an attempt to decrease the number of people with Chlamydia, by offering screening tests and treatment to those who tested positive for the STI. The NCSP recommends using contact tracing to offer advice, screening and treatment to those with whom the person had been in sexual contact. Chlamydia is the most common STI, affecting around one in ten people under the age of 25, who have been tested (NCSP, 2010).

In 2004, young women and men accounted for 74% and 56% of all UK chlamydia diagnoses respectively (HPA, 2008). Between 2004 and 2005, there was an increase of 5% in the number of Chlamydia cases diagnosed in genitourinary

medicine (GUM) clinics (ONS, 2006). Since the mid 1990s, the number of Chlamydia cases has risen and more than tripled from 30,794 cases diagnosed in 1995, to 109,958 cases diagnosed in 2005. Highest rates in females are seen in young women aged 16 to 19 years, the number of cases is 1,359 per 100,000; and in males, young men aged 20 to 24 years, where the number of cases is 1,070 per 100,000. In 2005, the highest rates were in London, Yorkshire and the North West (ONS, 2006). This increase may be as a result of increased awareness and screening, rather than increases in risky sexual practices that result in STI transmission.

It is recommended by the NCSP that all people under the age of 25 who are sexually active are tested for Chlamydia every year, and every time they change their partner, to ensure they do not have the infection (NCSP, 2010). Although many people will have no signs or symptoms of Chlamydia, visible signs can be noticed by a burning sensation or pain when urinating, discharge from the penis, pain during sex, irregular periods or bleeding between periods, or a change in the normal discharge from the vagina (NCSP, 2010). This information emphasises the fact that action needs to be taken to control the number of new cases of all STI diagnoses.

As Chlamydia has very few symptoms, many people do not know that they have the infection without being screened for it (NCSP, 2010). This can cause large implications if the patient does not seek treatment shortly after contracting the infection, as when left untreated, Chlamydia can cause serious long-term health implications, which can lead to infertility in later life (NCSP, 2010). This can have emotional and physical repercussions on the patient, as when they are ready to have children later in their life, they may find problems with fertility. This has an effect on the health service and nursing care, as the patient and their partner may require counselling and advice on the alternative methods for childbearing, which will require additional employment of specialist nurses and advisors to offer their services to the patient.

Condom usage is a major issue regarding the sexual practices of 16 to 24 year old people. As condoms are the main method of protection against contracting an STI, they are crucial to maintaining good sexual health. A survey conducted in 2001 found that 38% of men and 48% of women who had one or more sexual partners in the previous four weeks had not used a condom at all (ONS, 2001), which puts them at increased risk of contracting an STI from others. Data collected by the Office for National Statistics from 2007 to 2008 found that 80% of men and 70% of women aged 16 to 24 had used a condom in the last year (ONS, 2008), but this data may have its limitations, as the data is not specific, and it is not known how many times a condom is used and with how many partners. Although young people aged 16 to 24 were the most likely age group to use a condom, this study did not state whether the subjects used a condom for every sexual encounter.

Young people need better access to services where they can gain advice and support about how to protect themselves from contracting an STI, and receive treatment if they have an infection. Nursing plays a large role in this education and advice, as many young people do not wish to talk to friends and peers, due to the sensitivity of the subject, so many find consultations with healthcare professionals an ideal time to discuss their concerns. The Royal College of Nursing Sexual Health Advisor suggests that nurses are the ideal people to discuss sexual health with, as they can offer advice and treatment, without being judgemental (RCN, 2006). This can be challenging regarding consent and confidentiality, as previous partners may have contracted an STI from unprotected sexual activity with someone, and they need to be made aware of their potential infection and offered advice and treatment themselves, without being notified of who informed the health service.

As the dissertation will be investigating how effective behaviour change interventions are, it is useful to understand the theories and models that frame how changes in behaviour occur. There have been many behaviour change theories developed over the years, but the following model is of most importance to this study, as it can be applied to interpret the sexual practices and behaviours of young people, gaining accurate and reliable outcomes. Prochaska and DiClemente (1986)

developed a model for behaviour change, proposing that the change in behaviour occurs in five stages, where people move in a spiral pattern, often reverting back stages before they go to the next stage.

The first stage is precontemplation, where the individual has no intent to change their behaviour in the near future. The second stage is contemplation, where people are aware the problem exists and consider taking action to address the problem, but do not undertake the action. The third stage, preparation, involves intention to change and some minor behaviour that has limited success. Action is the fourth stage, where individuals modify their behaviour, experiences and environment in an attempt to meet their goals and overcome their problems. The fifth stage, maintenance, is prevention of relapse into previous behaviours and continuing with their current behaviour change (Prochaska and DiClemente, 1986). When applied to sexual health and behaviour change, this model shows that if an individual is unwilling to change their behaviour, STI interventions will be unsuccessful, as the individual will not admit that their current behaviour choices are wrong, and will continue to behave as they previously had done. The theories will be considered whilst analysing the intervention studies found later in the dissertation.

Aims and Objectives

The aim of the dissertation is to explore the effectiveness of behaviour change interventions undertaken in an attempt to reduce sexually transmitted infection rates, increase condom usage and decrease the amount of sexual risk taking behaviour in young people aged 16 to 24 years.

Research Question

"Do behaviour change interventions alter sexual risk taking behaviour and decrease the amount of unprotected sexual acts in young people aged 16 to 24 years?"

Objectives

- Identify current sexual risk taking behaviours taken by young people aged 16 to 24 years
- Identify condom use consistency within the age group
- Ascertain whether the interventions have had any effect on the risk taking behaviours
- Outline common themes in sexual behaviour of young people, and how these were altered through behaviour change intervention

Knowledge about STIs, education on how to prevent and treat STIs, and confidence in seeking advice on STIs plays a major role in how different people respond to their sexual health. This concept will be explored throughout the dissertation, using current literature and policies.

Ethical implications

As the dissertation will be reviewing and analysing current literature, policies and studies, ethical clearance does not need to be approved through an Ethics Approval Meeting. The studies being reviewed will have already been ethically approved in order to maintain patient and client confidentiality, and anonymity will be used throughout the dissertation to protect patient identity. The NMC Code of Conduct states that healthcare professionals must respect patient confidentiality at all times (NMC, 2008). By following the NMC Code, best practice nursing care is delivered, and patient satisfaction is maintained. Safe nursing practice occurs when policies and procedures are correctly followed, and any nursing actions that are undertaken are backed up by evidence that shows that the action is of benefit to the patient. Nursing excellence, where the care delivered is seen to be of exceptionally good quality, and compassion is shown towards the patient, helps to promote safe nursing practice, as policies are followed, and the patient is treated using a holistic approach, making care the main priority. The results found may have potential implications on young people aged 16 to 24 years, but a non-

judgemental and fair analysis will be conducted to provide a comprehensive review of actions that need to be taken to improve the sexual, physical and emotional health of young people.

Resource limitations

The possible resource limitations of this dissertation could be studies and research that was poorly undertaken, providing bias or inaccurate results, which would cause this dissertation to be misinformed on the data. This would cause the overall result to be inaccurate, and the research question would not have been answered using correct analysis results. In order to avoid this happening, only data and results where the studies have been carried out without bias will be selected, to ensure that the results provided within the dissertation are correct, so the analysis and synthesis provides a fair and accurate outcome.

Chapter 2

Methodology

This chapter will outline the methodology used to search for and identify the research papers that will be evaluated to analyse the sexual behaviour of young people aged 16 to 24 years, and the type of interventions that have taken place to challenge these risky sexual behaviours.

A useful method of searching and reviewing literature that will result in papers of relevance being obtained, is the seven stages of a literature review, developed by Hek et al (2000). They suggest developing a search strategy, where each following stage of the search gives a more focused selection of papers, while ensuring that relevant papers are not excluded from the search. The first stage is the main computerised database search, where relevant electronic databases are selected to review behaviour change interventions regarding sexual health in young people aged 16 to 24 years. This will produce a large amount of results, where many will not be relevant, but the second stage, where the results are examined and reviewed, will produce a more focused search selection. The third stage, supplementary searching, involves hand searching through journals for articles that are not available online (Garrard, 2007; Hart, 2001).

Quality appraisal, stage four, reviews the papers previously found to assess their validity within the topic being researched, how appropriate they will be in identifying behaviour change interventions that have already been applied, and the outcomes of these interventions. Stage five, literature saturation, is when the databases used in stage one are searched again using the same search terms, and no more new citations are found relating to the topic. A thematic review of the literature, stage six, is then completed, where the papers found to be of use to the review are critically analysed, to develop themes within the papers (Hek and Moule, 2006; Pope et al, 2007). Limitations and conclusions of the search are then identified, stage seven, and validity of results are acknowledged (Hek et al, 2000).

Using this method, comprehensive searches will be conducted of five well-known and highly acknowledged databases to find a number of papers relating to sexual health behaviours and practices of young people aged 16 to 24 years, and the behaviour change interventions that have been undertaken to challenge these risky practices.

The databases that will be searched are: CINAHL and MEDLINE for the clinical and medical impact that current behaviour actions and decisions regarding sexual health have on young people and their partners; Web of Knowledge and ASSIA for the social impact that young people's behaviour choices have on their lifestyles; and PsycINFO for the psychological impact that STIs, HIV and stigma have on young people.

CINAHL is a comprehensive resource that focuses on nursing and allied health literature, and includes four databases. It is operated by EBSCOhost, a useful research policy (EBSCO, 2009). PsycINFO, operated by OVID, is a psychology database for researchers, practitioners and students, that provides systematic coverage of the psychological literature from the 1800s to present. It contains peer-reviewed journal articles, books, dissertations, and technical reports based in the field of psychology and psychology related disciplines. Over 80,000 records are added annually in weekly updates (OVID, 2010). Medline is a database operated by OVID and run by the US National Library of Medicine, that contains over 16 million references to journal articles in life sciences, behavioural sciences and chemical sciences. The resources date from 1949 to present, and currently contain approximately 5,200 worldwide journals in 37 languages, with 2,000 to 4,000 references added 5 days per week (NLM, 2008).

ASSIA is an indexing and abstracting tool covering health, sociology, psychology, economics, politics, and education. It is updated monthly, with more than 1,500 records added per update. It covers journals from 1987 to present, and currently contains over 375,000 records from more than 500 journals, published in 16 different countries including the UK and US (CSA, 2009). Web of Knowledge is a

research platform used to find information on the sciences, social sciences, arts and humanities, and is operated by Thomson Reuters (Thomson Reuters, 2010).

Key words used to find the required studies are: "sexual health", "behaviour change" and "young people" or "16 to 24 year olds". Inclusion and exclusion criteria that will be used are:

Year – studies that have been published from 2001 to present will be included, as in 2001, the Department of Health (DoH) published the National Strategy for Sexual Health and HIV (NSSHH), a document focusing on improving the nation's sexual health. Some of the studies identified within the literature search were published in 1998 and 2000, but were found to be of use, so they were also included. Using studies published within these dates will allow the most relevant data to be analysed, as the studies contain the most recent research and findings.

Location of study – as STIs and HIV affects the population worldwide, papers from different Westernised and African countries will be included, as comparisons between the interventions and treatment offered within different countries can be made, outlining how a country's affluence level affects the outcome of the intervention. Comparisons will be made between Westernised and African countries, as although studies have been performed in other less affluent countries, such as China and India, these studies were not relevant to the topic of interest being reviewed in this study, so were not included.

Subject – only studies that are assessing behaviour change interventions relating to sexual health will be used, as this is the focus of the dissertation.

Participants – studies that have interviewed and analysed the sexual behaviour practices of young people aged 16 to 24 years will be used, as this is the age group that the dissertation will be focusing on.

Using these search criteria, a number of up to date, reliable, credible and accurate studies should be provided that can be analysed and reviewed to create a comprehensive synthesis of sexual behaviour practices in young people aged 16 to 24 years.

Firstly, a search of PsycINFO, which is operated by OVID, was undertaken. The first search term used was "behaviour change", regarding behaviour change and behaviour modification; this found 40,263 results. The second search term used was "sexual health", regarding "sexual health" as a keyword and sexual risk taking; this found 5,434 results. The two searches were then combined using the Boolean phrase 'AND', which filtered the results down to 151 possible useful articles. The titles and abstracts of all 151 articles were read, and papers that met the inclusion criteria were accessed. 13 of these were found on a preliminary level, but two were not research papers, and one was unavailable, leaving 10 potentially useful papers to be reviewed.

A search of Web of Knowledge was then conducted, where the search terms "behaviour change" as a topic, "sexual health" as a topic, and "16 to 24 years" as a topic; using the Boolean phrase 'AND' to ensure that all of the search terms identified would be present within the study. Three results were found, where two met the inclusion criteria, but one result had been found on the previous search, therefore only one new result was useful.

ASSIA (Applied Social Sciences Index and Abstracts) database was used to search the terms "behaviour change" as a keyword and "sexual health" as a keyword, combining the two search terms with the Boolean phrase 'AND'. This found four results; two had already been found to be useful by previous searches, one was unsuitable, as it was more than 20 years out of date, and one was not relevant to the topic being discussed, therefore although three results were potentially useful, this database revealed no new citations of use to the review.

Medline, operated by OVID, holding articles published from 1996 to present, was then searched. The first search, "behaviour change", regarding health behaviour and "behaviour change" as a keyword; limited to young adult (19 to 24 years), found 572 results. The age range of '19 to 24 years' was preset within the database, so was used to limit the number of results found. The second search, "sexual health", regarding sexual behaviour and "sexual health" as a keyword; limited to young adult (19 to 24 years) (the preset age range by the database),

found 767 results. The two searches were then combined, using the Boolean phrase 'AND', which revealed 41 possible useful results. Again, the titles and abstracts were read, and articles that met the inclusion criteria were accessed. Two of the four potentially useful results had been obtained in previous searches, therefore leaving two new results that were of use to the discussion topic.

CINAHL (Cumulative Index to Nursing and Allied Health Literature) database was used to search the terms "behaviour change" as a subject, "sexual health" as a subject, and "16 to 24 years" as an age group; the terms were related using the Boolean phrase 'AND', and filtered down further using the criteria of published from 2000 to present; written in the English language; and related to adults (19 to 44 years) (preset age range by the database). This search found no results, as it was too specific, so a further search was conducted, where the inclusion and exclusion criteria were added later in the search. This search used the terms "behaviour change" and "sexual health", relating to behavioural changes and sexual health, using the Boolean phrase 'AND'. A criterion of 'find all my search terms' was added, which produced 5,334 results. Further limits of 'published from 2000 to 2010', and 'research article' were included which produced 1,826 results. The results were then further filtered using the 'clinical trial' criteria, which revealed 212 results. This criterion was added, as it ensured that randomised controlled trials (RCTs) would be included (Stephenson and Imrie, 1998). An additional criterion of "young people" was added, but this bought the number of results down to one, which was not relevant, so the previous search, where 212 results were found was used. Of the 212 results, 14 were found to be of use on a preliminary level, but after reading the abstract and methodology chapter of the studies, only six papers were found to be of use to the topic under discussion.

Following Hek et al's literature review method (2000), the 19 papers were then read and abstracted onto index cards, providing the aim of the study, participants, methods and methodology, results and outcomes, key findings, and strengths and weaknesses, along with the reference. This enabled the papers to be analysed accurately and reliably when reviewed.

Although many papers were found, not all were relevant to this study. Some were found to be of use, but were unavailable to access either online or within the library. Some papers also required a subscription to a specific journal, and incurred a high monetary cost for access; therefore they were not included in the selection of potentially useful papers.

One of the difficulties found when completing these database searches was the alternate spellings of some of the words used within the search terms, for example, the word "behaviour" was spelt differently in journals written in UK English and US English (behaviour vs. behavior). Many of the databases found papers with both the US and UK spelling, regardless of which was used in the search term, therefore no significant concerns became apparent. There were many other spellings that differed within the US and UK journals, but for the purpose of this dissertation, the UK spelling will be favoured.

Although the dissertation is focusing on young people aged 16 to 24 years, and their sexual behaviour, some papers included were not specific to this age range, as they contained important information regarding sexual health behaviours of particular groups; if these papers had not been used within the review, vital information regarding sexual behaviours relating to young people would have been ignored, and inaccurate conclusions would have been drawn. However, many of the studies found are specifically related to young people and their sexual behaviours and practices, therefore accurate and reliable conclusions can be established from a review of all the citations found to be of use to the study.

Many of the papers found within the initial searches related to homosexual or bisexual relations, or men who had sex with men (MSM). These papers were not included as, for the purpose of this study, the research has been confined to heterosexual couples, as they represent the majority of the focus age group.

The Critical Appraisal Skills Programme (CASP) framework will be used to review the papers identified, to assess their validity and reliability (PHRU, 2007).

The findings from the comprehensive review of the papers will be presented under common themes, such as condom usage before and after the intervention

has occurred, number of sexual partners pre and post intervention, and effect on the change of behaviour and attitudes towards sexual health.

Chapter 3

Review of papers found

This chapter will focus on the common themes identified within the 19 papers found in the previous chapter. The Critical Appraisal Skills Programme (CASP) (PHRU, 2007) will be the framework used to assess the reliability and validity of the 19 papers found.

Condom usage

Consistency

One of the main themes within the papers was to attempt to increase consistent condom use in all sexual acts, as many papers found that pre-intervention condom usage was very poor. 16 of the 19 papers identified inconsistent condom usage as the primary factor that needed to be addressed within their intervention. Harvey et al (2009) completed a randomised controlled trial (RCT), where heterosexual couples, aged 18 to 25 years, were interviewed to assess their condom use consistency within the previous three months. The 301 couples assessed were then randomised to receive a sexual health intervention or to a control group who received a short talk on sexual education. The intervention consisted of information and group sessions aimed at reducing their risk of STIs and HIV, and prevention of unwanted pregnancies. It also addressed individual and relationship factors associated with increased condom use, and advised the couples on how to maintain consistent condom use within their relationships. The findings of the study established that the intervention had a positive effect on increasing condom usage within the relationships, as well as increasing sexual communication between partners, resulting in less sexual risk behaviours. The control comparison group noted no change in behaviour, condom use or sexual communication with partners.

Grossman et al (2008) found very similar results. Their study used the Transtheoretical Model Stages of Change (Prochaska and DiClemente, 1986) within an RCT, to assess whether young people aged 15 to 21 years moved towards or

away from adopting consistent condom use behaviour. They found that the intervention group had a higher consistency of condom use after receiving the intervention, due to perceiving more advantages of using condoms, greater communication with partner and less perceived invulnerability to HIV.

Guest et al (2008) used an HIV prevention double-blind RCT in Ghana, conducted solely with female participants aged 18 to 35 years, to assess whether risky behaviour would increase within the intervention group, due to the participants and their partners perceiving themselves to be protected from HIV. The study found that the intervention did have a positive effect on the behaviour change of the young women, as they increased their condom use, and used them more consistently, but some of the participants reported an increase in sexual partners due to being seen as 'clean' and 'free from HIV' as they protected themselves using condoms, so became more desirable to male partners. This was an unexpected outcome, and further interventions are required to inform the participants of the risk of multiple partners, even when they are using condoms consistently. The results from the three studies show that condom use consistency behaviour can change if the correct method of intervention is used to promote healthy sexual behaviour change.

Awareness

Some of the young people interviewed in the studies stated they were unaware of where and how condoms could be acquired (Kiene et al, 2008; Tucker et al, 2006; O'Leary et al, 2000). Some also reported they were unaware of how to correctly use condoms; many stating they did not use them due to the condoms breaking on previous occasions. O'Leary et al (2000) carried out an RCT assessing the indicators of behaviour change, consistency of condom usage, frequency of unprotected sexual acts, and awareness of condom advantages. The study was conducted in seven STI clinics in the USA on participants aged 17 to 44 years. The findings concluded that many of the participants were unaware of how to use condoms correctly, so did not use them consistently for every act of sex, increasing

their frequency of unprotected acts. Some also reported that they did not know the advantages of condom use, such as prevention of unwanted pregnancy, and protection against HIV and STI transmission (O'Leary et al, 2000).

Decision making and sexual communication

Many of the studies found that young people did not discuss condom use with their partners, and therefore did not know their partner's viewpoint about using condoms; therefore they could not make an active joint decision about using condoms during sexual acts. Braithwaite and Thomas (2001) assessed the self esteem, self efficacy, sexual communication, and HIV knowledge of African American and Caribbean college women. They found that most of the women were sexually active, but the intervention did not cause the women to change their behaviour significantly.

Even though the study was conducted equally at both sites, it was reported that the African American women had more HIV knowledge, and took fewer risks than the Caribbean women, but there was very little change in the amount of sexual communication with partners, and few informed, joint decisions regarding condom use in both groups of women. The Caribbean women were of the opinion that condoms should only be used if one partner does not trust the other, so many did not use them regularly (Braithwaite and Thomas, 2001). This highlights the fact that although the women are given the information regarding safer sex, and efficacy of communication with partners, they will not change their behaviour if they do not believe they are taking risks with their sexual health.

Self efficacy

Condom self efficacy, where people feel confident in using condoms correctly and discussing their use with potential partners, was identified by many of the papers as an issue that required addressing (Braithwaite and Thomas, 2001; Herlitz and Steel, 2000; O'Leary et al, 2000). O'Leary et al (2000) also found that condom use self efficacy varied within their study, and information regarding advantages of

condom use and how to use them correctly was best delivered on an individual basis, so questions could be answered adequately. This will allow people to change their behaviour due to having sufficient information about condom usage, and their advantages (O'Leary et al, 2000).

Negative perceptions

Due to peer influence and incorrect facts acquired, some young people have negative perceptions regarding condoms, so do not use them regularly, and in some cases, the young people do not use condoms at all. Ndubani et al (2003) aimed to enhance the understanding of men's sexual health, and their prospects for behaviour change. They randomly selected 79 men, aged 16 to 25 years, in Zambia, and interviewed them using a questionnaire. The men informed the researchers that their main obstacles to maintaining good sexual health were inadequate health facilities, unemployment, and disease. Many of the men reported that they did not use condoms, as they were 'real men', even though 91% perceived themselves to be at risk of contracting HIV; only 27% used condoms during every sexual encounter. The study concluded that there are prospects for changing the sexual behaviours of men, but the prevention messages need to build on previous knowledge, as the men are unwilling to change if they do not see the advantages of reducing their risk behaviours (Ndubani et al, 2003). This study shows that due to previous negative perceptions of condoms, many of the men do not use them. An intervention aimed at increasing their knowledge and highlighting the efficacy and advantages of condoms may help to dissipate their negative views, and help to reduce their risk taking behaviours.

Behavioural intentions

Many of the young people studied identified that condoms did not alter their behavioural intentions, but their condom beliefs and opinions did change after the intervention. These modifications in opinions resulted in increased condom use during sexual intercourse, and therefore increased protection against HIV and STIs

within the study participants. Tucker et al (2006) conducted an RCT within a secondary school based setting, aimed at young people, assessing their knowledge of condoms, and attitudes and intentions towards sexual behaviours. The intervention participants reported a significant increase in confidence of acquiring and using condoms, and an increased knowledge about condoms and their role in protecting against STIs and HIV. They also reported changes in their behavioural intentions, due to increased knowledge about condoms and how to use them effectively (Tucker et al, 2006). This study of young people demonstrates that if they are provided with sexual health information, they can make informed choices to change their behavioural intentions.

Number of sexual partners in the last three months

Number of sexual episodes with regular or casual partners

Another theme within the studies was engaging in sexual acts with multiple numbers of partners within a short period of time. Pre-intervention levels were high on most of the studies found. Metzler et al (2000) conducted an RCT aimed at adolescents, aged 15 to 19 years, recruited from a public STI clinic. The intervention targeted decision making about safer sex goals, social skills for achieving safer sex, and acceptance of negative thoughts and feelings. After the intervention, the participants reported a decrease in the number of sexual partners, and the number of non-monogamous partners. They also had fewer sexual contacts with strangers, and decreased their use of marijuana before and during sexual acts; although these results were not considered significant, so the behaviour change intervention did not produce a statistically significant outcome (Metzler et al, 2000).

Kiene et al (2008) conducted a web-based survey of sexually active college students, investigating day-to-day variability in condom use attitudes and behavioural intentions. The students reported their sexual behaviour on a daily basis, giving details of condom use, negative feelings and behavioural intentions. The study findings concluded that if negative feelings were present, condom usage was lower, and there were a higher number of partners with whom they engaged in

risky sexual activities (Kiene et al, 2008). These two papers highlight that interventions aimed at reducing the number of partners with whom the participants engage in sexual activities with are only successful if the participants understand the risks and are prepared to change their behaviour. It is clear from the analysis of the papers that the study participants will not change their behaviour if they are experiencing negative feelings, or cannot perceive the benefits of using condoms consistently and reducing the number of sexual partners (Kiene et al, 2008; Metzler et al, 2000).

Multi-partnered or concurrent relationships

Many of the study participants reported having two or more partners throughout their study periods, or believed their partners were in multiple relationships. This information highlights the fact that many young people are taking increased risks with their sexual and physical health, and could be affecting many others with whom they engage in sexual relationships, unless condoms are used consistently.

Sikkema et al (2000) conducted an RCT at community level to assess the efficacy of an HIV prevention intervention for women living in inner-city, impoverished neighbourhoods, who are at high risk of contracting HIV. Peer leaders were used alongside intervention supervisors to deliver HIV prevention information. Many of the women questioned stated that they were in a relationship with a male who had sexual relations with other women, or were in an exclusive relationship with a man who injected drugs or was HIV positive. These relationships place the women at increased vulnerability risk of contracting HIV or STIs if condoms were not used consistently. Some of the women also reported being in multiple, concurrent relationships during the study, and many indicated that they did not use condoms on a consistent basis, further increasing their risk of contracting and transmitting HIV or STIs to others.

Post-intervention the women reported a positive attitude toward behaviour change, as many decreased their unprotected intercourse in the past two months

from 50% to 37.6% and condom usage increased from 30.2% to 47.2%. Improvements in HIV risk knowledge, greater perceived personal risk for HIV, and greater condom discussion with partners were initiated, along with a decrease in the number of multi-partnered relationships within the women who received the intervention (Sikkema et al, 2000).

Risky sexual behaviour and attitudes

The majority of the papers identified risky sexual behaviour as a common theme within the lives of young people. The papers report that condom usage was low, and multi-partnered relationships were common in young people aged 16 to 24 years, revealing that attitudes and behaviours towards sexual health needed to be addressed. James et al (1998) conducted an RCT within a GUM clinic in the UK, assessing self reported condom use, behaviour change, and attitudes to condoms. The study found that the intervention participants were more likely to carry condoms and more likely to perceive themselves at risk of HIV, so were less likely to take as many risks with their sexual behaviours. The research concluded that the intervention had limited effectiveness, as many of the participants re-attended the GU clinic within the following year (James et al, 1998); alternatively, these findings suggest that the participants were more aware of their sexual health risks as a result of the intervention.

Ferrer et al (2009) also found that there were still sexual risks taken by participants, even when they claimed to be within the maintenance stage of change in the Transtheoretical Model (TTM) (Prochaska and DiClemente, 1986), where they should be using condoms consistently, during all sexual behavioural acts. 18% of the participants within the maintenance stage of change reported one or more sexual risk behaviours during the previous 30 days (Ferrer et al, 2009); this demonstrates that people have to be willing to change their behaviour, or the interventions will not work in maintaining safer sexual behaviours and consistent condom use.

HIV/STI knowledge and awareness

Perceive selves to be at low risk

As many of the participants within the studies were recruited in sexual health clinics and settings, it is surprising that many considered themselves to be at low risk of HIV and STIs. This may have been due to a lack of knowledge about transmission, or ignorance towards their health and wellbeing. Gerressu et al (2009) conducted one to one interviews and group discussions with young people aged 15 to 27 years, recruited from a GUM clinic in London. The results showed that the young people had mismatched perceptions and barriers to condom use, so difficulties were experienced in implementing risk reduction strategies. The study concluded that STI and condom knowledge was very low, and was not enough to equip young people to reduce their STI risk, as they believed they were at low risk of contracting and transmitting the infections (Gerressu et al, 2009); this resulted in low condom usage, and increased risky sexual behaviour.

Lack of knowledge or incorrect beliefs

Many papers found that young people aged 16 to 24 years have low rates of condom usage due to lack of knowledge about transmission of HIV and STIs and their prevalence. These interventions focused on increasing consistency in the use of condoms for all acts of sexual intercourse. Brigham et al (2002) produced an AIDS education class, aimed at increasing student knowledge and changing high risk behaviour, within the college and university participants. The course evaluation, conducted using a questionnaire, indicated a substantial decrease in the percentage of students who engaged in high risk behaviour, as their knowledge of HIV and STIs was increased, and any preconceived opinions and beliefs were altered (Brigham et al, 2002); this resulted in more knowledgeable, accurate decisions being made regarding sexual behaviours, and less risks taken.

Attitudes towards HIV and STIs

Some of the studies within the papers found that young people aged 16 to 24 years had a negative attitude towards people who had been diagnosed as HIV positive, or people who had been diagnosed with an STI. Herlitz and Steel (2000) conducted a 10 year study within the Swedish population to address attitudes towards HIV and sexual risk behaviour. They found through the use of a cross sectional survey that over the 10 years, there had been changes in attitudes towards HIV, but only small amounts of change had occurred within sexual behaviour. The younger participants were more likely to use condoms, but little change in sexual relations with multiple partners and unprotected sex was observed from 1987 to 1997. They concluded that although attitudes towards HIV and STIs had experienced a positive change, sexual behaviours remained constant (Herlitz et al, 2000). These results could be indicating that there was a change in perceptions of HIV within the 10 year period, but there was less change identified in the perception of risks taken when engaging in unprotected sexual acts; therefore further interventions are needed to address this problem.

Factors affecting young people

Substance and alcohol use before, during and after sexual acts

One of the main barriers to safe and protected sex within young people's lives is the use of illegal drugs such as marijuana, ecstasy, and the use of excessive amounts of alcohol, which severely impair their judgement, and their ability to make well informed, accurate decisions. Two of the studies found that substance and alcohol use was a major obstacle in practicing safer sex in young people. Rotherham-Borus et al (2001) conducted an RCT of HIV positive youths aged 13 to 24 years, providing an intervention of two modules aimed at improving the health behaviours, and enhancing the motivations to reduce transmission acts within the youth. The intervention attendees reported high rates of substance and alcohol use in the pre-intervention assessments. These rates were considerably decreased post-intervention, along with decreased rates of marijuana and hard drug use. The

study also found that the intervention resulted in significantly fewer sexual partners per attendee, and lower percentages of unprotected sexual risk acts.

Kalichman et al (2005) used counselling in an STI clinic to assess the sexual risk behaviours and condom usage of their participants. Post-intervention they found that they could classify their participants into three groups depending on their sexual behaviour. One group did not change their sexual behaviour, but due to their low levels of unprotected sex, they were at low risk. The second group decreased their sexual risks significantly, and the third group began to decrease their risks, but after the intervention had been completed, they increased the amount of unprotected sexual encounters, therefore increasing their sexual risk. These studies found that substance and alcohol use had a significant effect on their participant's ability to make informed decisions about sexual behaviour, and established if substance and alcohol use was decreased, sexual risk behaviours also decreased.

Lack of sexual control

Many of the young people interviewed within the studies, especially the young men, reported that they often did not use condoms if they were not readily available to them at a specific time. This resulted in increased sexual risk taking, and increased risk of transmitting or contracting an STI. Tagoe and Aggor (2009) used a behavioural surveillance survey, conducted within the University of Ghana, to determine the risky student behaviours present within the participants. They compared the actions and opinions of male and female participants aged 17 to 24 years, and their knowledge of HIV and STIs. The survey revealed that due to the sensitive nature of the questions asked, some students concealed details of their sexual behaviour, or gave false information. The study also indicates that the students had inadequate knowledge of HIV and STIs to be able to sufficiently protect themselves against contracting the infections.

One of the main outcomes of the survey was the lack of sexual control that the females felt whilst in university. They were forced to engage in sexual relations

with men for monetary reward, in order to be able to afford to remain in education and purchase clothes and material possessions. The females stated that they felt pressured into having sexual relations with multiple partners, as this was the social norm for all of the females on campus, and peer influence encouraged this behaviour. The males believed that encouraging the females to behave in this manner was acceptable, and offering monetary reward for sexual acts was usual practice (Tagoe and Aggor, 2009).

These practices emphasize the risky behaviours that young people feel they are obliged to take to be included in social conventions. Young females should not feel a lack of control over their sexual experiences, or be pressured into engaging in sexual acts against their will, purely because this is seen as socially acceptable practice. Although the intervention aimed to identify risky behaviours taken by students, a further intervention is required to specifically increase females' control of their sexual choices, and enable them to make informed decisions about their behaviour and practices.

Lack of self esteem

Another theme was the power imbalance between women and men in initiating and discussing sexual acts, where women felt that they had no choice to refuse sex with some of their partners. These interventions focused on increasing the self esteem of the women (Tagoe and Aggor, 2009; Gerressu et al, 2009; Braithwaite and Thomas, 2001).

Maintaining healthy relationships

From a comprehensive review of the papers, there was a clear boundary to using condoms for young people aged 16 to 24 years. One of these barriers was the worry that the suggestion of using condoms would imply that one partner did not trust the other partner, causing instability within the relationship and possibly causing the relationship to end prematurely. Fisher et al (2002) used an RCT to deliver an intervention based on HIV risk using an information-motivation-

behavioural skills model. The intervention was undertaken on high school students aged 13 to 19 years, and was expected to initiate and maintain patterns of HIV prevention behaviour. The intervention was delivered in a classroom setting by usual teaching staff, peer information, and a combination of both. The results showed that there was a difference in attitudes and behaviours between sexually active and sexually inactive participants, as they had differing opinions and knowledge about sexual behaviours.

After the intervention, the sexually inexperienced participants reported a significantly greater increase in their HIV prevention knowledge, and improved HIV prevention intentions and attitudes. The sexually experienced participants noted a significantly positive effect on the norms of condom use, and adopted a positive attitude towards preventative behaviour. The results of the intervention found that the classroom based intervention had more positive and sustainable changes in HIV preventative behaviour than the other two conditions. These results were found as the peer information was occasionally inaccurate and misleading to the young people, so they continued to practice behaviours that were detrimental to their sexual health, resulting in fewer positive results found in the peer information and combined interventions. The study also found that as the participants became more knowledgeable and had more positive attitudes towards HIV, their relationships with partners became stronger, as they were able to communicate about condom use, and practice preventative behaviour (Fisher et al, 2002). Gerressu et al (2009) emphasised the need for young women to be made aware of their sexual health risks, in order for healthy relationships and self esteem to be maintained.

Summary

Overall, the majority of the papers found that pre-intervention condom use was low due to lack of knowledge about how to use condoms correctly; lack of knowledge about the prevalence and transmission of HIV and STIs, and how condoms can help to prevent this occurring; unsure of partner's view on the use of condoms; and the fear that suggesting the use of condoms meant that one of the

parties within the relationship did not trust their partner, and this would cause the relationship to end prematurely.

Through using the CASP framework to review the papers, it was found that none of the papers considered the relationship between the researcher and the participants. None of the researchers critically examined their own role, potential bias and influence in formulation of the research question, participant recruitment, data collection or data analysis.

Many of the papers did not discuss whether ethical implications had been considered, such as whether the research study had been sufficiently explained to the participants, if ethical approval had been sought from ethics committees, or if the researcher had addressed informed consent and confidentiality issues. This was a major concern whilst analysing the papers, as if the studies were conducted without ethical approval, the participant responses and data found could be invalid and not credible.

One of the limitations found within all of the studies was the fact that all of the data collected was self reported. The participants may have been untruthful in their answers, but as the data was of qualitative nature, the results found have to be taken as authentic and reliable.

Chapter 4

Discussion

This chapter will focus on the credibility of the studies found, and how the results affect young people and their sexual behaviours.

The main finding from the 19 studies included was the lack of consistent condom use when engaging in sexual relations. This risky sexual behaviour, displayed by many of the participants within the studies, was a common theme within the papers. Sexual behaviour change interventions, aimed at reducing risky sexual behaviour, and increasing knowledge and awareness of condom use, STIs and HIV were delivered to the young people in an attempt to improve their sexual health, and in turn, the sexual health of their partners.

Many of the studies focused their intervention on trying to increase condom usage, awareness and knowledge in young people aged 16 to 24 years, as they are the age group that take the highest risk in sexual behaviours (HPA, 2008). STIs and HIV are the main cause of illness in young people aged 16 to 24 years. The number of new STI diagnoses at GUM clinics has risen steadily over the last 10 years. Although young people aged 16 to 24 years represent only 12% of the UK population, they experience the highest rates of STIs, and account for nearly half of all STIs diagnosed in GUM clinics. 65% of all Chlamydia diagnoses, 55% of all genital warts, and 50% of all Gonorrhoea diagnoses are found within the 16 to 24 years age group. These young people experience the highest rates of infection as they are the most sexually active age group and are more susceptible to infection (HPA, 2008).

The HPA has reported a 6% increase in the total number of new STIs diagnosed in 2007 compared to 2006, although there was a 10% increase in the number of sexual health screens carried out, so an increase in new STI diagnoses was to be expected. The number of people being tested for STIs continues to rise every year, with more than one million sexual health screens carried out in 2007. The HPA report found that the increase in testing, and decrease in waiting times for

GUM services, ensures prompt treatment for infections, reduced risk of transmission and complications developing (HPA, 2008); if these practices are sustained, this could have significant impact on the control of STIs. Reliance on prompt diagnosis and treatment alone is not sufficient; a change in the behaviours of young people is the only way that the continued decrease in infection rates can be upheld. The HPA state that it is crucial that young people continue to be exposed to safer sex messages, including using condoms, and the importance of being tested at a GUM clinic if they have had unprotected sex with a new partner (HPA, 2008).

Most of the studies included found that pre-intervention condom use, knowledge and attitudes were very poor within this age group, but post-intervention, there were improvements in attitudes, knowledge and consistency of condom use demonstrating reductions in the amount of risky behaviour taken. In a survey of young people, 90% of both women and men who used condoms revealed that they used them primarily to prevent pregnancy, and 45% used them to prevent infection (ONS, 2009a; ONS, 2009b). In 2009, the Office of National Statistics (ONS) found that the use of condoms is now equal to the use of the contraceptive pill as the woman's usual method of contraception, in women aged 16 to 50 years; condoms are used by 25% of women under 50 years of age and an equal percentage use the contraceptive pill as a method of birth control (ONS, 2009a; ONS, 2009b). The ONS also found that 75% of women under the age of 50 were using contraception. The younger women preferred the use of condoms or the contraceptive pill, and older women were more likely to rely on sterilisation or their partner's vasectomy (ONS, 2009a; ONS, 2009b).

A survey conducted by the ONS (2009b) found that over half of the young men interviewed (59%) who stated that they were not in long-term relationships, but had been in a sexual relationship in the past year, disclosed that receiving information on HIV and STIs had no effect on their behaviour. However, 34% stated they had increased their condom use, 6% had fewer casual relations, and 6% had been tested for STIs when they changed their partners (ONS, 2009a; ONS,

2009b). This information is encouraging as it appears that the young men are changing their risky sexual behaviours in a positive manner; however, these statistics do not identify the specific number of sexual relations or condom use consistency, therefore the numbers may have reduced, but it is unclear by what amount, and if this is a significant reduction.

Another common theme within the papers was an increased number of sexual partners, whether regular or casual, reported by the young people. These increased numbers of partners indicate high rates of sexual risk taking, as many also reported low rates of condom use with multiple partners.

Sexual communication between partners, regarding condom use and sexual beliefs, was inadequate before the interventions were commenced, as many participants reported anxiety in questioning their partner about using condoms, due to the fear their relationship may suffer damage, and accusations of being unfaithful may be raised. After the interventions had taken place, some of the participants found it easier to discuss their sexual concerns with partners, and therefore communication about condom use was more straightforward. This increase in sexual communication helped the participants to maintain healthy relationships, which was of great importance to many of the participants. A key point identified to sustain a healthy relationship by the participants, after they had received the intervention, was discussion of feelings and honesty about the relationship.

Substance, drug and alcohol use before and during sexual experiences was a significant factor in increased sexual risk behaviour, as the participants were less able to make informed, rational decisions due to the influence of the substances. Previous studies show that alcohol plays a key role in many young people's social lives, and excessive consumption often leads to decreased inhibitions, and therefore, the young people are more willing to take increased sexual risks, where rational thoughts and feelings are diminished. Hingson et al (2005) found that 8% of US college students aged 18 to 24 years have unprotected sexual intercourse related to excessive alcohol use annually. This was also suggested by Mallett et al

(2006) who found that many students overestimate the number of drinks they can consume without experiencing negative consequences, such as lack of personal control and decreased inhibitions. These studies emphasise the risky behaviours that can occur when substances are taken prior to sexual relations, and how intoxication promotes the risky behaviours.

Many of the young people within the studies felt that their lack of knowledge and awareness regarding HIV and STIs, and correct condom use was due to lack of education about how to maintain good sexual health. This emphasises the need for adequate sexual health education within schools, to ensure that young people are aware of how to protect themselves and others from contracting infections and taking unnecessary risks. Although the studies aimed to increase awareness and knowledge, many of the young people continued to take sexual behaviour risks, such as inconsistent condom use. This queries whether the studies were providing the information in an acceptable format, so the young people would listen and integrate these behavioural changes into their lives.

Several of the study participants reported feeling a lack of control and self esteem regarding their sexual behaviours, due to peer or partner pressures. A number of the young women questioned felt they had to engage in sexual relations in order to conform to social norms, and be accepted within society. Some of the participants also felt they had to engage in sexual relations with numerous men for monetary rewards in order to be able to afford their education. This was seen as acceptable behaviour by particular groups, especially young African men, as these men saw no problem in paying for sexual acts. Several of the interventions endeavoured to change these perceptions and explain to the women with low self esteem and feelings of lack of control, ways in which they could regain control in their relationships. Three of these interventions were successful, as the women reported feelings of increased self esteem and self control during post-intervention assessment (Tagoe and Aggor, 2009; Gerressu et al, 2009; Braithwaite and Thomas, 2001).

There is a vast amount of information regarding sexual health available to young people, in many different formats. Media images and campaigns are evident in magazines, newspapers, in advertisement breaks during television programmes, on billboards, on the sides of buses and taxis, and within most healthcare setting waiting rooms. Sexual health education is also delivered to older primary school children. It is difficult to understand why some young people claim they are unaware of STIs and HIV, and do not know about using contraceptives, as the information is around them in many different forms. One explanation for this sexual health ignorance is that many of the young people questioned felt that they were not at risk and were of the opinion that "it won't happen to me", so were unwilling to change their behaviour. It is a challenge to change the behaviour of someone who does not believe their behaviour is putting them at risk.

Prochaska and DiClemente's (1986) Transtheoretical Stages of Change Model explains this behaviour in the precontemplation stage, where a change in behaviour has not been considered, or the person believes that the change is of no benefit or interest to them. Young people will only consider changing their behaviour, or realise that they need to make a change in the second stage, contemplation, where they are aware that a problem exists, but they make no commitment to definitely change their behaviour. It is only in the preparation and action stages that a positive step towards making changes to their behaviour occurs. Maintenance of these positive behaviour changes is the most difficult stage, as people often relapse, and can fall back into old patterns of behaviour, where they may have to begin from the precontemplation stage once again (Prochaska and DiClemente, 1986).

From this Transtheoretical Model it is clear that healthcare professionals and other role models can only influence the young person's decisions regarding sexual behaviours and practices to a certain degree; they have to be willing to want to change before progress can be made.

In a report commissioned by the Office for National Statistics in 2009, it was found that television programmes and adverts were acknowledged as the main

source of information about STIs by 55% of the young people surveyed. Newspapers, magazines and books were revealed as the main source of sexual health information by 16%, sex information in schools and colleges accounted for 11%, and government information leaflets accounted for 3% (ONS, 2009a; ONS,2009b). Gillian Merron, the Public Health Minister was cited recently in the Sunday Telegraph newspaper stating that young people relate to the programmes they watch on television, so it is important that they see realistic and responsible portrayals of sex and contraception. This was in response to the Government's decision to monitor sex scenes on television, and suggestions to include more references to condoms and STIs in their storylines (Kite, 2010).

Strengths and weakness of the studies

Many of the studies were conducted well, and gave relevant results that contributed to previous knowledge of young people's sexual risk behaviours. Ten of the 19 papers included in the literature review were RCTs, which are the most appropriate kind of intervention to use when seeking information regarding risk behaviour and the sexual health of young people (Stephenson and Imrie, 1998). In clinical medicine, RCTs are considered the best way of measuring the efficacy of interventions, due to their ability to reduce bias and avoid false conclusions (Stephenson and Imrie, 1998); however, RCTs have limitations in behavioural trials, as blinded allocation to treatment conditions may be impossible, due to the participants being aware of whether they receive the behavioural intervention or the comparison control treatment, though this should not affect the outcome of the study (Stephenson and Imrie, 1998).

Although some of the papers did not discuss their consideration of the ethical issues that could affect the participants, the majority of the studies discussed the research project with their participants, and how it would be conducted, to ensure they understood the purpose for which their data would be used. None of the papers considered the relationship between the researcher and the participants; no critical examination of the researcher's role, influence or

potential bias whilst formulating the research question, collecting the data, and analysing the data was carried out in any of the research studies. Although the CASP framework (PHRU, 2007) recommends that critical analysis of the potential bias and influence should be carried out, there was no evidence of bias or influence within the papers. The participants were not required to maintain a relationship with the researchers, due to the need for confidentiality and anonymity. Due to the sensitive nature of questioning, the participant preference was to remain anonymous, therefore development of a relationship would be deemed inappropriate.

There were some papers identified within the research process that may have been of use to this study, but due to unavailability online and within the library, they could not be accessed. Several other studies were found to be of potential use, but required subscription to the journal or high monetary cost for access, therefore they were not included in the selection of papers. The lack of access to these papers may have hindered the study, although this was unavoidable. As all of the data within the studies was self reported, the validity and reliability of the data is an issue, and is a significant limitation in providing accurate results. This is an issue that all studies find when they use qualitative data, as people's perceptions and views cannot be considered wrong, and does not specifically mean that the participants were being untruthful; therefore the results found have to be taken to be truthful, and interpreted as authentic.

Aims and Objectives

The aim of the dissertation was to explore the effectiveness of behaviour change interventions undertaken in an attempt to reduce sexually transmitted infection rates, increase condom usage and decrease the amount of sexual risk taking behaviour in young people aged 16 to 24 years.

Identify current sexual risk taking behaviours taken by young people aged 16 to 24 years

This objective was met, as most of the interventions conducted baseline interviews and questionnaires to assess the type and amount of sexual risk behaviours that young people engaged in. They found that condom use consistency, awareness and knowledge was low, number of sexual partners and number of sexual episodes was high, and knowledge and awareness of HIV and STIs was low. Lack of sexual control, lack of self esteem, decreased communication with partners, low risk awareness of infection, and low motivation to change sexual behaviour was also found. These themes created a basis for the interventions to build on, where they aimed to increase knowledge and attitudes, decrease risky sexual behaviour and change sexual behaviours.

Identify condom use consistency within the age group

Condom use consistency was very low at baseline level in all studies. The majority of the studies used this information as the basis for their intervention, and conducted baseline interviews and questionnaires to assess the individual's degree of consistent condom use. Once the individual had been subjected to the intervention or comparison control condition, their level of consistent condom use was reassessed to discover how the information they had been supplied with had affected their behaviour, and whether they had made significant behavioural improvements within their relationships.

Ascertain whether the interventions have had any effect on the risk taking behaviours

The interventions have had some success at improving the risk taking behaviours, but not all of the studies found significantly positive changes in sexual behaviour within the young people. Other studies found that the intervention gave successful results immediately following the deliverance of the intervention, but when the sexual behaviour was reassessed after three, six or 12 months, the young

people's behaviour had returned to baseline levels, where they were taking more risks with their sexual behaviour. This shows that support and guidance needs to be provided to the young people after they have received the intervention, so they can continue to maintain their good sexual practices, or relapse will occur.

Outline common themes in sexual behaviour of young people, and how these were altered through behaviour change intervention

The sexual health themes of young people have been identified and analysed throughout the review and discussion chapters, the effects of the interventions have been examined to provide an overview of their effectiveness, and further research requirements have been acknowledged.

Research Question

"Do behaviour change interventions alter sexual risk taking behaviour and decrease the amount of unprotected sexual acts in young people aged 16 to 24 years?"

The research question has been answered using the above objectives. This study found that behaviour change interventions can alter the sexual risk taking behaviour of young people, by decreasing the amount of unprotected sexual acts, increasing condom, HIV and STI knowledge and attitudes, decreasing the number of sexual partners, increasing self esteem and sexual control, and promoting healthy, communicative relationships; although the extent to which the interventions have been successful varied from paper to paper. Many of the papers included found that the behavioural interventions were successful immediately after the intervention had been delivered, but during follow up assessments, it was found that some of the participants' behaviours had returned to previous risky levels, demonstrating that most of the beneficial behaviour changes were no longer being practiced.

Methodological considerations

The methodology used was very effective in finding the specific papers required for the literature review study. Hek et al's (2000) seven stages for reviewing the literature were valuable in identifying papers that would be of use to the study, as at each stage the papers that were of less use were excluded, and papers of potential use were found. This method of searching the literature ensured that the most useful and up-to-date research papers were found, and could therefore be analysed to identify the current behaviours of young people, and how the interventions undertaken affected the young people's sexual practices. The CASP framework (PHRU, 2007) used to review the papers was very effective in evaluating how valid and reliable the study results were, as the 10 questions analysed the methods, data collection, data analysis, results, and conclusions drawn. In using this critical appraisal tool, the results from the 19 papers identified were analysed to determine the accuracy, reliability and validity of the papers.

Implications for nursing practice

In 2001, the NSSHH was developed by the DoH in an attempt to improve the sexual health of the nation. The NSSHH focuses on better prevention from HIV and STIs, better service provision available for all, and therefore better sexual health in general (DoH, 2001). A further significant development influencing the sexual health of the nation was the introduction of the National Chlamydia Screening Programme (NCSP), an NHS sexual health programme set up by the DoH in England in 2003, which has made Chlamydia screening available to all. Since the launch of the programme, one and a half million Chlamydia tests have been performed nationwide by the NCSP (www.chlamydiascreening.nhs.uk, 2010). It aims to ensure that all sexually active young people under the age of 25 are made aware of Chlamydia, the effects it has on people physically and emotionally, and to ensure that all young people have access to free and confidential testing services.

Regional campaigns have been launched in an attempt to confront the problem at a local level; Nottinghamshire County have initiated a Chlamydia

screening programme. In January 2010, letters were sent to all 18 to 24 year olds in Nottinghamshire inviting them to undertake a Chlamydia test, with an incentive to be entered into a prize draw to win contemporary electrical goods (www.screen-me.org, 2009).

In 2004, the DoH developed *Choosing Health: making healthy choices easier*, a white paper aimed at tackling many of the health challenges the public faces, including sexual health. The paper has caused the implementation of changes in healthcare service provision (DoH, 2004), but further changes need to be made, to ensure that all of the public have equal access to adequate healthcare. Raine et al (2004) recognise that improving public health is about changing behaviour. They advise that an in-depth understanding of the personal values, beliefs, preferences and aspirations that drive differing practices is required before interventions designed to modify the behaviours can be implemented successfully (Raine et al, 2004).

In 2008, the Medical Foundation for AIDS and Sexual Health (MedFASH) reviewed the progress of the NSSHH. It is significant to note that the review discovered that diagnoses of STIs continue to increase, most specifically among young people. It also found that risky sexual behaviour is continuing, as one third of young people report inconsistent condom use. Frequent use of alcohol and other drugs continues, resulting in an increase in the number of sexual partners and decreased likelihood of using protection (MedFASH, 2008). The review has shown that although many positive changes in sexual health information and screening provision since the implementation of the NSSHH have been found, further government interventions must be put into practice at national, regional and local levels, to ensure the sexual health of the population continues to improve.

Following the development of the NSSHH, in 2009, the DoH generated a campaign that makes contraception a topic worth discussing. The campaign, *Sex: worth talking about*, was designed to help young people make more informed choices about contraception, and look after their sexual health. It aims to promote more open and honest discussions about sex among young people aged 16 to 24

years and their parents (DoH, 2009; www.nhs.uk/worthtalkingabout, 2010; Directgov, 2009).

The first phase, *Contraception: worth talking about*, intends to increase their awareness of the 15 different types of contraception, and inform them that they will not be protected from STIs unless they use a condom. For too long sex has been seen as a 'taboo' topic and people were afraid to discuss it openly, but this campaign is designed to change attitudes, and help people to discuss sex, contraception and relationships without feeling uncomfortable. Research has shown that poor awareness and communication holds young people back from adopting safer sexual behaviour practices (Directgov, 2009). The campaign is advertised on national television channels, and features snippets of 'contraception conversations' between friends and family in speech bubbles; this format is used to help promote young people to discuss these issues with their friends, partners and family (DoH, 2009; nhs.uk/worthtalkingbabout, 2010; Directgov, 2009).

Many nurses find it difficult to talk to young people about sex. The RCN suggests that some nurses are confused, embarrassed, and often unsure what to do when patients ask for advice or information regarding sexual health (RCN, 2000), even though sexual health is an important element of patient care; therefore more nursing training and education needs to be implemented to ensure patients receive the care they need. The RCN also suggests that nurses who work with young people must be able to identify their sexual health needs, to ensure they receive professional and effective sexual healthcare (RCN, 2005).

The DoH have announced that it is crucial for healthcare professionals to have the language, knowledge and understanding available to help make young people feel comfortable and at ease with open and honest conversations; nurses need to be competent and confident in delivering advice and information to young people. By implementing the *Sex: worth talking about* campaign, and normalising talking about sex in general conversation, informative discussions can be maintained between nurse and patient, ensuring they are aware of contraceptive options and how to protect themselves adequately. One of the key aspects to

delivering successful practice is making the environment welcoming and non judgemental to young people, helping them to develop trust in the healthcare professional, and seek advice earlier (Eveleigh et al, 2009). New roles can be developed for sexual health nurses to expand the range of services available to patients (RCN, 2009), therefore increasing patient choice in which service they prefer to access.

The NSSHH identified that risky sexual behaviours were increasing, and ignorance about the possible consequences was high; the Strategy aimed to reduce these behaviours and increase knowledge (DoH, 2001). This current study has found that risky sexual behaviours are still prevalent, suggesting that this issue needs addressing further in future strategies.

Djuretic et al (2001) conducted a survey to assess the capability of GUM clinics to meet patient demand for routine and emergency appointments. They found that in some clinics, patients had to wait up to 28 days for a routine appointment. Only 54% of clinics could provide emergency consultations within 24 hours, whereas in 5% of clinics, some patients had to wait for at least one week. Prolonged waiting times were reported nationwide. They proposed that additional resources should be made available to GUM services in order for the population's health to be improved (Djuretic et al, 2001; DoH, 2001). General practitioner (GP) surgeries also need to be more proactive by including sexual health information in general consultations and dealing with the problem at the time, rather than referring to the GUM nursing team.

Nursing staff and individuals responsible for the sexual health of sexually active young people should use their communication and personable skills to advise young people about changes that they could make to prevent them from contracting STIs and HIV, including fewer sexual partners and avoiding overlapping, concurrent sexual relationships; using a condom when engaging in sexual relations with new partners and continue to use them until both partners have been tested for STIs and HIV and have received negative test results; and going for STI and HIV screening before and after every new partner (HPA, 2008).

The HPA report (2008) found that it is essential to provide young people with the necessary information and skills to be able to negotiate and engage in safer sexual behaviour, where they can make informed and accurate sexual practice decisions (HPA, 2008). The National Institute of Health and Clinical Excellence (NICE) (2007) suggest implementing one to one structured discussions based on behavioural change with individuals who are seen to be at high risk of contracting and transmitting STIs. The discussions should concentrate on reduction of risk taking behaviour and improvement of self efficacy and motivation (NICE, 2007). The Scottish Intercollegiate Guidelines Network (SIGN) also suggest that one to one counselling involving behaviour goals should be considered during consultations for sexual health and reproductive health issues for prevention of STIs. Condom use should also be promoted in all settings where sexual health information and advice is provided (SIGN, 2009). These recommendations are particularly relevant for nurses with GP and GUM settings.

Recommendations for future interventions

As the studies included within the review section of this study found that behavioural interventions were not always successful, further studies are required to change the risk taking behaviour of young people aged 16 to 24 years.

Further research into condom use consistency within young people aged 16 to 24 years is required. One to one structured discussions focused on assessing young people's perceptions, knowledge, and attitudes about condoms should be implemented in an attempt to change the risk taking behaviour of young people. Specific information regarding how to use condoms accurately, advice on where they can access free condoms locally, and persuasion to carry condoms whenever they believe they may be in a situation where they will be required to use them should be included in the discussions. More information must be provided to the young people about where and when they can access sexual health services, as many have previously reported a lack of knowledge about access, and have therefore not been able to receive the treatment and advice they require.

Support and guidance must be provided to all young people who have participated in a behaviour change intervention, in order for the positive changes to be maintained, as relapse back to previous practices can occur without encouragement to sustain the improved behaviour. As many of the studies identified conducted their intervention using both genders, it may be valuable to assess the differences between the genders, using separate intervention techniques that are specifically tailored to promote a change in male or female behaviour.

Further interventions are required to target more specific age groups of young people, for example 16 to 18 years, 18 to 21 years, and 21 to 24 years, as sexual behaviours can change with age, therefore require different approaches to initiate a change in sexual practices.

Interventions focused specifically on the use of alcohol and drugs before sexual relations should be delivered to young people at high risk from risky sexual behaviours, as this was identified as one of the main barriers that prevented young people from using condoms, and decreasing their risky sexual behaviours.

Increased communication and discussion about sex and sexual health needs to be implemented into general conversations and education, reducing the stigma and taboo related to sex, therefore making it more acceptable to discuss sexual opinions and practices.

In order to challenge young people's risky sexual behaviour further, a future research intervention could focus on increasing condom use using the research question:

"*Do behaviour change interventions focused on consistent condom use alter sexual risk taking behaviour and decrease the amount of unprotected sexual acts in young people aged 16 to 24 years?"*

Chapter 5

Conclusion

This dissertation was undertaken to ascertain if behaviour change interventions delivered to young people aged 16 to 24 years altered their risky sexual behaviours, and decrease the amount of unprotected sexual acts in which they participated.

Research suggests that many young people take increased risks regarding their sexual health, which has resulted in this age group having the highest rates of STIs in the population. There are many reasons why young people have high rates of STIs, which include lack of condom use and knowledge about how to protect themselves from STIs and HIV effectively, and the use of drugs and alcohol prior to sexual activity. Some research results proved inconclusive, suggesting that young people continued to take increased risks with their sexual health.

Nineteen studies relating to behaviour change interventions in young people aged 16 to 24 years were identified from various medical and nursing databases: ASSIA, CINAHL, Medline, PsycINFO, and Web of Knowledge. The papers identified were selected as the interventions had occurred in different environments, in different countries, therefore accurate comparisons and conclusions could be drawn about the sexual behaviours and practices of young people internationally. The interventions were undertaken on a varying number of participants, in a range of settings, and using different methods to collect and interpret their data.

The literature review of the papers found that the main risky behaviour taken by young people internationally was the lack of consistent condom use when engaging in sexual relations. Other major barriers in engaging in safer sexual practices were a lack of self esteem and self control; lack of knowledge and risk awareness regarding STIs and HIV and their prevalence; increased number of sexual partners, whether casual or regular; increased substance and alcohol use before and during sexual encounters; multi partnered or concurrent relationships; lack of condom awareness and self efficacy; negative attitudes towards condoms

and people living with HIV; lack of sexual communication between partners, and decision making about using condoms during sexual relations; and condom use behavioural intentions. Many of the papers reported large numbers of these issues present in their interventions, which suggests that the young people were taking considerable risks in their sexual behaviours.

The review also discovered that the behavioural interventions generated a variety of results. Some reported that the behavioural interventions were successful in increasing condom, STI and HIV knowledge, and positive behavioural changes were made, such as increased condom use consistency and decreased number of partners. Others found that although the behaviours of their participants changed after intervention, at follow up assessments the behaviours had returned to baseline level, and risky sexual practices were continuing. From this review of the literature, it is clear that the interventions conducted with the young people did not produce long lasting effects on their sexual behaviour, therefore significant results were not found.

It was concluded that it is very difficult to change the sexual behaviours of young people if they do not recognise and acknowledge that their behaviour is putting their own and others health at risk. Prochaska and DiClemente's Transtheoretical Model (1986) was used to identify the stages of change that people must undergo before their behaviour will change, and be sustained. If young people are unwilling to change their behaviour, then no amount of interventions or money spent on increasing sexual health service provision will make a difference in STI and HIV prevention, as every successful form of prevention requires change in behaviour.

These findings have implications on nursing practice, as further efforts need to be made to inform young people about the effects their risky sexual behaviours have on their own and others health. Nursing staff must highlight the importance of condom use for all sexual acts, and give advice and information regarding contraception, sexual health and relationships to all young people within general consultations, in an attempt to normalise discussions of sex. Although Chlamydia

and other STI screening is widely available nationwide, information on how to access the GUM services must be made available to young people, so that they have adequate knowledge of where they can receive testing and treatment.

Government documents and campaigns, such as the NSSHH, the *Sex: worth taking about* campaign, the NCSP, and *Choosing Health: making healthy choices easier* have been produced and implemented into sexual health services by healthcare professionals in an attempt to improve the sexual health of the nation. These documents have focused on increasing knowledge and attitudes towards STIs, HIV and condoms, increasing condom use consistency, and reducing risky sexual behaviours. The NSSHH was reviewed in 2008 by MedFASH, which found that although many positive changes in sexual health information and screening provision have been implemented, further government interventions are required to ensure the sexual health of the population continues to improve.

The aims and objectives of the study were achieved, and have been examined in the discussion chapter. The research question *"Do behaviour change interventions alter sexual risk taking behaviour and decrease the amount of unprotected sexual acts in young people aged 16 to 24 years?"* has also been discussed and answered. It was found that although behaviour change interventions may have some effect on decreasing the risk taking behaviour of young people aged 16 to 24 years, these changes are often short-lived, as many return to their previous risky sexual behaviour, if they are not supported in maintaining their positive behaviour changes.

Overall, the study found that further research and behavioural interventions are needed to advise young people about how to achieve good sexual health, and to increase their knowledge of condoms, STIs and HIV, and GUM services available. The behavioural interventions should be more specific to gender, and should be conducted on a one to one discussion basis to achieve more reliable and accurate results.