

THE UNIVERSITY OF HULL

Sexual Self-Concept, Stigma & Shame following a Chlamydia Diagnosis

being a Thesis submitted for the Degree of Doctor of Clinical Psychology

in the University of Hull

by

Anne Parry

BSc (Psychology)

June 2012

Acknowledgements

Firstly, I would like to thank everybody that took the time to participate in this research. I would like to thank Dr Kate Guthrie and Conifer House for agreeing to let me recruit at the clinic. I would also like to thank Emma and Sharada for their help with recruitment. This research would not have been possible without your support.

Secondly, I would like to thank Lesley and Julie for their knowledge, support and reassurance throughout this project. I would like to thank you both for your dedication when time was pressured and the deadline was approaching. I would also like to take the opportunity to thank Eric for his all his help and statistical guidance.

I'd like to thank my peers for their advice and support during the harder times of this process (you know who you are).

Finally, I would like to thank Chris, my family and friends for their continued support and encouragement over the last few years.

Overview

The portfolio has three parts: a systematic literature review, an empirical study and a set of appendices.

Part one is a systematic literature review in which empirical literature relating to the sexual risk taking behaviour and sexual self-concept is reviewed and critically evaluated. It aims to present an understanding of how dimensions of sexual self-concept can influence sexual risk taking behaviours. Recommendations are made for future research and clinical implications are discussed.

Part two is an empirical paper exploring the relationship between sexual self-concept, stigma and shame following a Chlamydia diagnosis. People attending a sexual health clinic for the treatment of Chlamydia were approached to participate in the study. Quantitative data were collected using a cross sectional design. The clinical implications and methodological limitations are also discussed and areas requiring further research are identified.

Part three comprises the Appendices to support the work in the first two parts and a reflective statement of the research process.

Contents

Acknowledgements.....	2
Overview.....	3
Part One: Systematic Literature Review.....	9
Abstract.....	11
Introduction.....	12
Method.....	16
- Search strategy.....	16
- Study selection criteria.....	17
- Study quality assessment.....	18
-Data extraction.....	19
- Data synthesis.....	19
Results	19
- Overview of research results.....	19
- Details of included and excluded studies.....	20
- Quality assessment.....	21
-Summary of Studies.....	21

Design & Methodological Issues	23
- Main findings.....	25
Discussion.....	43
- Overview of research findings.....	44
- Summary and implications.....	50
- Future research methodology based on limitations of studies.....	52
References.....	54
Part Two: Empirical Paper.....	63
Abstract.....	65
Introduction.....	66
- Rationale and Aims.....	70
- Research questions.....	72
Method.....	72
- Design.....	72
-Participants.....	72
-Procedure.....	73
-Measures.....	73

-Pilot & Consultation.....	75
-Statistical analysis.....	75
-Sample Size Calculation.....	76
 Results.....	 77
 Discussion.....	 85
- Limitations and future research.....	92
- Clinical implications.....	94
 References.....	 96

Appendices

Appendix A – Guidelines for authors for Journal of Sex Research.....	103
Appendix B- Diagram of The theory of planned behaviour model.....	107
Appendix C – Quality checklist.....	108
Appendix D – Quality assessment of studies.....	110
Appendix E– Inter-rater reliability check.....	113
Appendix F– Data extraction sheet.....	115
Appendix G– Ethical Approval REC.....	117
Appendix H– R&D Ethical Approval.....	118
Appendix I–Pilot Questionnaire.....	119
Appendix J– Participant information sheet.....	121
Appendix K– Consent Form.....	124
Appendix L– Questionnaire Pack.....	125
Appendix M–SPSS Data Research Question 1.....	126
Appendix N–SPSS Data Research Question 2.....	127
Appendix O–SPSS Data Research Questions 3 & 4.....	128
Appendix P–Reflective Statement.....	134

Lists of Figures & Tables

Part One: A systematic literature review exploring sexual self-concept and sexual risk taking

Figure 1. The process outlining study selection.	20
Table 1. The measures of sexual self-concept and details of their development.....	26
Table 2. Summary of studies included in the review.	28

Part Two: Sexual Self Concept, Stigma & Shame following a Chlamydia Diagnosis

Figure 2. Distribution of the data for each sexual self-concept dimension.....	78
Table 3. Scores on MSSCQ, Stigma & Shame Measures.....	78
Table 4. Correlations between sexual self-concept dimensions, stigma & shame.....	81
Table 5. Scores of Stigma & Shame for Males and Females.....	83
Table 6. Screening Circumstances	84

Part One

Systematic Literature Review

Running Head: SEXUAL SELF-CONCEPT & SEXUAL RISK TAKING

**A Systematic Literature Review exploring Sexual Self-Concept
and Sexual Risk Taking**

Authors: Parry, A.*^a, Glover, L.^b, Jomeen, J.^c.

^{a & b} Department of Clinical Psychology & Psychological Therapies, University of Hull.

^c Faculty of Health & Social Care, University of Hull.

*Corresponding author: Anne Parry

Please send correspondence to: Anne Parry, Department of Clinical Psychology & Psychological Therapies, University of Hull, HU6 7RX, UK.

Tel: +44 (0)1482 464117 Fax: +44 (0)1482 464093

Email address: a.e.parry@2006.hull.ac.uk

This paper is written in the format ready for submission to the Journal of Sex Research.

Please see Appendix A for the guidelines for authors.

Word Count: (12,245, including tables and references)

Abstract

Self-concept as an antecedent to sexual risk taking behaviours has been considered in the literature (Houlihan et al., 2008). Sexual self-concept refers to an individual's perceptions and feelings about themselves as a sexual being (Winter, 1988). Previous research has neglected the role of sexual self-concept in relation to sexual behaviour. The main objective was to review the existing literature on sexual self-concept and sexual risk taking behaviours with the aim of understanding sexual risk taking behaviours further. Search terms were systematically entered into several electronic databases. A manual search of articles' reference lists was carried out to identify further studies. The quality of each study was evaluated and the main findings were extracted. Eleven studies were reviewed, all of which employed a quantitative methodology. The focus of these studies related to the development of sexual self-concept and its subsequent influence on behaviour. Sexual self-concept influences sexual behaviours and several moderators of this relationship were proposed: peer and parental approval; sexual risk cognitions; and sexual self-efficacy. The findings suggest that sexual self-concept influences sexual risk taking. Further research is required to clarify this relationship. Implications are discussed.

Keywords: Sexual self-concept, sexual behaviour, risky

A Systematic Literature Review exploring Sexual Self-Concept
and Sexual Risk Taking

It is estimated that more than 340 million new cases of curable sexually transmitted infections, occur every year throughout the world in men and women aged 15–49 years (World Health Organisation (WHO), 2007). Sexually transmitted diseases include HIV, Syphilis, Herpes, Genital Warts, Chlamydia and Gonorrhoea (AVERT, 2010). The socioeconomic costs of these infections and their complications are substantial, ranking among the top 10 reasons for health-care visits in most developing countries (WHO, 2007). In the United Kingdom (UK) young people aged 16–24 years are most at risk of being diagnosed with a sexually transmitted infection (STI). The most effective means of preventing STI infection among sexually active adolescents is consistent condom use (National Institute for Health and Clinical Excellence, 2007).

Sexual risk taking refers to behaviour in people whom have multiple partners and do not use condoms (Luster & Small, 1994). Therefore they are at risk for pregnancy, human immunodeficiency virus (HIV), and other STIs. A recent review of contraception¹ use in the UK revealed that women aged 16–19 were the least likely to be using contraception, with only 57% of respondents using at least one form of contraception (Office of National Statistics, 2009). Although it is acknowledged that this figure was based upon 60 respondents it reinforces previous findings (Fife-Shaw & Breakwell, 1992). This was followed by women aged 45–49, of which 72% of respondents were using contraception (Office of National Statistics, 2009).

Brooks-Gunn and Furstenberg (1989) found that a number of individual, family and extra familial influences were associated with condom use. Similarly a meta-analytic review linked condom use to a variety of factors such as gender, race, age,

¹ The word contraception refers more generally to contraceptive methods such as the pill, these methods may protect from pregnancy but not from infection.

education, religiosity, sexual and STD history, beliefs about condoms and the threat of HIV, HIV knowledge, and prior sex education (Sheeran, Abraham, & Orbell, 1999).

Bancroft (2000) proposed a model of risk appraisal and risk management that helps to conceptualise sexual risk taking behaviours. Risk appraisal refers to the decision over how much risk there is in a given situation and is influenced by a variety of factors including cultural norms, personal beliefs and attitudes (Bancroft, 2000). It was reasoned that a misperception of risk appraisal occurs when the risk is perceived as low when it is in fact high, e.g. assuming low risk as the person 'looks healthy' (Lowy & Ross, 1994). The model suggests that risk appraisals occur prior to a specific sexual interaction (Bancroft, 2009). Risk management refers to how the individual uses or does not use the appraisal at the time of sexual interaction and this can influence subsequent appraisals in the future (Bancroft, 2009). If there are no adverse consequences when behaviour has been risky, this may decrease the perceived risk associated with it, decreasing the chances of appraising it as a high risk situation in the future (Gerrard, Gibbons, & Bushman, 1996).

Other psychological models have been drawn upon in order to explain and understand sexual behaviour, such as the theory of reasoned action (Ajzen & Fishbein, 1977) and the theory of planned behaviour (Ajzen, 1985). The theory of planned behaviour was developed by Ajzen (1985) and was an extension of the theory of reasoned action model (Ajzen & Fishbein, 1977). It posits that psychological variables influence behaviour, specifically: (1) intention, (2) attitude towards the behaviour, (3) subjective norms, (4) perceived behavioural control and (5) behavioural, normative and control beliefs (Ajzen, 1991: See Appendix B for diagram). In combination, "attitude toward the behaviour," "subjective norm," and "perceived behavioural control" lead to the formation of a "behavioural intention" (Ajzen, 2002). Perceived behavioural control is presumed to additionally affect behaviour indirectly through behavioural intention

(Ajzen, 2002). The results from a meta-analysis supported the theories of reasoned action and planned behaviour in predicting condom use (Albarracin, Johnson, Fishbein, & Muellerleile, 2001). However perceived control did not contribute significantly to condom use. A limitation of this research was that the strength of the associations were influenced by the consideration of past behaviour.

The link between sexual risk taking and personality traits has also been investigated. Hoyle, Fejfar and Miller (2000) conducted a meta-analysis focusing on the relationship between personality factors and sexual risk taking. The one consistent finding was between sensation seeking and all the aspects of sexual risk taking examined in the analysis. High 'sensation seekers' showed permissive sexual attitudes and an increased likelihood of engaging in sexual activity. More recently, Cooper (2010) demonstrated that between-persons differences in risky sexual behaviour exist and can be predicted by individual differences in personality. Furthermore, personality interacted with context and predicted risky behaviours in contexts that were novel and ambiguous (Cooper, 2010).

Self-esteem has been investigated in relation to sexual behaviours. A review examined the relationship between self-esteem and adolescents' sexual behaviours, attitudes, and intentions (Goodson, Buhi, & Dunsmore, 2006). It was suggested that positive self-esteem is a vital protective factor for various risk behaviours (Goodson, Buhi & Dunsmore, 2006). However, this review did not find evidence to suggest that self-esteem has a direct impact on sexual behaviours. A possible explanation for this was the use of global measures of self-esteem as opposed to specific measures relating to sexuality (Goodson, Buhi, & Dunsmore, 2006).

The majority of studies examining associations between the self and sexual behaviours have focused on self-concept (which encompasses self-esteem dimensions)

as an antecedent to risk taking behaviours (Houlihan et al., 2008). The results have indicated that adolescent's self-concepts and risk cognitions are predictors of risky sexual behaviours. Furthermore it was proposed that changes in risk assessment occur as a consequence and an antecedent of risky sexual behaviours (Houlihan et al., 2008). An alternative model in which partner communication variables mediated the relationship between self-concept and sex refusal has also been proposed (Salazar et al., 2004).

Despite the seemingly influential role of sexual self-concept, few researchers have assessed the construct. Arguably in order to gain an understanding of sexual behaviour it is important to consider how people construct a sense of themselves as sexual people (O'Sullivan, Meyer-Bahlberg & McKeague, 2006). Sexual self-concept refers to an individual's positive and negative perceptions and feelings about him- or herself as a sexual being (Winter, 1988). As with other dimensions of self-concept, the development and consolidation of one's sexual self-concept is considered an important developmental task of adolescence (Longmore, 1998). Adolescents who have not had direct experience of sexual behaviour still have a range of models to draw upon, research suggests that media, family, church, school and peers are all important agents in sexual socialisation (Engel, Brown, & Kenneavy, 2006; Huntemann & Morgan, 2001). Sexual self-concept helps individuals to organise and understand their sexual experiences (Hensel, Fortenberry, O'Sullivan, & Orr, 2011). Sexual self-concept is thought to be influenced by meaningful sexual events and it is thought that new sexual experiences will shape and reshape one's sexual self-concept, which may in turn influence future behaviours (Hensel et al., 2011).

Although past research has clearly demonstrated the relevance of risk taking factors at the level of the person, the situation, and the relationship, research has

neglected the role of sexual self-concept in relation to sexual behaviour. The main objective of this systematic literature review was to review the existing literature on sexual self-concept and sexual behaviours particularly risk taking behaviours. This review can then highlight gaps in the literature and can make recommendations for future research within this field.

Method

Search Strategy & Data Sources

A search of the literature up to and including January 2012 was conducted using electronic resources. Databases covering a range of disciplines that may conduct research into sexual behaviours and sexual self-concept were searched for relevant articles. These databases included: PsychINFO, PsychARTICLES, MEDLINE, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Web of Science. Reference lists were also searched manually for appropriate articles.

Additionally, a search was carried out for existing review papers in this area to ensure that this review would not be replicating previous work. This search did not identify any systematic literature reviews investigating sexual self-concept and risk taking behaviours.

Initially the terms sexual self-concept OR sexual self concept AND sexual behavior* were entered into the databases as part of the preliminary search in order to examine the range of research in this area. Additional search terms were selected from the keywords that were stated most often by the articles generated during the preliminary search.

All possible combinations of these terms were systematically entered into each database to retrieve articles that featured the terms in their title, abstract, subject or keywords. Relevant articles were identified from their titles and the selection criteria

were applied to the abstract. Additionally, manual searches of reference sections from articles included within the review were conducted to identify further articles of relevance. The abstracts of these articles were assessed and copies of the full text obtained in relevant cases. Two papers were identified from reference sections (Seal, Minichiello & Omodei, 1997; Hucker, Mussap & McCabe., 2010). Authors who had published articles in the field were also contacted to see if they could recommend papers that may not have shown up in the literature search. Three authors responded but were unable to recommend further articles.

Study Selection Criteria

Search criteria were established after the preliminary search had been completed.

Search Terms:

- *Sexual AND (Behaviour OR Behavior OR Practices) OR Psychosexual behavior#r*
- *AND Risk OR Risky OR Unsafe*
- *AND Sexual self-concept OR sexual self concept OR sexual self schema# OR sexual self-schema# OR sexual self perception OR sexual self-perception*

Studies that met the all the inclusion criteria and none of the exclusion criteria were included in the review.

Inclusion Criteria:

- Peer reviewed as these studies have a greater quality methodology.
- Used either a quantitative or qualitative methodology
- Participants of all ages

- No publishing date restriction was chosen due to the limited number of papers available. This could impact on findings as the context of the research will differ depending upon the socio-cultural influences of the decade, however this will be acknowledged and discussed in relation to findings.
- The full text available in English, before January 2012.

Exclusion Criteria:

- Studies including participants with addictions; intellectual/physical disabilities; history of sexual abuse; have a sexual offending history were excluded from the review. These are confounding variables which could impact on sexual risk taking behaviours.
- Literature reviews or other non-empirical papers were excluded as these would not present new evidence and the report of previous studies may be incomplete or biased.
- Case-studies are likely to have limited generalisability of findings therefore these were also excluded.

Study Quality Assessment

All studies identified in the search employed a quantitative methodology and were assessed using a customised checklist based on items from the Downs and Black (1998) and National Institute of Clinical Excellence (2007) quality checklist frameworks. The existing checklists are predominantly used for assessing the quality of randomised control trials and intervention studies, they therefore needed adapting for use with cross sectional design and non-interventive studies. The final checklist comprised of fifteen items (Appendix C). Quality scores were calculated using scores of one or zero for each checklist criterion, the maximum obtainable score was 15, therefore a higher score indicated greater quality (Appendix D). The quality of each study was

rated by two researchers, both with experience in psychological research for assessment in order to determine the inter-rater reliability score (Appendix E). On three items there were discrepancies between ratings for one study, this lowered the agreement percentage to 80%. This could be due to the wording of the checklist. For all other items there was a 100% agreement between raters.

Studies were not excluded on the basis of quality rating scores. There was not a large enough literature base from which studies could be drawn from in order to maintain the focus of the literature review and meet all of the inclusion criteria. As the quality score was not used as a criterion for exclusion from the review, each paper was rated and reported in a data synthesis table. The quality scores enabled the reviewer to make judgements over the findings from the studies in order to inform the overall findings from the review.

Data extraction

Data were extracted from studies using a pro-forma designed specifically for recording data for this review (Appendix F).

Data Synthesis

Extracted data were collated and reported qualitatively due to heterogeneity of the methodologies of studies and the outcome measures used.

Results

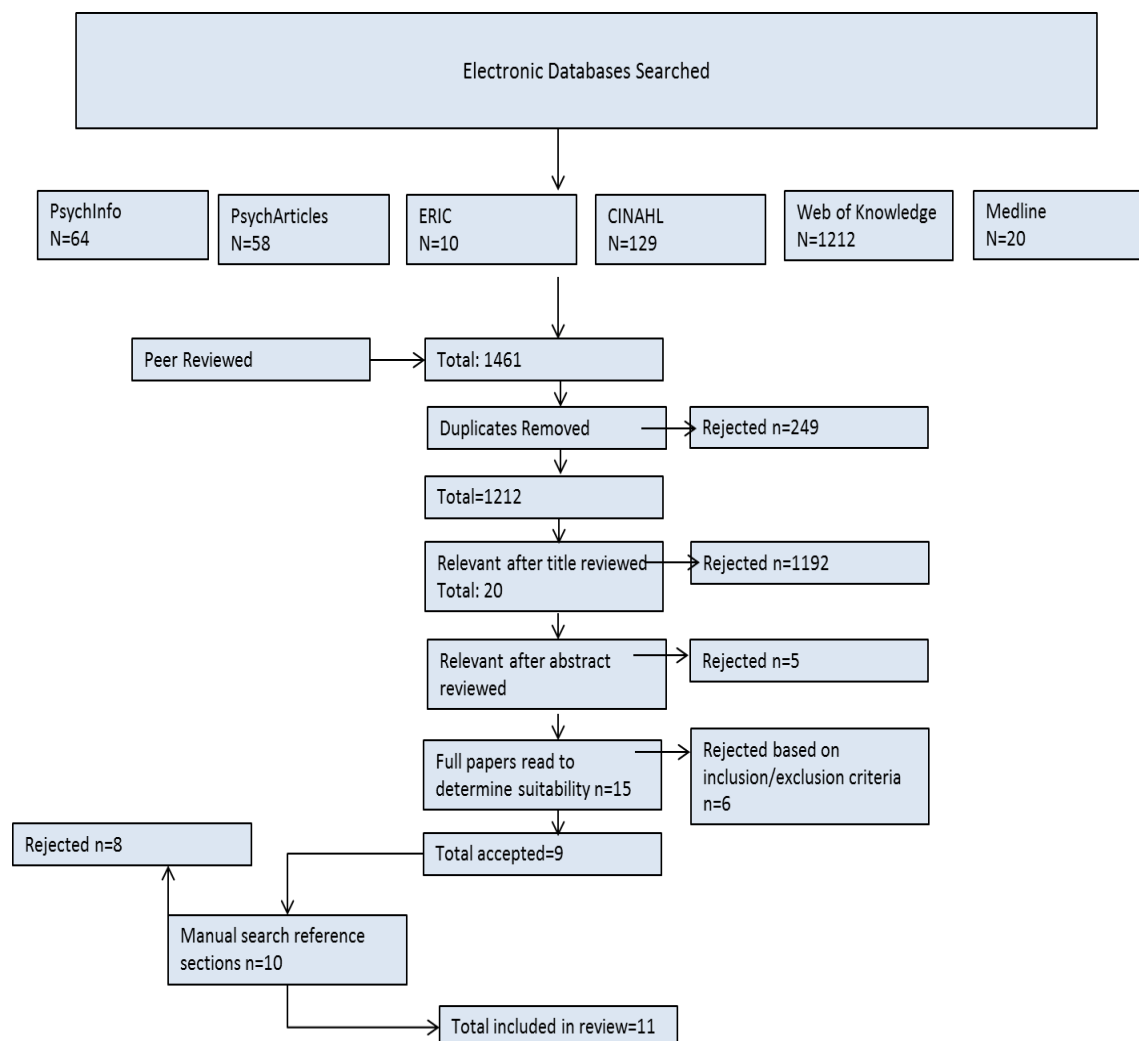
Overview of Search Results

Only quantitative studies were included in the review as the search strategy did not identify any qualitative studies. Eleven studies, all obtained from database searches which satisfied all selection criteria, were included in this review. Study selection methodology is presented in Figure 1.

Details of Included and Excluded Studies

The search strategy produced 1493 articles. These were limited to those that were peer reviewed, leaving 1461 articles. Duplicate articles were removed (whereby different databases produced the same article) leaving 1212 articles. Articles were selected through the title and the abstracts were read, from this 1197 were removed according to the exclusion and inclusion criteria. The remaining 15 articles were obtained and full articles were read. On the basis of inclusion and exclusion criteria, six were excluded and nine articles were appropriate for inclusion. Two further articles were selected from manual reference searches and were consequently included in the review. The total number of studies included was therefore eleven.

Figure 1. The process outlining study selection.



Quality Assessment

The results of the quality assessment are presented in Appendix D. Quality scores ranged from 11/15 to 14/15 (mean score =12.27, S.D. 0.82). Seven studies lost a point for not reporting actual probability values (e.g. 0.035 as opposed to $p<.05$: Rotosky et al., 2008; Lou et al., 2010; Hucker et al., 2010). A lack of specification of the inclusion and exclusion criteria of the study lowered the scores of nine studies (Winter, 1988; Rotosky et al., 2008; Lou et al., 2010; Hucker et al., 2010; Pai et al., 2010; Buzwell & Rosenthal, 1996; O'Sullivan & Brooks-Gunn, 2005; Breakwell & Millward, 1997; Pai et al., 2012). Three studies failed to report the proportion of those who had agreed to take part (Winter 1988; Hensel et al., 2011; Hucker et al., 2010). These issues have direct impact on the findings being reported; they limit the generalisability of findings and make replication difficult. Three studies lost a point for the fact that participants were not representative of the entire populations being recruited (Hensel et al., 2011; Hucker et al., 2010; Buzwell & Rosenthal, 1996). This too may impact on the generalisability of these findings. All studies reported their findings clearly and related their conclusions to the main research questions.

Summary of Studies

The process of study selection led to 11 studies being included in the review. All studies employed a quantitative design and were from a range of different countries. One research study identified was conducted in the UK.

The design of the studies included was predominantly cross-sectional however two studies employed a longitudinal design. The data collection method was via questionnaires and in two studies interviews in which measures were administered to participants.

Participants

Participants were generally adolescents recruited from schools, college or other educational programs. The number of participants recruited by each study varied. One study used different participants for two of their three research questions (Winter, 1988). The number of participants recruited across the studies ranged from 110-748.

Age.

Three studies recruited younger adolescents, one recruited participants aged between 12-14 (Pai, Lee & Chang,) and two recruited participants aged 12-15 years old (O'Sullivan & Brooks-Gunn, 2005; Pai, Lee, Yen, 2012). Six studies recruited participants between the ages of 13-19 (Hensel, Fortenberry, O'Sullivan & Orr, 2011; Rotosky, Dekhtyar, Cupp & Anderman, 2008; Lou, Chen, Li & Yu, 2010; Buzwell & Rosenthal, 1996; Breakwell & Millward, 1997). One study recruited participants in early adulthood aged from 17-25 (Seal et al., 1997). One study recruited participants aged between 18-67, therefore across the adult life span, however the mean age of the participants was 25.8 years old (Hucker, Mussap & McCabe, 2010). As mentioned above one study recruited 2 separate samples of participants. One of which consisted of 149 undergraduate participants aged between 17-23 and the other comprised of 120 participants aged between 14-19 years (Winter, 1988).

Gender.

Six studies did not recruit any males (Hensel, et al., 2011; Hucker et al., 2010; Pai, Lee & Chang, 2010; O'Sullivan & Brooks-Gunn, 2005; Seal et al., 1997; Pai et al., 2012). The remainder of studies recruited both males and females. No studies recruited males only.

Ethnicity.

The ethnicity of participants was not reported in six studies (Lou et al., 2010; Hucker et al., 2010; Pai et al., 2010; Breakwell & Millward, 1997; Seal et al., 1997; Pai et al., 2012). Two studies reported ethnicity by categorising people into white, Asian, black, Hispanic, Native American or other. In these two samples white participants contributed to over 50% of each total sample (Winter, 1988; Rotosky et al., 2008). One study reported that 90% of participants were African/American (Hensel et al., 2011). An additional study reported that 62% of the sample were Latina, primarily Dominican and 32% of the sample were African American with 6% being accounted for by 'other' (O'Sullivan & Brooks-Gunn, 2005). A further study reported that 81.7% were of Australian ethnicity but did not include additional information (Buzwell & Rosenthal, 1996).

Design and Methodological Issues

Nine of the reviewed studies employed a cross-sectional design which is limited by the inability to determine causal relationships between sexual self-concept and sexual behaviours. Two of the reviewed studies employed a longitudinal design which therefore included scope for assessing the change in relationships between sexual self-concept and sexual behaviours over time. In one study participants completed measures at two time points (O'Sullivan & Brooks-Gunn, 2005). The amount of time between time 1 and time 2 was 1 year. Although comparison at two time-points does not allow determination of the potential on-going fluctuations in the relationships between factors, participants were contacted every 2 months in order to determine if they had started menstruation. If so they and a randomly selected premenarcheal girl (from the sample) were interviewed again. This allowed for comparison of girls who had and had not started menstruation in terms of experiences, attitudes and beliefs.

The study conducted by Hensel et al. (2011) was part of a larger study that collected information from daily sexual diaries, quarterly interviews and annual questionnaires over the course of four years. This allowed the researchers to document the developmental reciprocity between the factors they were investigating.

With regards to approaches to statistical analysis, the majority of studies utilised correlation analyses and comparison tests (t-tests, ANOVAs & MANOVAs) to establish the cross-sectional relationships between factors. Multiple regression methods were used to determine path coefficients for proposed relationships in three studies (Rotosky, et al., 2008; Pai, Lee & Chang, 2010; Seal, Minichiello & Omodei, 1997). Two studies used structural equation modelling to determine the relationship between sexual self-concept, and other dimensions (Lou, et al., 2010; Pai et al., 2012). A longitudinal study used latent curve modelling to examine developmental patterns (Hensel et al., 2011) over the course of four years.

A number of different measures of sexual self-concept were used within the research. The summary of outcome measures used and whether the measures were piloted is demonstrated in Table 1. Two of the studies used the Multiple Sexual Self Concept Questionnaire (Snell, 1995, 1998). Three studies used the Sexual Self-Concept Inventory (O'Sullivan et al., 2006) and three studies used the Sexual Esteem Scale (Rosenthal, Moore & Flynn, 1991).

Four studies piloted the measures prior to data collection (Winter, 1988; Lou et al., 2010; O'Sullivan & Brooks-Gunn, 2005; Breakwell & Millward, 1997). Two studies created the measures used for their research however they piloted these measures prior to use (Winter, 1988; Breakwell & Millward, 1997). Three studies adapted existing measures; one study piloted the questionnaire prior to use (Lou et al., 2010). Two additional studies did not pilot the measure but conducted a principal

component analysis to reveal underlying dimensions (Buzwell & Rosenthal, 1996; Hensel et al., 2011).

Main Findings

The findings are presented in Table 2. The focus of these studies was assembled around the development of sexual self-concept and the influence of sexual self-concept on behaviour. The way in which sexual self-concept develops over time and gender differences were found to be reported in the literature. Furthermore the influence that sexual self-concept has on behaviour and possible moderators such as parental and peer approval, sexual risk cognitions and sexual self-efficacy were explored in the literature and several models of risk taking behaviour were proposed.

Table 1. Summary of the measures of sexual self-concept used, how they were developed and details of pilot studies.

Study	Measures of Sexual Self-Concept	Adapted/Developed the Measure	Details of Pilot Studies
Winter. (1988).	Sexual Self-Concept Scale (SSC) The final SSC scale contained 14 items.	The authors developed a preliminary scale after two different focus groups.	A pilot was completed of the preliminary scale.
Hensel, Fortenberry, O'Sullivan & Orr. (2011).	Sexual Self-Concept: 17 item sexual self-concept scale.	The scale was adapted from research on adults (Reynolds & Herbenick, 2003) and similar in content to items validated for adolescence (O'Sullivan et al., 2006). Factor analysis was used to elicit dimensions.	
Rotosky, Dekhtyar, Cupp, & Anderman. (2008).	Sexual self -esteem and sexual anxiety subscales from Multidimensional Sexual Self-Concept Questionnaire (MSSCQ: Snell, 1998).	The authors completed factor analysis. They retained 8 items measuring sexual self-esteem and 8 items measuring sexual anxiety.	
Lou, Chen, Li, & Yu. (2010).	Sexual Self Concept Inventory (SSCI; O'Sullivan, et al., 2006). It measured: sexual arousability; sexual agency; and negative sexual affect.	Adapted version of sexual self-concept inventory. The original test had 16 items however 10 were retained after item analysis.	A pilot test was completed.
Hucker, Mussap, & McCabe. (2010).	Sexual self-esteem and sexual satisfaction subscales from MSSCQ (Snell, 1995).		

Pai, Lee & Chang. (2010).	SSCI (O'Sullivan, et al., 2006). It measured: sexual arousability; sexual agency; and negative sexual affect		
Buzwell & Rosenthal. (1996).	Sexual Self Esteem Scale (Rosenthal, Moore & Flynn, 1991).	This scale included items from Rosenthal et al.'s (1991) sexual self-esteem scale and 10 additional items.	
O'Sullivan & Brooks-Gunn. (2005).	Sexual Esteem (Rosenthal et al., 1991). Sexual Arousability & Agency Scale (O'Sullivan & Meyer-Bahlburg, 2004).		A pilot study was conducted. This tested the wording of the questionnaires and reliability of the measures over 3 weeks.
Breakwell, & Millward. (1997).	Sexual Self-Concept Scale	Created by the authors for the study. Measure was formed after interviews were conducted with 100 16-19 year olds. The key aspects of sexual self-concept identified in the interviews were included in the questionnaire.	The measure was piloted with 16-19 year olds. They were asked about the phrasing of questions and to add other dimensions they thought should be included.
Seal, Minichiello, & Omodei. (1997).	Sexual Self-Esteem (Rosenthal, et al., 1991).		
Pai, Lee, & Yen. (2012).	SSCI (O'Sullivan, 2006). 3 Subscales measured: sexual arousability; sexual agency; and negative sexual affect.		

Table 2. Summary of studies included in the review.

Reference (Location)	Aims/Research Questions	Participants	Design and Analysis	Measures	Main Findings (Quality Score)
Winter, (1988). (USA)	3 research questions regarding sexual self-concept: 1. Does it develop with age? 2. Does it account for contraceptive use among sexually active young people? 3. Is it distinct from similar psychological concepts, e.g.	Part 1 of the research: 50 male and 70 female, ninth and twelfth graders at a high school in Pennsylvania. Ages of participants ranged from 14-19. Part 2 of the research: 149 unmarried male (40% of sample) and female undergraduates from a psychology course at NYU. The students ranged in age from 17-23 years. Ethnicity: 69% of the students were white, 24% were Asian, 5% were black and 11% were Hispanic.	The study employed a Cross sectional design. Data was collected using questionnaires. Analyses: T-tests of independent means. Correlations. Intercorrelations.	<ul style="list-style-type: none"> SSCS (Winter, 1988). The Sexual Opinion Survey (Winter, 1988). 	Part 1: The 17-19 year olds scoring significantly higher on the SSC scale than the 14-16 year old students. No differences between males and females. Part 2: Sexual self-concept was associated with several aspects of contraceptive use: general consistency, use at most recent intercourse and method used. It did not predict first intercourse contraception. Part 3: Sexual Self-Concept is distinct construct. (12/15)

	erotophobia?	Of this sample 53% had sexual intercourse at least once, 46% were sexually inexperienced. Part 3 of the research: 80 participants from part 2.			
Hensel, Fortenberry, O'Sullivan, & Orr. (2011). (Indiana).	1. What is the change in sexual openness, sexual esteem, sexual anxiety and coital frequency over time? 2. What is the influence between sexual openness, sexual activity, sexual esteem and coital frequency?	324 females aged 14-17 at time of enrolment were recruited. The sample was predominantly African-American.	Data was collected as part of a larger longitudinal cohort study (Fortenberry et al., 2005). Analyses: Latent Growth Curve Modelling examined developmental patterns.	<ul style="list-style-type: none"> • SSCS (Reynolds et al., 2003). • Coital frequency. 	Sexual self-concept is comprised of multiple dimensions. It evolves during in adolescence in a manner consistent with less reserve, less anxiety and greater personal comfort with sexuality and sexual behaviour. Vaginal intercourse becomes a more common aspect of a young woman's life over time. (12/15)
Rotosky,	To examine the	388 adolescents in health	Cross-sectional	<ul style="list-style-type: none"> • Situational 	Sexual esteem mediates the relationship

Dekhtyar, Cupp & Anderman (2008). (Mid-South, USA)	associations between sexual self-concept and sexual self-efficacy during adolescence.	classes of 3 public schools were recruited. Participants ranged in age from 13-18 (mean age of 15.32; 44% sample were males). Ethnicity: 59% White, 28% Black/African American, 3.6% Hispanic, 1.8% Asian, 0.5% Native American. Social Economic Status: 24% sample received a free school dinner. 9% paid a reduced price due to their household income.	design, data were collected at one time point. Analyses: Bivariate correlations. Hierarchical multiple regressions. Two way interactions.	Sexual-Efficacy Measure (Zimmerman, 2008; Cecil & Pinkerton, 1998). • MSSCQ (Snell, 1998).	between knowledge of sexual risk and both situational and resistive self-efficacy. Adolescent males reported. higher levels of sexual anxiety and lower sexual esteem than women. Findings suggest that female adolescent' positive views of themselves as sexual beings may enhance their ability to translate their knowledge of sexual risk into sexual confident action on behalf of their sexual health and wellbeing. (13/15)
Lou, Chen, Li, & Yu. (2010). (Taiwan).	To test a structural equation model where the relationships between sexual self-concept, sexual risk cognition and sexual	748 junior college students (52.5% males). Average age was 16.7. 53.6% were in a relationship. The mean relationship length was 1.37 years. 54.1% were satisfied	Cross-sectional survey. Convenience sampling was used. Analyses: Structural	• SSCI (O'Sullivan, 2006). • Sexual risk cognitions questionnaire (Shah et al.,	Gender differences were not significant. Sexual self-concept has a positive influence on sexual risk cognition. Sexual self-concept has a positive influence on sexual communication. Sexual risk cognition could serve as a mediator between sexual self-concept and sexual communication.

	communication.	in their relationship. 390 participants indicated they had sexual experiences (53.1% males & 48.7% females).	equation modelling.	1997). • Sexual communication scale (Somer & Ganivez, 2003).	(13/15).
Hucker, Mussap, & McCabe. (2010). (Australia).	To measure women's general self-concept clarity, their investment in and crises regarding sexual identity and wellbeing.	261 females with a mean age of 25.8.65% of participants reported that they were in a relationship. 91% of participants reported experiencing at least one sexual relationship in their life. 84% reported they prefer 'male only' partners, 12% reported 'mostly men', 2% responded 'equally men and women', 1% responded 'mostly women' and 1% responded 'women only'.	Cross sectional design. Analyses Correlations. Multiple mediation analyses.	<ul style="list-style-type: none"> • The self-concept clarity scale (SCCS; Campbell et al., 1996). • Measure of Sexual Identity, Exploration and Commitment (Worthington et al., 2008). 	<p>Self-concept clarity was positively associated with sexual self-efficacy, sexual self-esteem and sexual satisfaction.</p> <p>The results suggest that a more stable and internally consistent self-concept, generally and sexually may act as a protective factor against risky sexual decision making.</p> <p>(11/15)</p>

				<ul style="list-style-type: none"> • Sexual Risk Behaviour Beliefs and Self-Efficacy Scales (Basen-Engquist et al., 1996). • MSSCQ (Snell, 1998). 	
Pai, Lee & Chang. (2010). (Southern Taiwan).	Explore sexual self-concept and intended sexual behaviour of young adolescent girls in Taiwan.	421 females aged between 12-14 years were recruited. Participants were from a low SES area. 88.7% of the sample had begun menstruation.	<p>Cross sectional self-report design was used.</p> <p>Analyses</p> <p>Partial correlation coefficients.</p> <p>T-Tests.</p> <p>Multiple logistic regression analyses.</p>	<ul style="list-style-type: none"> • SSCI (O'Sullivan, 2006). • Parental Approval of Sexual Behaviour Scale (PASB) & Friends' Approval of Sexual Behaviour Scale (FrASB: Treboux & Busch- 	<p>Sexual self-concept and parental or friends' approval are likely to moderate or mediate each other mutually in their association with sexual activity. Sexual arousability and sexual agency were positively associated with parental approval of sexual activities. Sexual arousability and sexual agency were associated with greater peer approval of sexual activities.</p> <p>Girls' perceptions of peer approval were more important than their perceptions of</p>

				Rossnagel, 1995). <ul style="list-style-type: none"> • Behavioural Outcomes assessed: sexual experiences and sexual intent. 	parental approval about romantic sexual activities (kissing, having a crush, and being in love). Parental approval was associated with perceived sexual intercourse intention. (14/15)
Buzwell & Rosenthal. (1996). (Melbourne).	To investigate whether different sexual styles, or patterns of sexual self-characteristics, exist within a group of high school students and the associations these styles have with sexual practices.	470 males and females from a private coeducational school in Melbourne were recruited. 3 age groups recruited: Age: Year 10 (n=158, mean age of 14.9, 75 girls) Year 11 (n=142, mean age of 16.1, 61 girls) Year 12 (n=170, mean age of 17.1, 75 girls) The majority of participants (81.8%) were born in Australia.	Cross sectional design. Analyses: Cluster analysis. One-way analyses of variance (ANOVAs). Chi-square analyses.	<ul style="list-style-type: none"> • Sexual self-esteem (Rosenthal et al., 1991). • Sexual self-efficacy, (Rosenthal et al., 1991). • Sexual attitudes measure (Goggin, 1989). • Questions regarding Sexual risk taking 	5 different sexual styles identified: sexually naïve; sexually unassured; sexually competent; sexually adventurous; and sexually driven. The groups that were more likely to be engaging in sexual activity were those whose members had the highest levels of sexual self-esteem and were best able to assert their sexual desires and use precautions. The two groups with the highest sexual commitment scores were the only groups taking significantly greater risks with their regular partners.

		Social Economic Status: 43.2% of fathers were in professional occupations and 34% were in management positions. 31.7% of mothers were in professional occupations and 13% were in management. 74.5% were living with two parents.		(Rosenthal, et al.,1990). <ul style="list-style-type: none">• Sexual orientation.	The Sexually Unassured, Sexually Adventurous, and Sexually Driven do not distinguish between their regular and casual partners to the same degree as the other groups. Those who felt more confident about their sexual conduct and sexual appearance engaging in more potentially risky sexual behaviour. The Sexually Competent group, although equally high on sexual self-esteem as the Sexually Driven, were not engaging in sex with as many partners. This may be attributed to their higher levels of sexual commitment. (12/15)
O’Sullivan & Brooks-Gunn. (2005) (New York	1) Which developmental changes in behaviours are noted over a year for young	162 girls aged between 12 and 15 years old were recruited. Ethnicity: 62% Latina primarily Dominican, 32% African-American, 6 %	Longitudinal design Analyses: Examined differences between and	• Female version of Psychosexual Development Interview-Child Version for Sexual Risk Behaviour	A key finding is that changes in girls’ sexual cognitions actually precede sexual experience. Those who transitioned to new sexual behaviour over the year did not vary before their transition in cognitions from those who were already sexually experienced

City).	adolescent girls?	Other	within the 2	(Meyer-Bahlburg, et al., 1998).	in that behaviour.
	2) What is the nature of the changes in girls' sexual cognitions?	All girls spoke English and chose to be interviewed in English, although 4% indicated Spanish was the first language spoken in their households.	cohorts between time 1 and time 2. MANOVAs were completed.	<ul style="list-style-type: none"> • Sexual Esteem Measure (Rosenthal et al., 1991). • Measure of SSC (O' Sullivan et al., 2004). • Measure of abstinence (Miller et al., 1998). • PASB & FrASB (Trebourg et al., 1990). 	Girls who never reported the sexual experiences were notably different in their sexual cognitions from the other 2 groups, especially with regard to breast fondling and genital contact. They reported lower sexual Arousability, perceived peer approval, sexual esteem and stronger endorsement of abstinence attitudes. Earlier events appear to be more meaningful experiences in the development of these sexual cognitions.
	3) Do changes in sexual cognitions precede or follow changes in sexual behaviour.	Pubertal Development: 83% had reached menarche by time 1 and 94% had one year later.			(13/15)
Breakwell & Millward. (1997).	Examine the relationship between aspects of sexual self- concept and	474 males (n=168) and females (306) were recruited. Age: 16-19 year olds (males	Cross sectional design. Analyses:	<ul style="list-style-type: none"> • SSCS • Measure of • Traditionalism, 	Contraceptive responsibility is largely irrelevant to males' sexual self-concept yet quite central to females.

(UK).	sexual activity in adolescents.	mean age 17.4; females mean age 17.8) Geographical Region: One suburban region in the UK	Principal components analysis. ANOVAs. T-tests. Pearson's Correlations.	importance of sex and sexual attractiveness. • Alcohol, Tobacco use and sexual activity.	The majority of men pitch themselves in the mid-range of permissiveness. Females viewed themselves as equally permissive as males. For sexually active males neither number of partners or frequency of condom use was related to either sexual self-concept dimension. Female sexual risk taking is the product of: the centrality of sexual responsibility which inhibits sexual risk taking and centrality of sexual assertiveness which facilitates risk taking (multiple partners, less condom use, increased alcohol and cigarette consumption). (12/15)
Seal, Minichiello & Omodei. (1997). (Australia).	Examine the effects of sexual efficacy and esteem on sexual risk taking behaviour	331 females aged between 17-25 years old were recruited. 221 participants had regular sexual relationships and 143 had casual sexual	Cross sectional design. Analyses: Zero-order correlations.	<ul style="list-style-type: none"> • Sexual Self-efficacy & esteem • Sexual activity 	Sexual self-efficacy and sexual self-esteem are positively related, either directly or indirectly to sexual risk taking behaviours in both casual and regular sexual relationships. Sexual self-efficacy indirectly affects risk

	and how this is mediated by overall sexual activity.	relationships. Only participants who had engaged in sexual activity formed the sample of this study.	Path coefficients. Serial multiple regressions.	<ul style="list-style-type: none"> Sexual risk taking. All measures were from Rosenthal et al. (1991). 	taking in regular relationships through the levels of overall sexual activity. However in casual relationships there is a direct association. (13/15)
Pai, Lee, & Yen. (2012). (Tainan County, Taiwan).	To examine whether normative beliefs would act as a moderator of the main relationship between sexual self-concept and sexual health intentions.	534 females were recruited from 8 junior schools. They were aged from 12-15; the mean age of the girls was 13.34 years old. Of these girls 124 were 12 years old, 165 were 13 years old, 183 were 14 years old and 62 were 15 years old. 87.7% had achieved menarche	Cross sectional design. Analyses: Pearson correlations. Factor analysis. Structural Equation Modelling.	<ul style="list-style-type: none"> The Sexual Health Behavior Intention Scale (Lin, 2003). SSCI (O'Sullivan et al., 2006). PASB & FrASB (Trebooux et al., 1995). 	Females who have a more positive sexual self-concept report a lower likelihood of protecting their sexual health. Greater perceived normative beliefs were related to a lower likelihood of protecting their sexual health. Normative beliefs and sexual self-concept together accounted for 24.9% variance of girls' intentions to engage in sexual health behaviour. (13/15)

Development of Sexual Self-Concept

Differences in sexual self-concept were observed between younger and older adolescents. Winter (1988) found that the 17-19 age group scored significantly higher scores on the sexual self-concept scale than the 14-16 year olds. This suggests that sexual self-concept develops during adolescence. Hensel, et al. (2011) conducted a longitudinal study and they found that aspects of sexual self-concept such as sexual openness, sexual esteem and sexual anxiety changed over 4 years. They concluded that sexual self-concept is comprised of multiple dimensions each with a unique trajectory evolving in adolescence. As sexual self-concept evolves adolescents become less reserved, have less anxiety and greater personal comfort with sexuality and sexual behaviour (Hensel et al., 2011).

No significant differences were reported between participants from different ethnicities.

Gender Differences.

Gender differences in the way that sexual self-concept is construed were found in two studies. Rotosky et al. (2008) found that adolescent males reported lower levels of sexual self-concept than adolescent females. Furthermore males experienced higher levels of sexual anxiety and lower sexual esteem (Rotosky et al., 2008). Whereas Breakwell and Millward (1997) found contraceptive responsibility was central to females' sexual self-concept and was largely irrelevant to males'. Moreover sexual initiative and interest were found to be integral parts in females' understanding of their sexuality. Socio-emotional factors in young males' understanding of sexuality were found to be important in relation to the sample's sexual self-concept.

Conversely three studies did not find any gender differences in the development of sexual self-concept. Winter (1988) found no differences between males and females on the sexual self-concept scale that they administered. Similarly, Lou et al. (2010) and Buzwell and Rosenthal (1996) found that gender differences were not significant.

Sexual Self-Concept & Behaviour

Sexual self-perceptions were found to discriminate between those who had engaged in sex and those who had not (Buzwell & Rosenthal, 1996). Buzwell and Rosenthal identified 5 different groups consisting of different sexual styles. The groups that were more likely to be engaging in sexual activity were those whose members had the highest levels of sexual self-esteem and were best able to assert their sexual desires and use precautions. It was suggested that positive sexual self-perceptions may indicate that the individual is ready to engage in sex (Buzwell & Rosenthal, 1996). The groups with the highest sexual commitment scores were taking significantly greater risks with regular partners. It was proposed that for these people sexual commitment could equate to not wearing a condom. The sexually unassured, sexually adventurous and sexually driven groups did not distinguish between their regular and casual partners to the same degree as other groups. This was reflected in their low ability to say 'no' to sex and this was thought to be due to a compulsion to engage in sex irrespective of a relationship with a partner. Therefore it was postulated that those who felt more confident about their sexual conduct and sexual appearance engaged in potentially more risky sexual behaviour. The sexually competent group scored equally as high on sexual self-esteem measures as the sexually driven group but were not engaging in sex with as many partners. This was attributed to their higher levels of sexual commitment.

Recently women's general self-concept clarity, their investment in and crises around sexual identity and wellbeing was investigated (Hucker et al., 2010). Self-

concept clarity was found to be positively associated with sexual self-efficacy, sexual self-esteem and sexual satisfaction. Women who possessed a clear and integrated sexual identity were more likely to achieve positive sexual self-efficacy, sexual self-esteem and sexual satisfaction. Furthermore it was suggested that a more stable internally consistent self-concept may act as a buffer against risky sexual decision making, negative self-evaluations and unsatisfying sexual experiences. This supports earlier findings by Buzwell and Rosenthal (1996).

Parental and Peer Influence.

O'Sullivan and Brooks-Gunn (2005) conducted a longitudinal study to investigate sexual experiences and cognitions including perceived peer and parental approval. The younger cohort of girls showed significant changes in five of the 6 sexual self-cognitions between Time 1 and Time 2. They showed a decrease in endorsement of abstinence values, decreased disapproval in perceived parental and peer reactions and increased sexual self-esteem. Sexual cognitions of the older cohort also significantly changed however changes were less strong than the younger cohort. The older cohort reported less endorsement of abstinence, decrease in parental and peers disapproval and increased sexual self-esteem. The younger and older cohort had the similar scores for perceived parental approval which were universally low. The univariate analyses revealed no differences in cognitions between girls who transitioned to breast fondling or genital contact over the year and those who reported these experiences all along at either assessment. Therefore changes in cognitions occurred before the sexual activity was experienced. However girls who reported no experience at either time point had lower sexual arousability, sexual agency and sexual esteem scores. They had stronger abstinence values and perceived greater peer and parental disapproval for sex compared girls who had transitioned and girls who were more experienced. The one reported

difference between girls who reported no sexual intercourse experience and girls who were experienced was perceived stronger peer approval for sexual experience.

Pai, Lee and Chang (2010) suggest that sexual self-concept and parental or peers' approval are likely to moderate each other mutually in their association with sexual activity. Sexual arousability, a component of sexual self-concept was associated with greater parental approval of sexual activities and more positive feelings of anticipation with intent to engage in sexual activity. Sexual agency was associated with greater parental approval of sexual activities. Peer approval of sexual activities was associated with both sexual arousability and sexual agency. These findings suggest that the greater the peer and parental approval the more likely it is that an adolescent girl engages in sexual behaviour. Girls' perception of peer approval was more important than perceptions of parental approval about sexual activities. However, peer approval was associated with romantic activities (kissing, being in love) as opposed to parental approval which was associated with girls' perceived sexual intercourse intention.

Recently, Pai, Lee and Yen (2012) examined whether normative beliefs would act as a moderator between sexual self-concept and sexual health intentions. The results indicated that adolescent females' sexual health behavioural intentions can be predicted by sexual self-concept. However among these girls, normative beliefs played an important role in their intention to protect their sexual health. Normative beliefs and sexual self-concept together accounted for 24.9% of variance of girls' intentions to engage in sexual health behaviour. This finding is consistent with studies that found perceived approval of both peers and parents with regards to sexual activity and sexual self-concept predict sexual behavioural intentions (O'Sullivan & Brooks-Gunn, 2005; Pai, Lee & Chang, 2010).

Sexual Self-Concept, Sexual Risk Cognition & Communication.

The relationship between sexual self-concept, sexual risk cognitions and sexual communication was explored (Lou, Chen & Yu, 2010). The findings revealed that sexual self-concept had a positive influence on sexual risk cognition. Adolescents with higher sexual self-concept had more sexual risk cognitions. Thereby it was proposed that the more positive an adolescent's sexual self-concept, the more important they perceive knowledge about safe sex and the higher they perceive the risk of unprotected sex.

Sexual self-concept was found to positively impact on sexual communication with parents. Females were found to have more sexual communication with their parents than males, although this was not a significant difference. It was proposed that sexual risk cognition acts as a mediator between sexual self-concept and communication and that greater sexual communication might be related to higher sexual self-esteem and risk cognition. Indeed research has suggested (Pai et al, 2010) that greater peer and parental approval is associated with positive domains of sexual self-concept such as sexual arousability and agency. This increases the likelihood of females engaging in sexual behaviours.

Sexual Self-Concept & Sexual Self-Efficacy.

Seal, Minichiello and Omedei (1997) explored the relationship between sexual self-efficacy, sexual self-esteem and sexual risk taking behaviour. The results implied that sexual self-efficacy and sexual self-esteem with regards to how women feel about their sexual relationships are generally positively related, either directly or indirectly to sexual risk taking behaviours in both casual and regular sexual relationships.

More recently the associations between sexual self-concept and sexual self-efficacy in adolescents were examined (Rotosky, Dekhytar, Cupp & Anderman, 2008). It was posited that sexual self-esteem mediates the relationship between knowledge of sexual risk and situational and resistive self-efficacy (Rotosky et al., 2008). Furthermore they found that males have lower levels of sexual self-concept and this may affect their ability to manage sexual interactions with a partner.

Sexual Self-Concept & Contraception.

Winter (1998) suggested that sexual self-concept does predict several aspects of contraceptive use. Specifically it predicted general consistency with using contraception, the use at the most recent intercourse and the method of contraception used. However it did not predict the use at first intercourse. No gender differences were identified.

In contrast Breakwell and Millward (1997) suggested contraceptive responsibility was central to women's sexual self-concept. It was proposed that female sexual risk taking was the product of two independent and counteracting variables of sexual self-concept: centrality of sexual responsibility which inhibits sexual risk taking and centrality of sexual assertiveness which facilitates risk taking. For males it was proposed that this was different, for sexually active males neither number of partners or frequency of condom use was related to either dimension of sexual self-concept. However both studies used different measures to assess sexual self-concept and it could be that this accounted for differences.

Discussion

The results identified in this review suggest that research has focused on the development of sexual self-concept in adolescence and subsequent sexual behaviour;

and the influence of sexual self-concept on sexual risk taking behaviours. Within each of these areas were several sub-topics. The aims of the studies varied widely; therefore different aspects of the relationship between sexual self-concept and sexual behaviours were measured by each study.

Overview of Research Findings

The findings suggest the relationship between sexual self-concept and sexual risk taking behaviour is multi-faceted.

In line with literature it was evident that the development of sexual self-concept is an important task of adolescence (Longmore, 1998). It was consistently identified that sexual self-concept evolves during adolescence and that sexual intercourse becomes a more common part of a young person's life. O'Sullivan and Brooks-Gunn (2005) found that changes in girls' sexual cognitions preceded sexual experience and that earlier sexual events are meaningful experiences in the development of these sexual cognitions. Dimensions of sexual self-concept such as sexual esteem and sexual openness were found to increase over adolescence whereas sexual anxiety was found to decrease during a four year period across middle and late adolescence (Hensel et al., O'Sullivan & Brooks-Gunn, 2005). The relationship between sexual self-concept and sexual behaviour was found to be reciprocal. Sexual self-concept influenced sexual behaviours and resulting sexual behaviours shaped sexual self-concept (Hensel et al., 2011). Buzwell & Rosenthal (1996) found that those engaging in sexual behaviour had the highest levels of sexual self-esteem and were best able to assert their sexual desires and use precautions. They concluded that positive sexual self-perceptions may indicate that one is ready for sexual activity (Buzwell & Rosenthal 1996).

Sexual arousability and sexual agency dimensions of sexual self-concept concept were influenced by both parental and peer approval and this subsequently

affected behavioural intentions (Pai et al., 2010; Pai et al, 2012). Encompassed within the sexual arousability dimension were feelings of interest and anticipation of sexual activities. This is consistent with the theory of planned behaviour (Ajzen, 1985) which acknowledges that normative beliefs are an influential predictor of behaviour.

Pai et al. (2012) further examined the role of normative beliefs as a moderator of the relationship between sexual self-concept and sexual health intentions. It was identified that adolescent females who have a positive sexual self-concept and greater perceived normative beliefs about sexual activities were less likely to protect their sexual health. This suggests that positive sexual self-concept and perceived normative beliefs could pose a risk to sexual health. The theory of planned behaviour would suggest that normative beliefs are influential factors of sexual risk taking behaviours; however a positive sexual self-concept could also be linked to sexual risk taking. Further research is required to confirm the relationship between sexual self-concept, normative beliefs and sexual risk taking.

Hucker et al. (2010), investigated self-concept clarity, sexual self-efficacy, sexual self-esteem and sexual satisfaction and found that women with an integrated sexual identity were more likely to achieve positive sexual self-efficacy, sexual self-esteem and sexual satisfaction. Previous research has either focused on sexual self-concept or self-concept and has neglected studying dimensions of both. This research suggests the way in which sexual self-concept is integrated within self-concept could be important in predicting sexual risk taking behaviours.

Breakwell and Millward (1997) suggested that contraceptive responsibility was central to women's sexual self-concept but not to male's. Gender discrepancies were reported by Rotosky et al., 2008, with adolescent males having lower scores of sexual self-concept than females. A further three studies reported that gender differences were

not significant (Lou et al., 2010; Buzwell & Rosenthal, 1996; Winter, 1988). It is important to acknowledge that the majority of participants in the studies identified in this review were adolescent women. This could be due to the fact that it has been deemed to be more important to understand adolescent female sexual risk taking behaviours due to high teenage pregnancy figures. Recently a drive to understand sexual self-concept and sexual risk taking has been attributed to the rising numbers of sexually transmitted infections (O'Sullivan & Brooks Gunn, 2005) in both sexes. However recent research has still predominantly focused on women (Hensel et al, 2011; Pai et al., 2012). Arguably common STIs such as Chlamydia produce further reproductive complications for women such as pelvic inflammatory disease and ectopic pregnancies. Whereas the causal link between Chlamydia and male infertility is still debated (Mazzoli, Cai, Addonisio, Bechi, Mondaini & Bartoletti, 2010).

For women unprotected sex does not just equate to an increased risk of an STI but could also lead to pregnancy. It was reported that fear of pregnancy is young people's most immediate concern (UNICEF, 2009). It was proposed that pregnancy overshadows all other issues and many feel 'safe' if they are using the contraceptive pill. Over a third of young people who had had sex reported that they only sometimes or never used a condom. Moreover 70 per cent of those who had unprotected sex did not feel that they needed to visit a sexual health service (UNICEF, 2009). This suggests that 'pregnancy' is still more of a concern to young people than the possibility of contracting a STI. There has also been recognition that research has been dominated by the assumption that sexual and reproductive issues are primarily female concerns (Varga, 2001). However none of the female contraceptive methods currently available safeguard against HIV and STIs. This illuminates the importance of focusing on both the reproductive health behaviours of both males and females (Varga, 2001) and promoting equal responsibility. For this reason there is also an equivalent

accountability for both health care providers and educators to understand and acknowledge the implications of sexual risk taking behaviours for both males and females.

Several studies have tried to ascertain the changes in sexual behaviours between males and females over the years. Johnson et al. (2001) compared findings on a national survey of sexual attitudes and lifestyles (Natsal) in the UK, from 1990 to 2000. They reported an increase in the reporting of behaviours associated with the risk of HIV and STI transmission. There were considerably higher rates of new partner acquisition among those younger than 25 years and those not cohabiting or married. The authors suggested that behaviour and attitudes were becoming more homogenous across the country and between genders since Natsal 1990. They concluded that the increased reporting of risky sexual behaviours is consistent with changing cohabitation patterns and rising incidence of STIs. A follow up study has not yet been completed to see how behaviours have continued to change over the last decade. Clearly there have been changes in women's sexual conduct over the past twenty years, linked to changes in societal attitudes to both women and sex. This needs to be acknowledged when interpreting findings from the older studies included in this review.

Many of the papers in this review recruited participants from different cultures at different time points. The social learning theory (Bandura, 1977) posits that people learn within a societal context, through concepts such as observation and modelling. Bandura (1977) proposed that an individual's behaviour is influenced by the environment and characteristics of the person. The research in this review was undertaken in a variety of countries where there are different expectations around sexual behaviour for both males and females. Societal influences such as family, media, medicine, religion, economy and law can influence a society's rules about the

expression of sexual behaviours (Carroll, 2010). These factors vary over time and have varied over the last 24 years and it is of note that this could have impacted on the variability and generalisability of findings.

Temporal issues are also worthy of further consideration, in the 1980s, AIDS cases began to be diagnosed in the UK. Public health campaigns directed at members of the gay community were initiated in 1983 and this campaign was extended for the whole public in 1986 (Nicoll, et al., 2001). Similar campaigns were conducted in the USA. When some of the earlier research in this review was conducted (Breakwell & Millward, 1997; Buzwell & Rosenthal, 1996; Winter, 1988; Seal et al., 1997) the AIDS campaign was in the forefront of people's mind due to the widespread media coverage. This means that people may have associated unprotected sex with the contraction of AIDs. This is not the dominant discourse in modern society and there have been changes in the way that the media has portrayed STIs.

Currently the most widespread STI in both the USA and UK is Chlamydia (AVERT, 2011). The National Chlamydia Screening Programme (NCSP) in the UK was established in 2003 in order to make people aware of Chlamydia and to increase the number of people between the ages of 16-25 being screened. Media campaigns in the UK have focused on encouraging screening as opposed to creating panic. People may equate unprotected sex with potentially contracting Chlamydia which is easily treated although the risk of HIV transmission remains the same. This could be accounted for by the fact that there is now an acknowledgement that people can survive with HIV by taking antiretroviral drugs. Furthermore, there is less media 'panic' in relation to HIV compared to in the 1980s. Changes in the way in which STIs are portrayed by the media can influence people's attitudes about sexual behaviours. This needs acknowledged when making comparisons between studies conducted in the 1980s and 2000s.

A variety of measures were used within the research to assess sexual self-concept. It has been acknowledged that developing tools to measure sexual self-concept has been a challenge to researchers as they have had to consider physical, psychological and social changes that are fundamental to a developing sense of self (O'Sullivan et al., 2006). It was noted that many of the older research studies had focused on measuring the construct in adolescents of 15 years or older who are a different phase of development than early adolescents (O'Sullivan et al., 2006). Four of the research studies identified in this review were conducted before 1999. These studies (Breakwell & Millward, 1997; Buzwell & Rosenthal, 1996; Winter, 1988; Seal et al., 1997) conducted research on adolescents that were aged 15 and above and were likely to have more sexual experience than younger adolescents. This was reflected in the focus of the measures that assessed sexual self-concept. In the earliest study (Winter, 1988), the emphasis of the sexual self-concept measure was on intercourse attitudes and contraception. Recently the focus of the measures has been on the feelings of interest anticipation and curiosity of sexual activities in addition to sexual concerns (Pai et al., 2010; Pai et al., 2012).

Sexual self-concept is perceived to be a multi-dimensional construct and many items assessing sexual self-concept in earlier research have been incorporated into modern assessments. Previously dimensions such as sexual self-efficacy and sexual esteem were measured by separate questionnaires however these have been incorporated into one measure (Snell, 1998). The MSSCQ assesses 20 items of sexuality that are thought to encompass the construct of sexual self-concept. However research does not usually measure all 20 dimensions of this construct. Two studies identified in this review used the MSSCQ (Snell, 1998), both of which to measured sexual self-esteem (Hucker et al, 2010; Rotosky et al, 2008). However one measured sexual anxiety and another measured sexual satisfaction as variables were linked with the research aims.

Moreover the questions assessing sexual self-esteem are similar to the items in older research (Buzwell & Rosenthal, 1996; Seal et al., 1997; Winter 1988). Therefore even though measures have been developed overtime individual dimensions of the construct have not changed significantly.

As previously noted, societal influence and culture and the measures and subscales selected to be used within research can impact on the generalisability of findings. Three papers used the same dimensions of the SSCI (O'Sullivan et al., 2006) to measure sexual self-concept (Lou et al, 2010; Pai et al., 2010; Pai et al., 2012). Additionally all three studies were conducted in Taiwan within a similar culture. However the research questions of these studies differed and the scope of this research was different so it is difficult to compare their findings.

Clearly the findings suggest that sexual self-concept has a significant and prominent role in determining participation in sexual behaviours. However a challenge has been that research questions have focused on different dimensions that could influence this relationship. Therefore although it is a multidimensional construct made up of several dimensions it is seldom researched in its entirety. This could limit what is meant by the term sexual self-concept and its utility as single construct with predictive value.

Summary & Implications

It appears that sexual self-concept is associated with sexual behaviours and that it is a significant factor in sexual risk taking behaviours. However there is not one consistent model of this relationship due to the limited number of articles researching this area and the broad focus of the existing research. This is an area that has started to be researched more in recent years, six of the studies identified have been published since 2005 and further research in this area will be able to further clarify the relationship

between sexual self-concept and sexual risk taking. Furthermore different dimensions of sexual self-concept have been measured by each study, as discussed above. This too could contribute to the difficulty in determining the association between sexual self-concept and sexual risk taking.

The quality ratings of the studies included ranged from 11 to 14 out of a possible 15 points. Many of the studies lost points due to the quality of the reporting of information. The majority of studies lost points for not reporting inclusion and exclusion criteria; not reporting analyses in the introduction or method section; not reporting the proportion of people who took part; and not writing actual probabilities for main outcomes. The statistical tests used to analyse the findings were appropriate and outcome measures used were considered reliable and valid. However in three studies participants were deemed to not be representative of the entire populations from which they were recruited (Hensel et al., 2011; Buzwell & Rosenthal, 1996; Hucker et al., 2010). This limits the applicability of these findings and this must be acknowledged when making interpretations of their findings.

It is important for professionals working with adolescents to be aware of the relationship between sexual self-concept and sexual behaviour. This review illustrates that sexual self-concept develops across adolescence and is influential and responsive to experience. If someone has negative sexual experiences this could impact on the sexual self-concept and may determine their future sexual behaviours. Interventions to enhance certain dimensions of sexual self-concept could be important in reducing sexual risk taking behaviours and increasing contraceptive use. Interventions that enhance dimensions of sexual self-concept such as motivation to avoid risky sex and sexual self-efficacy may promote healthier sexual behaviours, which encourage the use of condoms. Education programs could focus on enhancing people's confidence to

negotiate condom use in addition to providing education about the importance of the use of contraception. These programs should be evaluated in order to determine if such interventions are successful. This could help to identify whether enhancing sexual self-concept is an important intervention strategy.

The review highlights the need for different educational programs depending upon the stage of the adolescent. If the adolescent has high sexual self-esteem this may imply they are ready to have sexual relationships and they will require different support to someone with low sexual self-esteem. They may require practice and confidence building for using contraception thus reducing future risk taking behaviours.

Clearly other variables influence this relationship; parental approval was found to be important in the subsequent behaviours of adolescents. Parental education about conveying messages about sexual behaviours to their children may be an important intervention. Parental education about contraception may aid parents to communicate effectively with their children about this. It could be suggested that sexual education needs to be broader than in the classroom.

Future Research Based on Limitations of Findings

The research has been generally focused on females and few studies have considered males' sexual self-concept and behaviour. The high number of unplanned teenage pregnancies has been at the forefront of the motivation to understand female sexual risk taking in both eastern and western cultures. However given the context of the rising number of sexually transmitted diseases transmitted worldwide, sexual risk taking in both men and women need to be understood. Therefore future research needs to include male participants.

Many of the studies have focused on investigating sexual intercourse. Future research could investigate pre-intercourse behaviours of both males and females and subsequent cognitions. O'Sullivan and Brooks-Gunn (2005) suggested understanding cognitions associated with pre-intercourse behaviours that occur earlier within the developmental trajectory may be important. It was reasoned that it may be more helpful to target cognitions that precede earlier sexual experience as opposed to changing sexual behaviours and cognitions later in the developmental trajectory.

A major limitation was that nine of the studies identified employed a cross sectional design. Two studies used a longitudinal approach however both samples were of adolescents and this did not extend into adulthood. No research to date has looked at changes in sexual self-concept from adolescence into adulthood and the subsequent impact on sexual behaviour.

Future research could also focus on the impact of interventions and education programs that enhance sexual self-concept to determine if they are positively impacting on sexual behaviours and compare them to traditional educational programs.

This review highlights the lack of qualitative research in this area. A qualitative study may provide more information about the relationship between sexual self-concept and sexual risk taking as it will not be limited to the choice of outcome measures and research questions.

References

References marked with an asterisk indicate studies included in the review.

- Ajzen, I. (1985). From intentions to actions: A theory of planned behaviour. In J. Khul, & J. Beckman, *Action-control: From cognition to behaviour* (pp. 11-39). Heidelberg: Springer.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.
- Ajzen, I. (2002). Perceived Behavioral Control, Self-Efficacy, Locus of Control, and the Theory of Planned Behavior. *Journal of Applied Social Psychology*, 32, 665-683.
- Ajzen, I., & Fishbein, M. (1977). Attitude-behaviour relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, 84, 888-918.
- Albarracin, D., Johnson, B. T., Fishbein, M., & Muellerleile, P. A. (2001). Theories of Reasoned Action and Planned Behavior as Models of Condom Use: A Meta-Analysis. *Psychological Bulletin*, 127(4), 142-161.
- AVERT. (2010, January 22). *STD Statistics and STDs in the UK*. Retrieved January 29, 2010, from Avert: <http://www.avert.org/stdstatisticuk.htm>
- AVERT. (2011). *STD Statistics Worldwide*. Retrieved 05 13, 2012, from Averting HIV and AIDS: <http://www.avert.org/std-statistics.htm>
- Bancroft, J. (2000). Individual differences in sexual risk-taking: A biopsychosocial theoretical approach. In J. Bancroft, *The role of theory in sex research* (pp. 177-212). Bloomington IN: Indiana University Press.

- Bancroft, J. (2009). *Human Sexuality And Its Problems (3rd Edition)*. Europe: Elsevier Limited.
- Bandura, A. (1977). *Social Learning Theory*. New York: General Learning Press.
- Basel-Engquist, K., Edmundson, E. W., & Parcel, G. S. (1996). Structure of health risk behavior among high school students. *Journal of Consulting and Clinical Psychology, 64*, 764–775.
- *Breakwell, G. M., & Millward, L. J. (1997). Sexual self-concept and sexual risk taking. *Journal of Adolescence, 20*, 29-41.
- Brooks-Gunn, J., & Furstenberg, F. (1989). Adolescent sexual behavior. *American Psychologist, 44*, 249-257.
- *Buzwell, S., & Rosenthal, D. (1996). Constructing a Sexual Self: Adolescents' Sexual Self-Perceptions and Sexual Risk-Taking. *Journal of Research on Adolescence, 6*(4), 489-513.
- Campbell, J. D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavalley, L. F., & Lehman, D. R. (1996). Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology, 70*, 141-156.
- Carroll, J. L. (2010). *Sexuality Now: Embracing Diversity*. Belmont: Wadsworth.
- Cecil, H., & Pinkerton, S. D. (1998). Reliability and validity of a self-efficacy instrument for protective sexual behaviors. *Journal of American College Health, 47*, 113-121.
- Cooper, L. M. (2010). Toward a Person X Situation Model of Sexual Risk-Taking Behaviors: Illuminating the Conditional Effects of Traits Across Sexual

Situations and Relationship Contexts. *Journal of Personality and Social Psychology*, 98(2), 319-341.

Downs, S. H., & Black, N. (1998). The feasibility of creating a checklist for the assessment of the methodological quality both of randomised and non-randomised studies of health care interventions. *Journal of Epidemiological and Community Health*, 52, 377-384.

Engel, K. L., Brown, J. D., & Kenneavy, K. (2006). The mass media are an important context for adolescents' sexual behavior. *Journal of Adolescent Health*, 38(3), 186-192.

Fife-Shaw, C. R., & Breakwell, G. M. (1992). Estimating sexual behaviour parameters in the light of aids: A review of recent UK studies of young people. *AIDS Care*, 14, 255-264.

Fortenberry, J. D., Temkit, M., Tu, W., Katz, B. P., Graham, C. A., & Orr, D. P. (2005). Daily mood, partner support, sexual interest and sexual activity among adolescent women. *Health Psychology*, 24, 252-257.

Gerrard, M., Gibbons, F. X., & Bushman, B. J. (1996). Relation between perceived vulnerability to HIV and precautionary sexual behavior. *Psychological Bulletin*, 119, 390-409.

Goggin, M. (1989). *Intimacy, sexuality, and sexual behaviour among young Australian adults*. Melbourne, Australia: Unpublished thesis University of Melbourne.

Goodson, P., Buhi, E. R., & Dunsmore, S. C. (2006). Self-esteem and adolescent sexual behaviors, attitudes and intentions: a systematic review. *Journal of Adolescent Health*, 38(3), 310-319.

- *Hensel, D. J., Fortenberry, J. D., O'Sullivan, L. F., & Orr, D. P. (2011). The developmental association of sexual self-concept with sexual behavior among adolescent women. *Journal of Adolescence*, 34, 675-684.
- Houlihan, A., Gibbons, F., Gerrard, M., Yeh, H., Reimer, R., & Murry, V. (2008). Sex and the self. *Journal of Early Adolescence*, 28(1), 70-91.
- Hoyle, R. H., Fejfar, M. C., & Miller, J. D. (2000). Personality and Sexual Risk taking: a quantitative review. *Journal of Personality*, 68, 1203-1231.
- *Hucker, A., Mussap, A. J., & McCabe, M. M. (2010). Self-concept clarity and womens' sexual well-being. *The Canadian Journal of Human Sexuality*, 19(3), 67-77.
- Huntemann, N., & Morgan, M. (2001). Mass Media & Identity Development. In D. G. Singer, & J. L. Singer, *Handbook of Children and the Media* (pp. 309-323). California: Sage Publications.
- Johnson, A. M., Mercer, C. H., Erens, B., Copas, A. J., McManus, S., Wellings, K., et al. (2001). Sexual behaviour in Britain: partnerships, practices, and HIV risk behaviours. *The Lancet*, 358(9296), 1835-1842.
- Lin, C. L. (2003). *The effectiveness of Intervention in Sex Education on the Second-Grade Junior High School Students: Taken as an Example From the Sex Interaction Learning Camp at a Junior High School in Rural Kaohsiung*. Taipei, Taiwan: Master Thesis, National Taiwan Normal University.
- Longmore, M. A. (1998). Symbolic interactionism and the study of sexuality. *The Journal of Sex Research*, 35, 44-57.

- *Lou, J.-H., Chen, S.-H., Li, R.-H., & Yu, H.-Y. (2010). Relationships among sexual self-concept, sexual risk cognition and sexual communication in adolescents: a structural equation model. *Journal of Clinical Nursing*, 20, 1696-1704.
- Lowy, E., & Ross, M. W. (1994). 'It'll never happen to me': gay men's beliefs, perceptions and folk considerations of sexual risk. *Aids Education and Prevention*, 6, 467-482.
- Luster, T., & Small, S. A. (1994). Factors Associated with Sexual Risk-Taking Behaviors among Adolescents. *Journal of Marriage and Family*, 56(3), 622-632.
- Mazzoli, S., Cai, T., Addonisio, P., Bechi, A., Mondaini, N., & Bartoletti, R. (2010). Chlamydia trachomatis Infection is Related to Poor Semen Quality in Young Prostatitis Patients. *European Urology*, 57, 708-714.
- Meyer-Bahlburg, H. F., Dugan, T. M., & Ehrhardt, A. A. (1998). *Psychosexual development interview: Child version for sexual risk behavior, female (PDI-RISK-C-F)*. New York: Unpublished instrument, Columbia University.
- Miller, B. C., Norton, M. C., & Fan, X. (1998). Pubertal development, parental communication, and sexual values in relation to adolescent sexual behaviors. *Journal of Early Adolescence*, 18, 27-52.
- National Institute for Health & Clinical Excellence. (2007). Appendix H Methodology Checklist: Quantative Studies. In *NICE: The Guidelines Manual* (pp. 150-187).
- National Institute for Health and Clinical Excellence. (2007). *Prevention of sexually transmitted infections and under 18 conceptions*. London: National Institute for Health and Clinical Excellence.

- Nicoll, A., Hughes, G., Donnelly, M., Livingstone, S., De Angelis, D., Fenton, K., et al. (2001). Assessing the impact of national anti-HIV sexual health campaigns: trends in the transmission of HIV and other sexually transmitted infections in England. *Sexually Transmitted Infections*, 77, 242-247.
- Office of National Statistics. (2009). *Opinions Survey Report No. 41: Contraception and Sexual Health 2008/2009*. Richmond: National Statistics.
- O' Sullivan, L. F., & Meyer-Bahlburg, H. F. (2004). *The sexual self: Development of an instrument assessing sexual self concept among ethnically diverse early adolescent girls*. New York: Available from Columbia University.
- *O'Sullivan, L. F., & Brooks-Gunn, J. (2005). The timing of changes in girls' sexual cognitions and behaviors in early adolescence: a prospective, cohort study. *Journal of Adolescent Health*, 37, 211-219.
- O'Sullivan, L. F., Meyer-Bahlburg, H. F., & McKeague, I. W. (2006). The development of the sexual self-concept inventory for early adolescent girls. *Psychology of Women Quarterly*, 30, 139-149.
- *Pai, H.-C., Lee, S., & Chang, T. (2010). Sexual Self-concept and Intended Sexual Behavior of Young Adolescent Taiwanese Girls. *Nursing Research*, 59(6), 433-440.
- *Pai, H.-C., Lee, S., & Yen, W.-J. (2012). The effect of sexual-self concept on sexual health behavioural intentions: a test of moderating mechanisms in early adolescent girls. *Journal of Advanced Nursing*, 68(1), 47-55.
- Reynolds, M. A., & Herbenick, D. L. (2003). Using computer-assisted self interview (CASI) for recall of childhood sexual experiences. In J. Bancroft, *Sexual*

Development in Childhood (pp. 77-81). Bloomington, IN: Indiana University Press.

Rosenthal, D., Moore, S., & Brumen, I. (1990). Ethnic group differences in adolescents responses to AIDS. *Australian Journal of Social Issues*, 25, 220-239.

Rosenthal, D., Moore, S., & Flynn, I. (1991). Adolescent self-efficacy, self-esteem and sexual risk-taking. *Journal of Community and Applied Social Psychology*, 1, 77-88.

*Rotosky, S. S., Dekhtyar, O., Cupp, P. K., & Anderman, E. M. (2008). Sexual Self-Concept and Sexual Self-Efficacy in Adolescents: A Possible Clue to Promoting Sexual Health? *Journal of Sex Research*, 45(3), 277-286.

Salazar, L. F., DiClemente, R. J., Wingood, G. M., Crosby, R. A., Harrington, K., Davies, S., et al. (2004). Self-concept and adolescents' refusal of unprotected sex: A test of mediating mechanisms among African American girls. *Prevention Science*, 5, 137-149.

*Seal, A., Minichiello, V., & Omodei, M. (1997). Young women's sexual risk taking behaviour: re-visiting the influences of sexual self-efficacy and sexual self-esteem. *International Journal of STD & AIDS*, 8, 159-165.

Shah, D., Thronton, S., & Burgess, A. P. (1997). Sexual risk cognitions questionnaire: a reliability and validity study. *AIDS Care*, 9, 471-480.

Sheeran, P., Abraham, C., & Orbell, S. (1999). Psychosocial correlates of heterosexual condom use: A meta-analysis. *Psychological Bulletin*, 125, 90-132.

- Snell, W. E. (1998). The multidimensional sexual self-concept questionnaire. In C. M. Davis, W. L. Yarber, R. Bausenman, G. Schreer, & S. L. Davis, *Handbook of sexuality-related measures* (pp. 521-524). Newbury Park, CA: Sage.
- Somer, C. L., & Ganivez, G. L. (2003). The sexual communication scale: a measure of frequency of sexual communication between parents and adolescents. *Adolescence*, 38, 43-56.
- Treboux, D., & Busch-Rossnagel, N. A. (1990). Social network influences on adolescent sexual attitudes and behavior. *Journal of Adolescent Research*, 5, 175-189.
- Treboux, D., & Busch-Rossnagel, N. A. (1995). Age differences in parent and peer influences on female sexual behavior. *Journal of Research on Adolescence*, 5(4), 469-487.
- UNICEF. (2009). *Sexual Health, Rights and Staying Safe: Young people's views on sex and UK sexual health services*. London: UNICEF.
- Varga, C. A. (2001). The Forgotten Fifty Per Cent: A Review of Sexual and Reproductive Health Research and Programs Focused on Boys and Young Men in Sub-Saharan Africa. *African Journal of Reproductive Health*, 5(3), 175-195.
- *Winter, L. (1988). The Role of Sexual Self-Concept In the Use of Contraceptives. *Family Planning Perspectives*, 20(3), 123-127.
- World Health Organisation. (2007). *Global strategy for the prevention and control of sexually transmitted infections: 2006–2015*. Geneva: World Health Organisation.

Worthington, R. L., Navarro, R. L., Savoy, H. B., & Hampton, D. (2008). Development, reliability and validity of the Measure of Sexual Identity Exploration and Commitment (MoSIEC). *Developmental Psychology, 44*, 22-33.

Zimmerman, R. S., Cupp, P. K., Donohew, L., Sinonean, C. K., Feist-Price, S., & Helme, D. (2008). Effects of a school-based, theory-driven HIV and pregnancy prevention curriculum. *Perspectives in Sexual and Reproductive Health, 40*, 42-51.

Part Two
Empirical Research

Sexual Self Concept, Stigma & Shame following a Chlamydia Diagnosis

Authors: Parry, A.*^a, Glover, L.^b, Jomeen, J.^c.

^{a & b} Department of Clinical Psychology & Psychological Therapies, University of Hull.

^c Faculty of Health & Social Care, University of Hull.

*Please send correspondence to: Anne Parry, Department of Clinical Psychology & Psychological Therapies, University of Hull, HU6 7RX, UK.

Tel: +44 (01)1482 464117 Fax: +44 (0)1482 464093

Email address: a.e.parry@2006.hull.ac.uk

This paper is written in the format ready for submission to the Journal of Sex Research.
Please see Appendix A for the guidelines for authors.

Word Count: (7263 including references and tables)

Abstract

Despite evidence that women testing positive for Chlamydia have less adaptive scores on domains of sexual self-concept, (Gottlieb et al., 2011) no research has been conducted in this area in the UK. Stigma has emerged as a main theme when women with Chlamydia were interviewed (Duncan, et al., 2001). The way that sexual self-concept may link with shame and stigma, following a diagnosis, is not generally understood. The current study aimed to investigate the relationship between sexual self-concept, stigma and shame, and to explore their relationship to demographic factors and screening circumstances. 51 participants recruited from a sexual health clinic completed questionnaires following their treatment session for Chlamydia. There were no differences between those who had previously had an STI and who had not, on the five dimensions of sexual self-concept. Sexual anxiety was significantly, positively correlated with both stigma ($r=.465$, $p=.001$) and shame ($r=.593$, $p<.0001$). Females scored significantly higher than males on the measure of shame ($F(1, 49)=7.59$, $p=.008$). These findings are discussed with reference to literature on sexual self-concept, sexual risk taking, stigma and shame. Limitations of the study, clinical implications and areas for future work are identified and discussed.

Keywords: Sexual self-concept, stigma, shame, Chlamydia

Sexual Self Concept, Stigma & Shame following a Chlamydia Diagnosis

Sexual self-concept refers to an individual's positive and negative perceptions and feelings about him- or herself as a sexual being (Newton & McCabe, 2008). The development and consolidation of one's sexual self-concept is considered an important developmental task of adolescence (Longmore, 1998). Sexual self-concept is considered a multidimensional construct and it has been suggested that it is comprised of twenty dimensions of sexuality (Snell, 1998) this includes sexual anxiety, sexual depression and sexual self-esteem. Studies often explore individual dimensions of sexual self-concept as opposed to the construct as a whole.

Sexual self-concept is thought to be influenced by new sexual behaviours and these new experiences will shape and re-shape one's sexual self-concept, which in turn may influence future behaviours (Hensel et al., 2011). It was proposed that sexual experience is a process linking the sexual-self with experience, behaviours and emotions. Thereby the sexual-self adjusts accordingly as one's sexual experience and associated meanings expand (Hensel et al., 2011). The acquisition of a sexually transmitted infection (STI) could be perceived as an important sexual event and could, subsequently, impact on dimensions of sexual self-concept. This could influence future sexual behaviours.

Sexual self-concept in people with a positive sexually transmitted infection status is not well understood. Newton and McCabe (2008) appear to have carried out the first research in this area. They recruited participants who either had human papillomavirus (HPV), herpes, or no STI. The results from the study indicated that having an STI was negatively related to sexual anxiety, sexual depression and sexual self-esteem compared to individuals without an STI. This study was conducted over the internet and demographics, such as ethnicity, have not been reported. Therefore the

context of these results is unknown. A recent longitudinal study compared dimensions of sexual self-concept in women testing positive for Chlamydia versus those testing negative (Gottlieb, et al., 2011). Women testing positive for Chlamydia had significant increases on the sexual anxiety scale and specific concerns about Chlamydia one month after receiving their test results compared to women testing negative.

It has been suggested that positive self-esteem is a vital protective factor for various risk behaviours (Goodson, Buhi & Dunsmore, 2006). It has been identified to protect women from feelings of stigma and shame following an STI diagnosis (Sales, DiClemente, Rose, Wingood, Klein & Woods, 2007). According to Goffman (1963), a stigma is an attribute that discredits either an individual or a group, leaving them tainted. Stigma is believed to result from an individual possessing characteristics that society views as deviant, or from an individual engaging in activities that society does not view well (Goffman, 1963). Stigma associated with having an STI was a major theme that emerged when women were interviewed following a Chlamydia diagnosis (Duncan, Hart, Scoular & Bigrigg, 2001; Darroch, Myers & Cassell, 2003).

The degree to which stigmatized persons can blame themselves, or are blamed by others, for their behaviour reflects their degree of shame (Lewis, 1998). Shame is defined as an intense negative emotion to do with the self in relation to standards, responsibility and attributions such as global self-failure (Lewis, 1992). Shame affiliated to sexual behaviour that is considered outside of socially approved norms appears universal (Greenwald & Harder 1998). Unacceptable behaviour can evoke disgust and provoke shame on the part of the 'deviant individual' (Greenwald & Harder, 1998).

A study explored self-esteem, locus of control and STI related shame and stigma (Sales et al., 2007). Participants with higher self-esteem experienced lower levels of STI related shame and stigma. Additionally those with an external locus of control had

higher levels of STI-related shame and stigma (Sales et al., 2007). However, STI related shame was predictive of condom-protected intercourse at a 6 month follow up. This suggested that shame is an important protective factor against sexual risk taking in female adolescents. As self-esteem protected against feelings of shame, it may be considered a risk factor as opposed to a protective factor in sexual risk taking behaviours.

Previous studies examining associations between STI related shame and stigma have focused on the association with self-concept, which encompasses self-esteem dimensions. Arguably, to gain an understanding STI related shame and stigma, it is important to consider how individuals construct a sense of themselves as sexual people and, thus investigate dimensions of sexual self-concept. Research has neglected to examine shame or stigma experienced following a Chlamydia diagnosis, since the launch of the national Chlamydia screening programme (NCSP). The NCSP was established by the Department of Health in England in 2003.

The NCSP aims to ensure that all sexually active young people under 25 are aware of Chlamydia, its effects, and have access to free and confidential testing services (NHS, 2009). Prior to the launch of this programme, a cross-sectional survey of 19,773 people found that the frequency of Chlamydia infection in the general population was highest in those below 25 years of age (Low, et al., 2007). This was the justification for promoting Chlamydia screening in the under 25 age range. As screening is now undertaken in a variety of locations, this may have reduced the stigma attached to Chlamydia.

Stigma has been identified as an important element of a female's decision to seek STD related healthcare (Cunningham, Tschann, Gurvey, Fortenberry, & Ellen, 2002). It was suggested that one way to escape uncomfortable feelings elicited by stigma and shame is to avoid the interaction required by STD related care (Cunningham

et al., 2002). Pavlin, Gunn, Parker, Fairley, & Hocking (2006) also reported that women felt put off Chlamydia screening due to the moral connotations of a diagnosis. These studies demonstrated the need to decrease stigma associated with Chlamydia to increase the rate of screening, access to sexual health services and prevent further transmission of the disease (Young, Monin, & Owens, 2009).

No research, to date, had considered a possible link between screening circumstances and levels of stigma and shame following a diagnosis of Chlamydia. Screening circumstances refers to the reason for the screen, whether it was planned or opportunistic and the location of the screen. Screening has become opportunistic and it was unknown whether people who intended to complete a screen and those who took an opportunistic screen (i.e. in a pub) differed in the stigma and shame they experienced.

The reason people take a Chlamydia test could influence how they perceive stigma and shame following a diagnosis. If people have taken a test because a sexual partner has received a diagnosis, they may experience less stigma and shame as they have someone to whom they can attribute blame (Darroch et al., 2003). Whereas an individual who gives the main reason for screening as having unprotected sex may experience more self-blame and, thus, experience more shame (Lutwak, Panish & Ferrari, 2003).

It has been acknowledged that women have been put off obtaining screens from discredited settings, settings that are publically related to STIs, due to a fear that their identities would become stigmatised (Balfe, Brugha, O'Connell, McGee & Donovan, 2010). It was recognised that women wanted screening services to be located in settings where it was not witnessed (Balfe et al., 2010). Chlamydia screening kits can be ordered online and delivered to peoples' homes adding to privacy and discretion. It was assumed that those who seek out tests in such a manner could feel more stigma and shame about attending the clinic for STI screens and subsequent treatment.

Alternatively, it could just help people who do not have time to attend the clinic to obtain a test.

Since the initiatives stemming from the NCSP, people's perceptions of stigma associated with a Chlamydia diagnosis have not been investigated, despite its assumed importance.

Research Rationale & Aims

Chlamydia is the most common bacterial sexually transmitted infection (Avert, 2010) but can often remain undetected as many people do exhibit symptoms and this can lead to fertility problems in both men and women (Bekaert, 2005). No prior research has been conducted in the UK focusing on the dimensions sexual self-concept in people with a positive diagnosis of Chlamydia. Previous research has not considered whether sexual self-concept is different in people with a history of STIs. It has been recognised that meaningful sexual events can influence dimensions of sexual self-concept (Hensel et al., 2011).

Previous studies have suggested that having an STI is negatively related sexual anxiety, sexual esteem, sexual depression and sexual satisfaction dimensions of sexual self-concept (Newton & McCabe, 2008; Gottlieb et al., 2012). Motivation to avoid risky sex was another dimension that was deemed important to investigate following a Chlamydia diagnosis. This would help to inform services on whether people are motivated to use contraception following a positive Chlamydia diagnosis. These dimensions of sexual self-concept were evaluated in this research.

The way in which these dimensions of sexual self-concept are related to feelings of stigma and shame were also measured. Self-esteem has found to be protection against both feelings of stigma and shame, but it was unknown if dimensions of sexual self-concept were associated with feelings of stigma or shame. Based on previous findings

it was assumed that sexual self-esteem would protect against STI related stigma and shame (Sales et al., 2007). As higher levels of shame were linked to increased condom use (Sales et al., 2007), it was postulated that motivation to avoid risky sex would be associated with higher levels of shame. This was thought to have important implications for sexual health services which have aimed to reduce stigma and shame associated with Chlamydia.

The NCSP was set up to increase the number of people getting screened, to reduce onward transmission to sexual partners and prevent the consequences of untreated infection. It was unknown whether people still perceive Chlamydia as shameful and stigmatising following these initiatives. Additionally it was uncertain if location of the screen, reason for screen and whether the screen was planned were linked with stigma and shame following a Chlamydia diagnosis.

This research aimed to improve understanding of how young UK Genitourinary Medicine patients perceive Chlamydia and to identify the psychosocial impact of a positive diagnosis. This was considered important given the current emphasis on prevention of sexually transmitted diseases in the public health strategy (DOH, 2011). This information could be used to inform sexual health education programmes and interventions for those with Chlamydia.

Although a recent literature review identified that no research has previously investigated sexual self-concept qualitatively (Parry in submission, 2012) no quantitative research has been conducted in the UK in this area. Previous research has qualitatively explored how people respond to a Chlamydia diagnosis and explored perceived stigma and shame associated with it. By employing a quantitative approach it was felt that more data could be obtained and this could act as a baseline for further research conducted in the UK.

Research Questions

1. Are the sexual anxiety, sexual self-esteem, sexual depression, sexual satisfaction and motivation to avoid risky sex associated with stigma & shame, in people with Chlamydia?
2. Is there an association between previous sexually transmitted disease history and the sexual self-concept domains of: sexual anxiety, sexual self-esteem, sexual depression, sexual satisfaction and motivation to avoid risky sex?
3. What is the relationship between demographic factors, such as gender, relationship status and whether the person has children and stigma & shame in people with Chlamydia?
4. Is Chlamydia screening location and whether the test was planned associated with ratings of shame and stigma?

Method

Design

This study employed a cross sectional design and quantitative self-report data were collected. This examined the relationship between dimensions of sexual self-concept, stigma, shame, demographics, sexually transmitted disease history, reason for recent screen, location of screening and whether the screen was planned or not.

Participants

Participants were recruited through the local Chlamydia screening service between March and May 2012. Men and women aged between 18 to 25 years attending the clinic for Chlamydia treatment were approached to take part in the research by the nurses. If people consented to take part they met with the researcher at the end of their treatment consultation. The researcher recruited 51 of a possible 53 participants

(96.08% of the identified participants). One person declined to meet with the researcher as they were a student at the same university as the researcher and did not want to come into contact with the researcher at university. The other person decided not to take part after reading the information sheet.

Procedure

Approval for the study was granted by an NHS Research Ethics Committee (Appendix G) and the Research and Development Department of the participating Trust (Appendix H). All participants were provided with written (Appendix J) and verbal information regarding the study and if willing to participate provided written informed consent (Appendix K). After consenting, participants were required to complete the questionnaire measures (Appendix L) and were given the opportunity to ask any questions or express any concerns after its completion.

Measures

Participants were asked questions about demographic information including their gender, age, relationship status, religion and number of children. Participants were also required to confirm that they had a current diagnosis of Chlamydia (YES/NO). They were asked where their Chlamydia test was taken and whether it was planned or unplanned. They were also asked to indicate if they had previously had an STI. If they had, they were asked to specify the type of STI and number of times they had been diagnosed with it. Participants were also asked to indicate the reason they had recently undergone Chlamydia screening (e.g. partner had Chlamydia, unprotected sex, routine screen, etc.).

The Multidimensional Sexual Self-Concept Questionnaire (Snell, 1998).

The MSSCQ measures of 20 aspects of human sexuality. Five subscales deemed most relevant to the purposes of the study were selected. Participants responded to the following subscales: *Sexual Anxiety*, the tendency to feel tension, discomfort and anxiety about sexual aspects of one's life; *Sexual Esteem*, a generalised tendency to positively evaluate one's own capacity to engage in healthy sexual behaviours and to experience one's sexuality in a satisfying and enjoyable way; *Sexual Satisfaction*, a tendency to be highly satisfied with sexual aspects of one's life ; *Sexual Depression*, the experience of feelings of sadness, unhappiness and depression regarding one's sex life. *Motivation to avoid engaging in 'risky' (i.e. unprotected) sexual behaviour*, the motivation and desire to avoid unhealthy patterns of risky sexual behaviours. Each subscale consisted of 5 items and each was responded to using a 5 point likert scale ranging from 0-4 (not at all characteristic of me to very characteristic of me). In order to create subscale scores, the items on each subscale are averaged. Higher scores correspond to greater amounts of the relevant MSSCQ tendency. The internal consistency of the subscales was determined using a sample of 473 university students (Snell, Fisher, & Walters, 1993). The coefficients of the 5 subscales used were: sexual anxiety =.84; sexual self-esteem =.88; sexual satisfaction=.91; Sexual depression=.85; Motivation to avoid risky sex =.72. This demonstrates that these scales had a good internal consistency.

Questions assessing Stigma & Shame.

Questions were adapted from Cunningham, et al. (2002) on perceptions of stigma (6 questions) and shame (5 questions) in relation to STDs and made specific to Chlamydia. The six original items related to stigma reflected the participant's expectation of negative interactions and judgments associated with STDs. For both scales, higher scores indicate a greater sense of stigma or shame related to STD related

issues. The five original shame items were deemed reflective of a participant's sense of shame and related negative affect states. However these scales were modified to be specifically about Chlamydia as opposed to general STIs, for the use in this study.

Qualitative Question

At the end of the questionnaire people were invited to leave any additional comments.

Pilot & Consultation

Prior to data collection the questionnaire was reviewed by staff working within the sexual health clinic. The pilot took place in August 2011. Each participant was required to look at the questionnaires and complete an answer sheet (Appendix I). The questions involved asking about the layout and content of the questions. The sample consisted of 7 participants (5 females and 2 males) aged between 18-25, all seeking a STI test on that day. All felt that the questions were clear, easy to read and the language was understandable. Nobody offered any suggestions for improvement.

Statistical Analysis

The statistical software package SPSS version 19.0 was used to analyse the data of this research. A preliminary analysis of the data revealed that the sexual self-concept scores on all five dimensions were not normally distributed. Therefore, non-parametric tests were used within the analysis. There was a limited range of responses as to whether participants had previously had an STI. Consequently, the information regarding type and number of previous STIs was not used in the analyses. In order to answer research question 1, to determine if there was an association between previous STI history and dimensions of sexual self-concept, participants were split into two

groups depending upon whether or not they had had a previous STI. The differences of the sexual self-concept scores between the two groups were calculated using a Mann-Whitney. To answer the primary research question, Spearman's Rho correlations were used to test the associations between sexual self-concept, stigma and shame.

The stigma and shame scores were normally distributed therefore a one way ANOVA was used to test the relationship between categorical demographic factors and stigma and shame scores. To determine if screening location and whether the test was planned was associated with ratings of shame and stigma a series of one-way ANOVAs were completed.

Sample Size Calculation

The primary research question was to examine the association between sexual self-concept and stigma and shame dimensions in people with Chlamydia. No research to date has investigated this so there was limited data to base a power calculation on. It was therefore hypothesised that a correlation or effect size of 0.5 would be present. This assumed, a calculation using GPower Version 3.0.10 software (Buchner, Erdfelder, Faul, & Lang, 2009) demonstrated that a total sample size of 47 would give 80% power for a statistically significant relationship using a 5% significance level. The significance level .005% was used as this is 5% of 10 and this makes a Bonferroni correction for Type I error from testing ten correlations from the sexual self-concept scale and the stigma and shame dimensions. It was aimed to recruit 100 participants to have more flexibility for the ANOVA analysis planned for research questions 3 & 4. However, the final sample comprised of only 51 participants.

Results

Descriptive Statistics

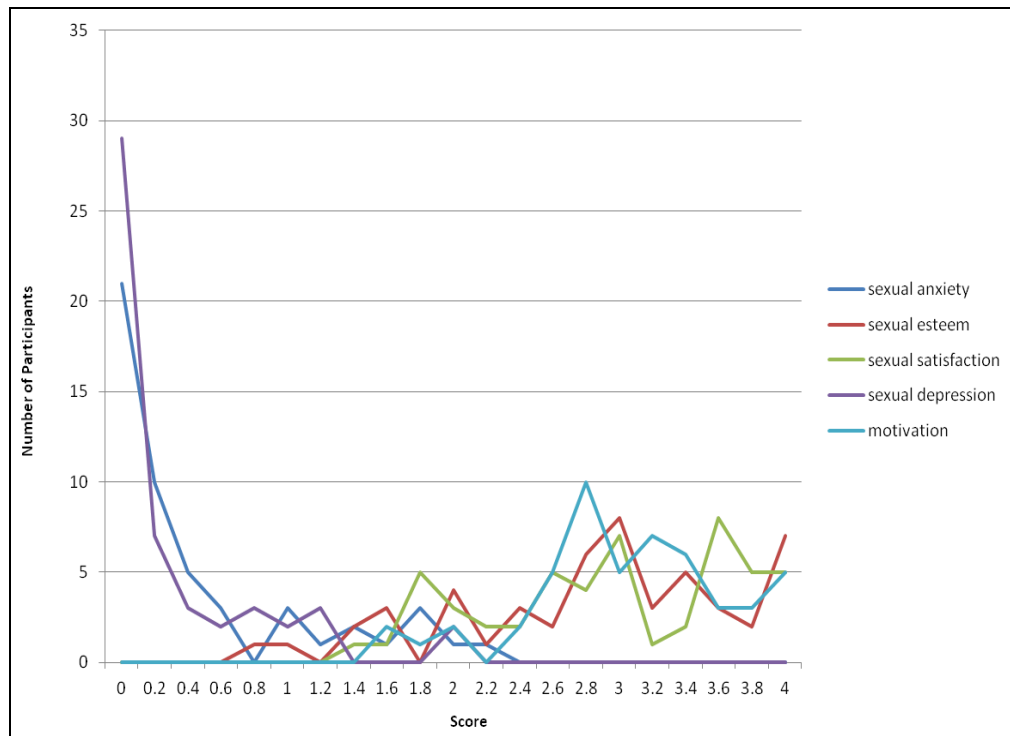
Fifty one participants took part in the study, of these 23 were males (45.1%) and 28 were females (54.9%). This is consistent with the fact that the clinic had diagnosed more females with Chlamydia over the past year. The average age of participants was 20.16 years (SD=1.96, age range =18-25). Over half of the sample reported that they were single (n=29 (56.9%)) and the remainder of the sample (n=22 (43.1%)) classified themselves as 'in a relationship'. Forty six (90.2%) participants stated that they did not have children and five (9.8%) participants had 1 child.

A significant proportion of the sample identified themselves as 'White British' (n=49 (96%)) and reported that they were not religious (n=48 (94%)).

Research Question 1

Dimensions of Sexual Self-Concept, Stigma & Shame.

Preliminary analyses performed indicated that not all the data were normally distributed. Scores on the dimensions of sexual self-concept were skewed. The scores on both stigma and shame were normally distributed. The distribution of data on each dimension of sexual self-concept is shown in Figure 2. For this reason, non-parametric tests were used to answer both research questions 1 and 2.

Figure 2. Distribution of the data for each sexual self-concept dimension.

The mean scores on the measures of sexual self-concept, stigma and shame are presented in Table 3.

Table 3. Scores on MSSCQ subscales, Stigma & Shame Measures.

Measure	Mean Score	S. D.	Alpha	Minimum Score	Maximum Score
MSSCQ					
Sexual Anxiety	0.47	0.64	.825	0.00	2.20
Sexual Esteem	2.86	0.84	.852	0.80	4.00
Sexual Satisfaction	2.95	0.76	.807	1.40	4.00
Sexual Depression					
Sexual Depression	0.31	0.51	.644	0.00	2.00
Motivation to avoid risky sex	3.04	0.61	.624	1.60	4.00

Stigma	13.27	4.08	.802	6	20
Shame	11.53	3.93	.769	5	18

The highest possible score on the MSSCQ subscales was 4. The highest possible scores on the stigma and shame questions were 24 and 20 respectively.

The Cronbach's alpha values were all above .7 which is deemed acceptable except on the sexual depression and motivation to avoid risky sex scales, which are deemed 'questionable' (George & Mallery, 2003). These values were lower than the internal consistency values reported by Snell, Fisher & Walters (1993).

As mentioned above, preliminary analyses performed indicated that the scores on the sexual self-concept dimensions were not normally distributed. Spearman's rho correlations were used to determine the relationship between stigma, shame and the dimensions of sexual self-concept. The associations between the different dimensions of sexual self-concept and stigma and shame are presented in Table 4.

In order to test ten correlations between stigma, shame and sexual self-concept dimensions, with a Bonferroni Correction to reduce type 1 errors the significance level needs to be $p < .005$. The significant findings based on this level are reported below.

There was a significant, positive correlation between sexual anxiety and stigma ($r = .465$, $p = .001$). There was a strong, positive correlation between sexual anxiety and shame ($r = .593$, $p < .0001$). Sexual depression was positively correlated with shame ($r = .340$, $p < .05$), however the significance did not account for Bonferroni Correction. Sexual depression was not significantly correlated to stigma ($r = .238$, $p = .092$). Sexual self-esteem was not significantly correlated with either stigma ($r = -.044$, $p = .757$) or shame ($r = -.078$, $p = .586$). Sexual satisfaction was not significantly correlated with either stigma ($r = .076$, $p = .597$) or shame ($r = -.231$, $p = .103$). Motivation to avoid risky sex was

not significantly correlated with either stigma ($r=.040$, $p=.780$) or shame ($r=.129$, $p=.367$).

Inter-factor Correlations

There was a positive correlation between sexual anxiety and sexual depression ($r=.468$, $p=.001$). Sexual self-esteem was positively correlated with sexual satisfaction ($r=.515$, $p<.0001$) and motivation to avoid risky sex ($r=.430$, $p=.002$).

Sexual depression was not significantly correlated with sexual self-esteem ($r=.051$, $p=.721$), sexual satisfaction ($r=-.261$, $p=.065$) or motivation to avoid risky sex ($r=.190$, $p=.092$). Sexual anxiety was not significantly correlated with sexual self-esteem ($r=-.203$, $p=.152$) sexual satisfaction ($r=-.216$, $p=.128$) or motivation to avoid risky sex ($r=-.064$, $p=.655$). Motivation to avoid risky sex was not significantly correlated with sexual satisfaction ($r=.182$, $p=.201$). Stigma and shame were significantly, positively correlated ($r=.435$, $p=.001$).

Table 4. The correlations between sexual self-concept dimensions, stigma & shame

	Sexual Anxiety	Sexual Esteem	Sexual Satisfaction	Sexual Depression	Motivation to avoid risky sex	Stigma	Shame
Sexual Anxiety							
Correlation Coefficient							
Significance							
Sexual Esteem							
Correlation Coefficient	-.203						
Significance	.152						
Sexual Satisfaction							
Correlation Coefficient	-.216	.515					
Significance	.128	.000**					
Sexual Depression							
Correlation Coefficient	.468	.051	-.261				
Significance	.001**	.721	.065				
Motivation to avoid risky sex							
Correlation Coefficient	.064	.430	.182	.190			
Significance	.655	.002**	.201	.183			
Stigma							
Correlation Coefficient	.465	-.044	.076	.238	.040		
Significance	.001**	.757	.597	.092	.780		
Shame							
Correlation Coefficient	.593	-.078	-.231	.340	.129	.435	
Significance	.000**	.586	.103	.015*	.367	.001**	

*p<.05 **P<.005 (significant at Bonferroni level)

Research Question 2

Previous STI history & dimensions of sexual self-concept.

34 participants (66.7%) reported that they had not had a previous sexually transmitted infection (STI). The remainder of the sample had previously had Chlamydia (n=17 (33.3%)). No other types of STIs were reported. Of the participants who had previously had Chlamydia, 12 participants had it once, 3 participants had it twice and 2 participants had it three times previously.

Due to the range of responses to this question, data were grouped into whether people had a previous STI (n= 17 (33.3%)) or not (n=34 (66.7%)). The differences between these groups on the sexual self-concept scales were calculated. A Mann-Whitney test was used to assess whether people who had had a previous STI differed from those who had not on the sexual self-concept measure. The Mann-Whitney U test revealed no significant differences between the groups on any of the sexual self-concept dimensions. The scores of sexual anxiety (p=.581), sexual self-esteem (p=.166), sexual depression (p=.626), sexual satisfaction (p=.388) and motivation to avoid risky sex (p=.968) was the same across both groups according to STI history.

Research Question 3

Demographic factors, stigma & shame.

A series of one way ANOVAs were used to test the relationship between demographic variables and stigma and shame scores. Age was not considered in the analysis due to the narrow age ranges recruited. The majority of participants were aged 19-21 years old therefore it was not possible to statistically analyse age differences. There were no statistically significant relationships between relationship status, STI history, those who had children or not, and scores of stigma. A multi-way ANOVA was

conducted to see if any findings were significant when controlling for other demographic factors. No statistically significant relationships were found.

A one way ANOVA revealed that there was a significant difference between males and females on their score on the shame measure ($F(1, 49)=7.59, p=.008$). Females scored significantly higher on the measure of shame. Multiway ANOVAs were completed in order to control for factors that could be confounding such as relationship status, whether they had previously had an STI and whether the person had children. Two further factors that were controlled for were whether the screen was planned and the location of the screen, as it was unknown if these too would be confounding variables. Females did not score significantly higher on the measure of shame after these factors were controlled for on a multi-way ANOVA ($F(1, 43)=3.57, p=.066$). No further significant findings were found.

Table 5. Scores of Stigma and Shame for Males and Females.

	Males	Females
Mean Stigma	12.61	13.82
Std. Deviation	4.39	3.80
Mean Shame	9.96	12.82
Std. Deviation	3.72	3.67

Research Question 4

Screening Circumstance, Stigma & Shame.

A wide range of screening locations were reported. They all fitted within three categories: clinic, postal kits and outreach. Locations such as bars and colleges were placed within the outreach category. Tests requested on the internet and testing kits

picked up from pharmacies and surgeries were posted back to the clinic and were included in the postal category. The data were categorised into groups in order to have sufficient numbers for the ANOVA analysis. Circumstances around screening are presented in Table 6.

Table 6. Screening Circumstances

	Number Participants (%)
Location of Screen	
Clinic	27 (53.9)
Postal Kits	12 (23.5)
Outreach	12 (23.5)
Planning:	
Planned	32 (62.7)
Unplanned	19 (37.3)
Reason for Screen:	
Part of another health contact	8 (15.7)
Took a test from outreach	9 (17.6)
Check up	5 (9.8)
Experienced Symptoms	5 (9.8)
Had unprotected sex	5 (9.8)
Partner told me they had it	19 (37.3)

One-way ANOVAs were conducted to test whether screening circumstances were associated with stigma and shame scores. No significant differences were found between stigma and: whether the test was planned ($F(1, 49)=.299$, $p=.587$) and the screening location ($F(2, 48)=.381$, $p=.686$). No significant differences were found between shame and: whether the test was planned ($F(1, 49)=.388$, $p=.564$) and the screening location ($F(2, 48)=1.643$, $p=.205$). There were no significant differences

between reason for the screen and scores of stigma ($F(2, 45)=.632, p=.536$) or shame ($F(2, 45)=1.238, p=.299$).

Qualitative Findings

At the end of the questionnaire, there was an open ended question asking participants to leave any comments. Five participants left additional comments, four of these were males. The comments left ranged in content and were as follows:

- *“Chlamydia is a badge of honour” (M).*
- *“I feel like an idiot, the one time I didn’t use a condom this happened. I feel like I’ve let myself down and will learn from this experience”. (M)*
- *“I feel more motivated to use condoms now”. (F)*
- *“I’m worried I won’t be able to have a bairn after this”. (M)*
- *“If I have sex with someone I don’t know I use a condom but with my girlfriend it is different. We broke up and she slept with someone else and got back together and now I have Chlamydia”. (M)*

Discussion

Sexual self-concept has been proposed to be influenced by meaningful sexual events (Hensel et al., 2011). It has been demonstrated that having an STI was negatively related to sexual anxiety, sexual depression and sexual self-esteem compared with individuals without an STI (Newton & McCabe, 2008; Gottlieb, 2011). It was thereby postulated that there may be differences in the way that people who have had previous STIs score on dimensions of their sexual self-concept. The results indicated no

differences between those who had previously had an STI and those who had not on the scores of sexual self-concept dimensions.

The profile of results obtained on the dimensions of sexual self-concept indicated that the sample had high sexual self-esteem, sexual satisfaction and motivation to avoid risky sex. Moreover, participants had a low mean score of sexual anxiety and sexual depression. It is unknown if scores on these dimensions were similar prior to the diagnosis as data were collected after diagnosis. It could be that the diagnosis has increased motivation to avoid future risky sex. This was substantiated by comments left by two participants.

Gottlieb et al. (2011) conducted a longitudinal study and tested people prior to their diagnosis of Chlamydia and 5-8 weeks after treatment. At follow up, Chlamydia positive women had a 75% increase in sexual anxiety on the MSSCQ (Snell, 1998). This replicated earlier findings which suggested that sexual anxiety was higher in people with both HPV and herpes compared with people with no STI (Newton & McCabe, 2008). These studies both used the same measure as the current study and both measured sexual anxiety. The mean sexual anxiety score in the current study was lower than the mean reported in both these papers, for both the 'no STI' groups and the groups diagnosed with an STI (Newton & McCabe, 2008; Gottlieb et al., 2011). This suggests that the current sample were not as sexually anxious following their diagnosis. This could be due to the increasing normalisation of the diagnosis in the UK, particularly since the launch of the NCSP (2003). The previous research investigating sexual anxiety following a Chlamydia diagnosis was conducted in America in the context of a different healthcare system.

It was postulated that a more stable internally consistent self-concept may act as a buffer against risky sexual decision making, negative self-evaluations and unsatisfying sexual experiences (Hucker, Mussap & McCabe, 2010). It may be important to understand how sexual self-concept fits with both self-concept and sexual identity and commitment in people who have acquired Chlamydia. Whilst 43.1% of the sample reported that they were in a relationship, the length and type of relationship was unknown. Therefore, it is difficult to make inferences about sexual commitment from the current findings. No measures of self-concept or sexual identity were administered in the current study. Conclusions about the integration of participants' sexual self-concept within their self-concept cannot be made. This could be a focus of future research in this area.

It has been suggested that STI related shame is significantly associated with self-esteem (Sales et al., 2007). It was proposed that participants with high self-esteem experience less STI related shame and stigma (Sales et al., 2007). It was further reported that feelings of shame were predictive of condom-protected intercourse at a 6 month follow up. The current study did not replicate these findings. Firstly, feelings of shame or stigma were not significantly associated with sexual self-esteem. This could imply that global self-esteem as opposed to sexual self-esteem protects against STI related shame and stigma. It is also important to acknowledge that the current study adapted the stigma and shame measures so they were specifically related to a Chlamydia diagnosis. Sales et al. (2007) measured general STI-related shame and stigma and therefore this measure was not as specific. Perceived stigma and shame associated with STIs as a group of diagnoses may be different that of a Chlamydia diagnosis. This could account for the differences between findings. Secondly, sexual self-esteem was significantly positively correlated with motivation to avoid risky sex. This suggests that

high sexual self-esteem may be a protective behaviour. Given earlier findings by Sales et al. (2007) it was expected that motivation to avoid risky sex would be associated with feelings of shame. However, this was not reported. One explanation for these differences in the findings could be that in previous research the sample consisted of women (Sales et al., 2007). The current sample included almost an equal percentage of males and females. Males may construct dimensions of sexual self-concept differently and this may have impacted on the findings. Gender differences in the way that dimensions of sexual self-concept are constructed were not explored in this study due to the large number of participants that would need to be recruited. No previous research has investigated whether there are gender differences in sexual self-concept following an STI diagnosis.

There was a significant, positive correlation between sexual anxiety and both stigma and shame. One male participant commented that he felt more anxious about his fertility following the diagnosis. Another participant felt he had let himself down and felt “ashamed” by the diagnosis. Previous research has illustrated that individuals who received an STI diagnosis reported experiencing shame, guilt, anxiety, fear of rejection, isolation and worry about sexual desirability (Duncan et al., 2001; Darroch et al., 2003). Due to the analyses and design of the current study, the causality of this relationship cannot be determined. Duncan et al. (2001) reported that women receiving a diagnosis of Chlamydia reported feelings that ranged from mild self-disgust and distress, thus experiencing a sense of shame. Women were also worried about disclosing their diagnosis to others. Perhaps anxiety about disclosure and future reproductive health produce feelings of stigma and shame in both males and females.

Participants did not report high levels of stigma associated with their Chlamydia diagnosis. This could be related to the fact that they had accessed STI related care as

previous findings indicated that stigma may be a powerful barrier to seeking STI related care and services (Fortenberry, McFarlane, Bleakley et al., 2002). This was consistent with the expectations of the researcher following discussions with staff working at the clinic. The assumption was that stigma associated with a Chlamydia diagnosis had decreased over the past few years. It was felt as if males in particular were proud of naming their sexual partners when they attended the clinic for treatment. This was thought to be a way of demonstrating that they are sexually active and have had multiple sexual partners. However, it was felt that women were more cautious about disclosing partners when attending for treatment and this was assumed to be due fears around stigma. Surprisingly, the findings suggested that there was not a significant difference between the way that males and females perceived stigma in relation to Chlamydia. One male participant left a comment stating that a Chlamydia diagnosis was a “badge of honour”. Previous research conducted in the UK illustrated that women felt stigmatised following the diagnosis (Duncan et al., 2001; Darroch et al., 2003). Conversely, men generally reported less concern, were unwilling to disclose their condition to sexual partners, and some men projected attributions of blame onto their partners (Darroch et al., 2003). These studies were both qualitative and the current results cannot be directly compared to assess if levels of shame and stigma have changed. In the current study women did not appear to be feeling more stigmatised than males. This could suggest that there has been a change in the way that stigma around Chlamydia is perceived, compared to previous findings (Duncan et al., 2001; Darroch et al., 2003). This was in line with the researchers assumption that stigma attached to the diagnosis has changed. This could be due to the NCSP initiatives and the normalisation of the diagnosis on television and radio campaigns.

Women felt more ashamed in relation to their Chlamydia diagnosis compared to men but did not feel more stigmatized. Lewis (1998) proposed that shame can take

place privately as long as the attributions that give rise to it occur. For a person to feel stigma it must be transparent either by physical appearance or action (Lewis, 1998). Previous research has indicated that males attribute blame to female sexual partners, absolving themselves of responsibility (Darroch et al., 2003) and thus displacing their sense of shame onto females. Interestingly, a participant's reason for screen was not significantly related to levels of stigma and shame. It could be expected that those who could attribute the blame to another person may feel less stigma or shame. This was not reported to be the case. All participants reported, in their consultation, that they had had unprotected sex with their recent sexual partners. This was ultimately the reason they had contracted Chlamydia. Despite this, just under a tenth of participants attributed their reason for screen as to having had unprotected sex. The main reason for people seeking a sexual health screen was due to a sexual partner telling them they had Chlamydia. This implies that participants attributed the reason for their screen and their diagnosis onto another person, instead of accepting this as an outcome of their sexual risk taking behaviour. The reason that this may not have been associated with stigma and shame could be due to the sample size and this outcome may have been different if more people had been recruited.

Over a third of the participants had not planned to complete a screen but completed one due to opportunistic screening and the outreach services. This suggests that the outreach services are important in promoting screening amongst people who might not otherwise be tested. This provides support for the outreach services that have been set up as a consequence of the NCSP.

Formulation of Findings

Following a Chlamydia diagnosis the profile of sexual self-concept indicates that the -sample had high sexual self-esteem, satisfaction and motivation to avoid risky

sex. Participants appeared to have low sexual anxiety and depression. These results are consistent with the profiles of results obtained from research exploring sexual self-concept and sexual risk taking behaviours (Buzwell & Rosenthal, 1996; Hensel et al., 2011; Seal, Minichiello & Omodei, 1997).

Participants who experienced higher sexual anxiety also reported greater feelings of stigma and shame. Gottlieb et al., (2011) reported that sexual anxiety increase following a diagnosis of Chlamydia, therefore a diagnosis could activate sexual anxiety. The cognitive model of anxiety proposes that when people are anxious, they employ coping strategies to manage the anxiety which often perpetuate their anxiety, for instance, avoidance (Clark & Beck, 2010). It has been widely documented that stigma can also prevent people from accessing sexual health services and avoiding the services they provide (Fortenberry et al., 2002; Cunningham et al., 2002). If individuals feel sexually anxious, stigmatised and ashamed following their treatment session for Chlamydia, it is possible that they may avoid future encounters with the service (Pavlin et al., 2006). Women reported a higher level of shame than males in relation to their diagnosis. It could be postulated that they may also experience a higher level of sexual anxiety. This may suggest that they may need different messages to males during a treatment consultation, particularly around blame and feeling guilty. It has been suggested that the clinic encounter is an important opportunity for staff to inform and correct the patient if they have any misconceptions regarding STIs (Malta, 2007). This could therefore be an opportunity for people to update their belief system and challenge unhelpful thoughts which could maintain feelings of anxiety, stigma and shame. Thus avoiding an encounter in which unhelpful beliefs are challenged could maintain these difficult feelings and avoidance behaviours.

Alternatively if people are not anxious at all this may stop them from updating their sexual risk taking behaviours as they are not worried about the consequences of their behaviour. The current study did not find significant relationship between motivation to avoid risky sex and sexual anxiety. This suggests that higher levels of anxiety are not linked to higher levels of motivation to avoid risky sex. This may imply that high levels of anxiety are not positively associated with high levels of motivation to change risky sexual behaviours. Although the Cronbach's alphas of the motivation to avoid risky sex scale indicated that the internal consistency of the scale was questionable, therefore this link needs to be investigated further in research.

Limitations & Future Research

This study employed a cross sectional design and it is unknown how these scores could have changed over time. Future research could employ a longitudinal study to assess how sexual self-concept dimensions, stigma and shame change overtime. Furthermore, data were collected by self-report measures in the sexual health clinic. Participants may have wanted to give socially desirable answers particularly to scales such as motivation to avoid risky sex in this context.

The Cronbach's alpha scores on the motivation to avoid risky sex and sexual depression scale were lower than those previously reported by Snell, Fisher and Walters (1993). This suggests that the scales may not have as greater internal consistency than previous research suggests and therefore interpretations must be made with caution. Previous research used undergraduate participants and the current research was undertaken using a clinical sample. It is possible that the participants did not understand some of the wording of the questions although a pilot study was undertaken in order to assess this. Furthermore the current sample size was significantly less than the sample size in the previous research (Snell, Fisher & Walters, 1993). Future research is

required in order to assess the internal-consistency of these scales in the clinic population.

The questionnaires did not ask about number of lifetime sexual partners or sexual orientation. These factors could influence sexual behaviours and could impact on sexual self-concept. Socio-economical and information about educational background was not gathered in the current study. These variables should be measured in future research as they could influence perceived stigma and shame following a diagnosis. The way in which dimensions of sexual self-concept are integrated with sexual identity and sexual commitment in people with an STI could also be researched further. It has been suggested that the integration of sexual self-concept into sexual identity influences sexual risk taking behaviours (Hucker et al., 2010).

Despite evidence that personality traits could predict differences in sexual risk taking behaviours (Cooper, 2010) it was not measured in the current study. It was felt by the author that this would be beyond the scope of the current study and would add too many additional variables to investigate which would increase the number of participants needed for recruitment. Future research could measure personality traits in addition to sexual self-concept to see whether personality and sexual self-concept could be predictive of sexual risk taking behaviours in the clinic population.

This study was based on 51 participants. This was more than the target sample size to answer the main research question but, was not large enough to answer the secondary research questions 3 and 4. A consequence of this is that the statistical tests carried out may have been under-powered and significant differences may not have been detected due to reduced sensitivity. Thus, the chance of a type-2 error was increased. The results need to be interpreted with some caution and further examination with increased power may be required before firm conclusions can be made. Future

research could aim to recruit a larger sample of both males and females and examine differences in dimensions of their sexual self-concept following a Chlamydia diagnosis.

Clinical Implications

Motivation to avoid risky sex was found to be high in the sample. This could be due to people re-evaluating their beliefs about their susceptibility of catching an STI. As motivation to avoid risky sex is high following a Chlamydia diagnosis this could be a time when people are given a separate consultation to review their contraception methods. A possible way of enhancing motivation and enabling people to make a choice about their contraception is by professionals using techniques from the motivational interviewing (MI; Miller & Rollnick, 2002). Professionals could use an MI framework to provide information about different types of contraception as opposed to telling patients what they should do. They could then facilitate a discussion enabling people to weigh up the pros and cons of each method of contraception. As the design of the study was cross sectional, the length of time that this motivation remains high cannot be postulated.

People who present as sexually anxious may need more reassurance and support following a Chlamydia diagnosis as they may feel more shame and stigma. They may require tailored messages to address specific concerns that they have about their diagnosis. If people's concerns are not addressed, they may leave feeling stigmatised and ashamed and may avoid future clinic encounters.

This research has highlighted that perceived stigma following a Chlamydia diagnosis is not significantly different between males and females. Conversely, previous research illustrated that stigma was greater in women following a diagnosis (Darroch et al., 2003). This could be taken to mean that the stigma experienced by women following

a diagnosis has changed since the launch of the NCSP. Although it must be acknowledged that previous studies conducted qualitative interviews to assess themes associated with a diagnosis as opposed to a questionnaire measuring stigma and shame. This study could act as a baseline for future studies which aim to pursue this line of research. This would then be able to provide evidence that the NCSP is reducing stigma attached to Chlamydia.

The current study found that women felt more shame following a Chlamydia diagnosis than males. Health professionals should address unhelpful ideas about blame following a Chlamydia diagnosis both in clinical consultations and when delivering educational programmes. The emphasis should be placed on both males and females to protect their sexual health by using condoms. Educational programmes in schools and colleges should increase people's ability to negotiate condom use in addition to providing them with information about the consequences of unprotected sex. The inability to negotiate condom use was the main reason given by participants in their consultations as to why they were not using condoms.

The findings of this study support the outreach work that is undertaken by clinics in order to increase screening and the detection of Chlamydia. Over a third of the sample had taken a screen due to the outreach services. If these services were de-commissioned then less people may get tested and may continue to infect people without awareness that they have Chlamydia. This may also cause future health concerns if they remain untreated and this has financial implications for health care providers.

References

- Avert. (2010, January 22). *STD Statistics and STDs in the UK*. Retrieved January 29, 2010, from Avert: <http://www.avert.org/stdstatisticuk.htm>
- Balfe, M., Brugha, R., O'Connell, E., McGee, H., & O'Donovan, D. (2010). Where do young Irish women want Chlamydia-screening services to be set up? A qualitative study employing Goffman's impression management framework. *Health & Place, 16*, 16-24.
- Bekaert, S. (2005). *Adolescents and Sex. The Handbook for Professionals working with young people*. Oxford: Radcliffe.
- Buchner, A., Erdfelder, E., Faul, F., & Lang, A. (2009). *G*Power (Version 3.1.2)*. Retrieved from Computer Program: <http://www.pscho-uni-duesseldorf.de/app/projects/gpower/>
- Buzwell, S., & Rosenthal, D. (1996). Constructing a Sexual Self: Adolescents' Sexual Self-Perceptions and Sexual Risk-Taking. *Journal of Research on Adolescence, 6*(4), 489-513.
- Clark, D. A., & Beck, A. T. (2010). *Cognitive Therapy of Anxiety Disorders: Science and Practice*. New York: Guilford Press.
- Cooper, L. M. (2010). Toward a Person X Situation Model of Sexual Risk-Taking Behaviors: Illuminating the Conditional Effects of Traits Across Sexual Situations and Relationship Contexts. *Journal of Personality and Social Psychology, 98*(2), 319-341.

- Cunningham, S. D., Tschann, J., Gurvey, J. E., Fortenberry, J. D., & Ellen, J. M. (2002). Attitudes about sexual disclosure and perceptions of stigma and shame. *Sexually Transmitted Infections*, 78, 334-338.
- Darroch, J., Myers, L., & Cassell, J. (2003). Sex differences in the experience of testing positive for genital chlamydia infection: A qualitative study with implications for public health and for a national screening programme. *Sexually Transmitted Infections*, 79, 372-376.
- Department of Health. (2011). *Healthy Lives, Healthy People: Update and way forward*. London: Department of Health.
- Duncan, B., Hart, G., Scoular, A., & Bigrigg, A. (2001). Qualitative analysis of psychosocial impact of diagnosis of Chlamydia trachomatis: Implications for screening. *BMJ*, 322, 195-199.
- Fortenberry, J. D., McFarlane, M., Bleakley, A., Bull, S., Fishbein, M., Grimley, D. M., et al. (2002). Relationships of stigma and shame to gonorrhea and HIV screening. *American Journal of Public Health*, 92(3), 378-381.
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update* (4th ed.). Boston: Allyn & Bacon.
- Goffman, E. (1963). *Stigma: Notes on Management of Spoiled Identity*. New Jersey: Prentice-Hall.
- Goodson, P., Buhi, E. R., & Dunsmore, S. C. (2006). Self-esteem and adolescent sexual behaviors, attitudes and intentions: a systematic review. *Journal of Adolescent Health*, 38(3), 310-319.

- Gottlieb, S. L., Stoner, B. P., Zaidi, A. A., Buckel, C., Tran, M., Leichliter, J. S., et al. (2011). A Prospective Study of the Psychosocial Impact of a Positive Chlamydia trachomatis Laboratory Test. *Sexually Transmitted Diseases*, 38(11), 1004-1011.
- Greenwald, D. F., & Harder, D. W. (1998). Domains of Shame: Evolutionary, Cultural and Psychotherapeutic Aspects. In P. Gilbert, & B. Andrews, *Shame: Interpersonal Behaviour, Psychopathology, and Culture* (pp. 225-246). New York: Oxford University Press.
- Hensel, D. J., Fortenberry, J. D., O'Sullivan, L. F., & Orr, D. P. (2011). The developmental association of sexual self-concept with sexual behavior among adolescent women. *Journal of Adolescence*, 34, 675-684.
- Hucker, A., Mussap, A. J., & McCabe, M. M. (2010). Self-concept clarity and womens' sexual well-being. *The Canadian Journal of Human Sexuality*, 19(3), 67-77.
- Lewis, M. (1992). *Shame: The exposed self*. New York: Free Press.
- Lewis, M. (1998). Shame & Stigma. In P. Gilbert, & B. Andrews, *Shame: Interpersonal Behaviour, Psychopathology and Culture* (pp. 126-141). New York: Oxford University Press.
- Longmore, M. A. (1998). Symbolic interactionism and the study of sexuality. *The Journal of Sex Research*, 35, 44-57.
- Low, N., McCarthy, A., Macleod, J., Salisbury, C., Campbell, R., Roberts, T. E., et al. (2007). Epidemiological, social, diagnostic and economic evaluation of population screening for genital chlamydial infection. *Health Technology Assessment*, 11(8).

- Lutwak, N., Panish, J., & Ferrari, J. (2003). Shame and guilt: characterological vs. behavioral self-blame and their relationship to fear of intimacy. *Personality and Individual Differences*, 35(4), 909-916.
- Malta, M. e. (2007). Knowledge, perceived stigma, and care-seeking experiences for sexually transmitted infections: a qualitative study from the perspective of public clinic attendees in Rio de Janeiro, Brazil. *BioMed Central Public Health*.
- Miller, W. R., & Rollnick, S. (2002). *Motivational Interviewing: Preparing People to Change*. New York: Guilford Press.
- Newton, D. C., & McCabe, M. (2008). Effects of Sexually Transmitted Infection Status, Relationship Status and Disclosure Status on Sexual Self Concept. *Journal of Sex Research*, 45(2), 187-192.
- NHS. (2009). *National Chlamydia Screening Programme*. Retrieved 02 04, 2010, from National Chlamydia Screening Programme:
<http://www.chlamydiaSCREENING.nhs.uk/ys/about.html>
- Pavlin, N. L., Gunn, J. M., Parker, R., Fairley, C. K., & Hocking, J. (2006). Implementing Chlamydia Screening: What do women think? A systematic review of the literature. *BioMed Central*, 6, 221.
- Sales, J. M., DiClemente, R. J., Rose, E. S., Wingood, G. M., Klein, J. D., & Woods, E. R. (2007). Relationship of STD-Related Shame and Stigma to Female Adolescents' Condom Predicted Intercourse. *Journal of Adolescent Health*, 40(6), 573-584.

Seal, A., Minichiello, V., & Omodei, M. (1997). Young women's sexual risk taking behaviour: re-visiting the influences of sexual self-efficacy and sexual self-esteem. *International Journal of STD & AIDS*, 8, 159-165.

Snell, W. E. (1998). The multidimensional sexual self-concept questionnaire. In C. M. Davis, W. L. Yarber, R. Bausenman, G. Schreer, & S. L. Davis, *Handbook of sexuality-related measures* (pp. 521-524). Newbury Park, CA: Sage.

Snell, W. E., Fisher, T. D., & Walters, A. S. (1993). The multidimensional sexuality questionnaire: An objective self-report measure of psychological tendencies associated with human sexuality. *Annals of Sex Research*, 6, 27-55.

Young, S. D., Monin, B., & Owens, D. (2009). Opt-Out Testing for Stigmatized Diseases: A Social Psychological Approach to Understanding the Potential Effect of Recommendations for Routine HIV testing. *Health Psychology*, 28(6), 675-681.

Part Three**Appendices**

Appendices

Appendix A – Guidelines for authors for Journal of Sex Research.....	103
Appendix B- Diagram of The theory of planned behaviour model.....	107
Appendix C – Quality checklist.....	108
Appendix D – Quality assessment of studies.....	110
Appendix E– Inter-rater reliability check.....	113
Appendix F–. Data extraction sheet.....	115
Appendix G– Ethical Approval REC.....	117
Appendix H– R&D Ethical Approval.....	118
Appendix I–Pilot Questionnaire.....	119
Appendix J– Participant information sheet.....	121
Appendix K– Consent Form.....	124
Appendix L– Questionnaire Pack.....	125
Appendix M–SPSS Data Research Question 1.....	126
Appendix N–SPSS Data Research Question 2.....	127
Appendix O–SPSS Data Research Questions 3 & 4.....	128
Appendix P–Reflective Statement.....	134

Appendix A: Guidelines for authors for the systematic literature review

Email Correspondence with Editor

Dear Anne:

Thanks for your email and your interest in the journal. I think that the topic is likely appropriate and we do accept review articles, although we also have a special "Annual review of sex research" issue each year, and depending on the length, it may be better suited for this issue. Most of the reviews for the Annual review issue, however, are invited, so it would be up to the ARSR editor, Jacques van Lankveld, about whether he is interested in including it.

I think it would probably be best if you submitted the review and then we can decide whether it should be reviewed as a "regular" article or as a review article.

Hope this is helpful,
best

Cynthia

On 28 Feb 2012, at 14:48, Anne E Parry wrote:

Dear Dr Graham,

I have a couple of queries about submitting my work to the Journal of Sex Research. As part of my clinical psychology doctorate I have produced a systematic literature review on sexual self-concept and sexual risk taking behaviours. I was wondering firstly whether literature reviews would be accepted by this journal and if so is this an area that of interest to readers of the journal? If so, what would be the maximum word length of a review if it was submitted to this journal (I note for other research it is 35 pages)?

Secondly my empirical research is looking at sexual self-concept, stigma and shame following a Chlamydia diagnosis. Would this be appropriate to submit to this journal?

I look forward to hearing back from you,
Best wishes

Anne Parry

To view the terms under which this email is distributed, please go to
<http://www2.hull.ac.uk/legal/disclaimer.aspx>

Cynthia A. Graham, PhD, C. Psychol.
Editor
The Journal of Sex Research
Senior Lecturer in Health Psychology
Department of Psychology, Room 44/3016

Faculty of Social and Human Sciences
 Shackleton Building (B44)
 University of Southampton
 Highfield, Southampton
 SO17 1BJ UK

tel: 023 8059 3091

fax: 023 80594597

E-mail: C.A.Graham@soton.ac.uk<<mailto:C.A.Graham@soton.ac.uk>>

Guidelines for Authors

Aims and Scope

The Journal of Sex Research (JSR) is a scholarly journal devoted to the publication of articles relevant to the variety of disciplines involved in the scientific study of sexuality. *JSR* is designed to stimulate research and promote an interdisciplinary understanding of the diverse topics in contemporary sexual science. *JSR* publishes empirical reports, brief reports, theoretical essays, literature reviews, methodological articles, historical articles, book reviews, and letters to the editor. *JSR* actively seeks submissions from researchers outside of North America. The *JSR* audience is researchers and practitioners in the fields of psychology, sociology, education, psychiatry, communication, and allied health.

Manuscript Submission

JSR uses an online submission and review system, ScholarOne, through which authors submit manuscripts and track their progress up until acceptance for publication. Please log on to <http://mc.manuscriptcentral.com/sex> for information and instructions regarding registration and manuscript submission. Authors will enter pertinent information into the system and submit the following files: (a) cover letter file (see description below); (b) title page file that includes authors' names, affiliations (institutional and departmental), and addresses, e-mail, fax, and phone numbers of the corresponding author, as well as 4-5 key words, and any acknowledgments. When uploading this file, select the "Title Page and Acknowledgments" File Designation from the drop-down menu; (c) main document file (Word format [PC compatible]), including the abstract, all text, references, footnotes, and appendixes; (d) figures and tables, which should be submitted as separate files. Please do not submit PDF files. As part of the submission process, authors will also be asked to provide a suggested running head (an abbreviated title) that should not exceed 50 characters including spaces.

Because an anonymous peer review system is employed, please ensure that manuscripts have been properly blinded; author names and affiliations and acknowledgments should not appear anywhere in the main document file. Author names and affiliations are entered in a separate section in the online system for submission of manuscripts.

The cover letter should include the following information: (a) a description of the ethical review process employed by the authors; (b) a statement that the manuscript has not been published and is not currently under consideration elsewhere. If the data has been published in some form elsewhere, the authors should indicate how the content of

the submitted manuscript provides new information not available in previously published articles written by the authors.

Authors are responsible for all statements made in their work and for securing permission for reproducing any figure, table, or extract from the text of another source. This applies to direct reproduction as well as "derivative reproduction" (where a new table or figure has been created which derives substantially from a copyrighted source). Authors should write to both the author(s) and the publishers of such material to request nonexclusive world rights in all languages for use in the article and in future editions of it.

All inquiries regarding journal policy and manuscript preparation/submission should be sent to the Editor:

The Journal of Sex Research

Cynthia A. Graham, Ph.D., Editor

School of Psychology

Shackleton Building (B44)

University of Southampton

Highfield Campus

Southampton, UK SO17 1BJ

E-mail: C.A.Graham@soton.ac.uk

Manuscript Style

Manuscripts should be prepared according to the guidelines in the Publication Manual of the American Psychological Association (6th. ed.). Prior to submission, please review the APA submission guidelines carefully. Manuscripts that do not conform to APA guidelines may be returned to the author(s).

Although there is no maximum word length, a typical article accepted for publication will not exceed 35 double-spaced pages, including references and any tables/figures. The title should consist of 30 or fewer words and should identify the major variables investigated in the research. An abstract of 200 or fewer words is required for all papers submitted.

Color art will be reproduced in the online publication at no additional cost to the author. Color illustrations will also be considered for print publication; however, the author will be required to bear the full cost involved in color art reproduction. Please note that color reprints can only be ordered if print reproduction costs are paid. Print Rates: \$900 for the first page of color; \$450 per page for the next three pages of color. A custom quote will be generated for articles with

more than four pages of color. Art not supplied at a minimum of 300 dpi will not be considered for print.

Guidelines and free tutorials on APA style can be found at www.apastyle.org. This website also contains guidelines on the use of unbiased language and terms related to gender and sexual orientation; see <http://www.apastyle.org/manual/supplement/index.aspx>.

More detailed information about Manuscript Style can be found on the journal's website at: <http://www.tandf.co.uk/journals/journal.asp?issn=022-4499&linktype=44>.

Language Editing Services

For authors who would like assistance with English editing and proof-reading their manuscripts before submitting an article to the *Journal of Sex Research*, a list of companies that provide language editing services can at:

<http://www.tandfonline.com/page/authors>

Book and Media Reviews

The **Book Review Section** welcomes newly published books focusing on sexuality-related issues. The **Media Review Column** (published once a year) accepts submissions of videos, DVDs, audio CDs, CD-ROMs and web-based media that align themselves with the mission and purpose of the *Journal of Sex Research* and of the Society for the Scientific Study of Sexuality. If you have recently authored a research or theory-based text, a website, or other media focusing on sex research/theory, sexual health promotion, education, or teaching, clinical practice or sex therapy, and would like to have it considered for review, please instruct your publishers to send two copies of the materials to the Book Review Editor or the Media Review Column Editor. Because of space limitations, however, it is not possible to review all materials that are received. Individuals who are interested in writing a book review or a media review are invited to send the appropriate Editor their vita and a description of the content areas in which they feel competent to provide evaluative reviews.

Appendix B: Diagram of the Theory of Planned Behaviour Model (Ajzen, 1991)

Removed For Hard Binding

Appendix C: Quality checklist

Quality Checklist**Study Number:****Paper Title:****Paper Author:**

Quality Assessment Question	Quality Rating 1=Met the criteria 0=Not met the criteria
1. Is the hypothesis/aim/objective clearly described	
2. Are the variables clearly defined e.g. sexual self-concept	
3. Are the main outcomes to be measured clearly described in the introduction/method section	
4. Were the main outcome measures used accurate (valid and reliable)	
5. Are there clear participant inclusion and exclusion criteria	
6. Are the characteristics of participants included clearly described	
a. Are the number of participants, withdrawal rate reported	
b. Is the proportion of participants who agreed to take part reported	
7. Were the participants representative of the entire population from which they were recruited	
8.	

	ere the analyses planned in the introduction/method	
9.	ere the statistical tests used to assess the main outcomes appropriate	
10.	oes the study provide estimates of the random variability in the data	
11.	ave actual probability values been reported, e.g. 0.035 rather than <0.05 , except when $p<.001$	
12.	re the main findings of the study clearly described	
13.	ere the limitations of the study acknowledged in the discussion	

Appendix D: Quality assessment of studies

Quality Assessment Questions	Study Number										
	1	2	3	4	5	6	7	8	9	10	11
Is the hypothesis / aim/objective clearly described	1	1	1	1	1	1	1	1	1	1	1
Are the variables clearly defined e.g. sexual self-concept	1	1	1	1	1	1	1	1	1	1	1
Are the main outcomes to be measured clearly described in the introduction/method	1	1	1	1	1	1	1	1	1	1	1
Were the main outcome measures used accurate (valid and reliable)	1	1	1	1	1	1	1	1	1	1	1
Is there clear inclusion and exclusion criteria of participants	0	1	0	0	0	0	0	0	0	1	0
Are the characteristics of participants included clearly described	1	1	1	1	1	1	1	1	1	1	1
Are the number of participants, characteristics, withdrawal rate reported	1	0	1	1	1	1	1	1	1	1	1
Is the proportion of those who agreed to take part reported	0	0	1	1	0	1	1	1	1	1	1

Were the participants representative
of the entire populations from which
they were recruited

1 0 1 1 0 1 0 1 1 1 1

Were the analyses planned in the
introduction/method

0 1 1 1 1 1 1 1 0 0 1

Were the statistical tests used to
assess the main outcomes
appropriate

1 1 1 1 1 1 1 1 1 1 1

Does the study provide estimates of
the random variability in the data of
the main outcomes

1 1 1 1 1 1 0 1 1 1 1

Have actual probability values been
reported e.g. 0.035 rather than 0.05
for main outcomes. Except when
 $p < 0.001$.

1 1 0 0 0 1 1 0 0 0 0

Are the main findings of the study
clearly described

1 1 1 1 1 1 1 1 1 1 1

Were limitations of the research
acknowledged in the discussion

1	1	1	1	1	1	1	1	1	0	1	1
---	---	---	---	---	---	---	---	---	---	---	---

Total score

12	12	13	13	11	14	12	13	12	13	13
----	----	----	----	----	----	----	----	----	----	----

Appendix E: Inter-rater Reliability Checks

Item	Agreement (%)
Is the hypothesis aim/objective clearly described	100%
Are the variables clearly defined e.g. sexual self-concept	100%
Are the main outcomes to be measured clearly described in the introduction/method	100%
Were the main outcome measures used accurate (valid and reliable)	100%
Is there clear inclusion and exclusion criteria of participants	100%
Are the characteristics of participants included clearly described	100%
Are the number of participants, characteristics, withdrawal rate reported	100%
Is the proportion of those who agreed to take part reported	80%
Were the participants representative of the entire populations from which they were recruited	100%
Were the analyses planned in the introduction/method	100%
Were the statistical tests used to assess the main outcomes appropriate	100%

Does the study provide estimates of the random variability in the data of the main outcomes	80%
Have actual probability values been reported e.g. 0.035 rather than 0.05 for main outcomes. Except when $p < 0.001$.	80%
Are the main findings of the study clearly described	100%
Were limitations of the research acknowledged in the discussion	100%

Appendix F: Data extraction sheet

Data Extraction sheet***Study Information:***

Study title:

Authors:

Year of publication:

Source:

Reference:

Study Characteristics:

Research question/aims:

Duration of study:

Quality Score:

Study Design:***Participant Characteristics:***

Number:

Age:

Gender:

Ethnicity:

Geographical Region:

Marital/Relationship Status:

Social Economic Status:

Other Info:

Participant Recruitment

Recruitment methods:

Inclusion criteria:

Exclusion criteria:

Participation rate:

Procedure

Details of data collected

Method of data collection:

What was measured?

Which outcome measures were used?

Number of times data collected:

Results & Analysis

Statistical Tests:

Summary of Results (main findings and statistical significance):

Conclusions

Interpretation of results:

Limitations:

Key links to theory/literature:

Implications of findings:

Further research:

Notes/Comments

Appendix G: Ethical Approval REC

Removed for hard binding

Appendix H: R&D Ethical Approval

Removed for hard binding

Appendix I: Pilot Questionnaire Sheet

Pilot Question Sheet

I would like you take a few moments completing these questions about the questionnaires you have just looked at.

Age: **Please circle:** **MALE** **FEMALE**

Do you feel the questions are clear?

Yes No

Do you have any suggestions for improvement?

Were the words big enough for you to read them?

Yes No

Do you have any suggestions for improvement?

Could you understand the language used in the questions?

Yes No

Do you have any suggestions for improvement?

Do you think you would be able to answer these questions truthfully?

Yes No

How did you feel whilst reading the questions?

How upset did the questions make you feel?

Not at all upset A little upset Very upset

How embarrassed did the questions make you feel?

Not at all embarrassed A little embarrassed Very
embarrassed

Any other comments?

Thank you very much for your time and help!

Appendix J: Participant information sheet

**Participant Information Sheet****Version 1.2 (01/02/2012)**

*We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you. **The researcher will go through this sheet with you and answer any questions you have.** We'd suggest this should take about 5 minutes. Please ask if anything is not clear.*

Exploring Sexual Self Concept, Shame & Stigma Following a Chlamydia Diagnosis

Past research suggests after a Chlamydia diagnosis people have felt stigmatised and this can cause people to feel difficult emotions such as 'shame'. Since this research has been undertaken there has been a lot of publicity about Chlamydia including adverts on the radio and on the TV, which have aimed at improving people's awareness of the disease. This study wants to find out what young people who have recently been diagnosed with Chlamydia think and feel about it. This study also wants to look at young people's attitudes about themselves and their sexuality, this is known as sexual self-concept. This information will be useful for services as it will help to show current views on Chlamydia and will help us to understand the support that is needed after a diagnosis.

Why have I been invited?

You have been invited to take part because you are aged between 18-25 and are attending the sexual health clinic for treatment of Chlamydia. We are hoping to recruit around 100 people in total.

Do I have to take part?

No, it is up to you to decide to take part. We will describe the study and go through this information sheet. If you agree to take part, we will then ask you to sign a consent form. You are free to withdraw at any time, without giving a reason. Whether or not you take part would not affect the standard of care you receive.

What will happen if I decide to take part?

After you sign the consent form, you will be given a pack of questionnaires to fill in. You can do this in the clinic. There are 3 questionnaires. The first will ask some general questions about yourself and the other 2 will be concerned with asking about your views on Chlamydia.

What are the possible disadvantages and risks of taking part?

Taking part in this study requires some of your time, which may be inconvenient for you. It is possible that you may find some of the questions upsetting. If you become upset whilst taking part in the study you are able to withdraw from the research. You will also be given the opportunity to discuss any distress with the researcher who can discuss options for further help if you would like.

What are the possible benefits of taking part?

We cannot promise the study will help you but we hope that the information we gain from this study will help improve the treatment of people with Chlamydia.

***What will happen if I decide I no longer wish to take part?***

After signing the consent form, you can still change your mind about taking part in the study. Even if you have already given us your completed questionnaires, if you have kept a note of your reference number, you can contact us at any time and we will remove and destroy any information you have provided to us.

What if there is a problem?

If you have a concern about any aspect of this study, you should ask to speak to the researchers who will do their best to answer your questions. If you remain unhappy and wish to complain formally, you can do this through the NHS Complaints Procedure. Complaints can be addressed to:

Claire Attwood

The Complaints, Risk & Legal Services Manager (PALs)

City Health Care Partnership

Priory Park

Hull, HU4 7DY

Will my taking part in this study be kept confidential?

All data will be handled according to ethical and legal practice. All information which is collected about you during the course of the research will be anonymous. Your completed questionnaires will be given a code number which will be used throughout the analysis of the results. The coded data will be stored securely on University Departmental premises for five years after completion of the study. All information is treated as confidential unless participants disclose any information that suggests they are at risk (vulnerable adults, abusive relationship) or are a risk to others. At this point participants will be reminded of the limits of confidentiality and how it may be broken.

What will happen to the results of the study?

The results will be written up as part of a Clinical Psychology Doctorate and are intended to be published in a scientific journal. You will not be personally identified in any of the results. Information about the results will be available from the researcher upon completion of the study in Summer 2012.

Who is organising and funding the research?

This research is being undertaken as part of a Clinical Psychology Doctorate. The research is funded through the University of Hull.

Who has reviewed the study?

All research in the NHS is looked at by an independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed by the Nottingham Research Ethics Proportionate Review Sub-Committee.

Further information and contact details

If you wish to find out general information about taking part in research please visit the following website: <http://www.nhs.uk/conditions/clinical-trials/pages/gettinginvolvedinresearch.aspx>

If you have any further questions or queries relating to this research, please contact the researcher Anne Parry by email a.e.parry@2006.hull.ac.uk or on 01482 464117.

Appendix K: Consent Form



Participant Identification number for this study:

CONSENT FORM

Version 1.1. (17/11/2011)

Title of project: Exploring Sexual Self Concept, Shame & Stigma Following a Chlamydia Diagnosis

Name of Researcher: Anne Parry

Please initial the box

1. I confirm that I have read and understand the information sheet dated (version 1; dated 09/02/2011), for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	<input type="checkbox"/>
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without any medical care or legal rights being affected.	<input type="checkbox"/>
3. I understand that relevant sections of my medical notes and data collected during the study may be looked at by individuals from Conifer House, from regulatory authorities or from the NHS trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records.	<input type="checkbox"/>
4. I agree to take part in the above study	<input type="checkbox"/>

Appendix L: Questionnaire Pack

Version 1.1 (18/10/2011)

Removed for hard binding



Appendix M: SPSS Output Research Question 1

Correlations

			sexualanxiety	sexualesteem	sexualsatisfaction	sexualdepression	motivationtoavoidrisk	stigma	shame
Spearman's rho	sexualanxiety	Correlation Coefficient	1.000	-.203	-.216	.468**	.064	.465**	.593**
		Sig. (2-tailed)	.	.152	.128	.001	.655	.001	.000
		N	51	51	51	51	51	51	51
	sexualesteem	Correlation Coefficient	-.203	1.000	.515**	.051	.430**	-.044	-.078
		Sig. (2-tailed)	.152	.	.000	.721	.002	.757	.586
		N	51	51	51	51	51	51	51
	sexualsatisfaction	Correlation Coefficient	-.216	.515**	1.000	-.261	.182	.076	-.231
		Sig. (2-tailed)	.128	.000	.	.065	.201	.597	.103
		N	51	51	51	51	51	51	51
	sexualdepression	Correlation Coefficient	.468**	.051	-.261	1.000	.190	.238	.340*
		Sig. (2-tailed)	.001	.721	.065	.	.183	.092	.015
		N	51	51	51	51	51	51	51
	motivationtoavoidrisk	Correlation Coefficient	.064	.430**	.182	.190	1.000	.040	.129
		Sig. (2-tailed)	.655	.002	.201	.183	.	.780	.367
		N	51	51	51	51	51	51	51
	stigma	Correlation Coefficient	.465**	-.044	.076	.238	.040	1.000	.435**
		Sig. (2-tailed)	.001	.757	.597	.092	.780	.	.001
		N	51	51	51	51	51	51	51
	shame	Correlation Coefficient	.593**	-.078	-.231	.340*	.129	.435**	1.000
		Sig. (2-tailed)	.000	.586	.103	.015	.367	.001	.
		N	51	51	51	51	51	51	51

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Appendix N: SPSS Output Research Question 2

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of sexual anxiety is the same across categories of STI.	Independent-Samples Mann-Whitney U Test	.581	Retain the null hypothesis.
2	The distribution of sexual esteem is the same across categories of STI.	Independent-Samples Mann-Whitney U Test	.166	Retain the null hypothesis.
3	The distribution of sexual depression is the same across categories of STI.	Independent-Samples Mann-Whitney U Test	.626	Retain the null hypothesis.
4	The distribution of sexual satisfaction is the same across categories of STI.	Independent-Samples Mann-Whitney U Test	.388	Retain the null hypothesis.
5	The distribution of motivation to avoid risk is the same across categories of STI.	Independent-Samples Mann-Whitney U Test	.968	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Appendix O: SPSS Research Questions 3 & 4

*Gender & Stigma***Tests of Between-Subjects Effects**

Dependent Variable:stigma

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	18.571 ^a	1	18.571	1.119	.295	.022
Intercept	8820.924	1	8820.924	531.260	.000	.916
sex	18.571	1	18.571	1.119	.295	.022
Error	813.585	49	16.604			
Total	9819.000	51				
Corrected Total	832.157	50				

*Gender & Shame***Tests of Between-Subjects Effects**

Dependent Variable:shame

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	103.642 ^a	1	103.642	7.590	.008	.134
Intercept	6551.564	1	6551.564	479.815	.000	.907
sex	103.642	1	103.642	7.590	.008	.134
Error	669.064	49	13.654			
Total	7552.000	51				
Corrected Total	772.706	50				

a. R Squared = .134 (Adjusted R Squared = .116)

*Relationship Status & Shame***Tests of Between-Subjects Effects**

Dependent Variable:shame

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	24.894 ^a	1	24.894	1.631	.208	.032
Intercept	6540.345	1	6540.345	428.553	.000	.897
relationship	24.894	1	24.894	1.631	.208	.032
Error	747.812	49	15.261			
Total	7552.000	51				
Corrected Total	772.706	50				

a. R Squared = .032 (Adjusted R Squared = .012)

*Relationship Status & Stigma***Tests of Between-Subjects Effects**

Dependent Variable:stigma

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	11.586 ^a	1	11.586	.692	.410	.014
Intercept	8730.018	1	8730.018	521.309	.000	.914
relationship	11.586	1	11.586	.692	.410	.014
Error	820.571	49	16.746			
Total	9819.000	51				
Corrected Total	832.157	50				

a. R Squared = .014 (Adjusted R Squared = -.006)

*STI History & Stigma***Tests of Between-Subjects Effects**

Dependent Variable:stigma

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	6.127 ^a	1	6.127	.363	.549	.007
Intercept	8136.480	1	8136.480	482.655	.000	.908
STI	6.127	1	6.127	.363	.549	.007
Error	826.029	49	16.858			
Total	9819.000	51				
Corrected Total	832.157	50				

a. R Squared = .007 (Adjusted R Squared = -.013)

*STI History & Shame***Tests of Between-Subjects Effects**

Dependent Variable:shame

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	22.588 ^a	1	22.588	1.476	.230	.029
Intercept	6274.510	1	6274.510	409.870	.000	.893
STI	22.588	1	22.588	1.476	.230	.029
Error	750.118	49	15.309			
Total	7552.000	51				
Corrected Total	772.706	50				

Parental Status & Stigma

Tests of Between-Subjects Effects

Dependent Variable: stigma

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	6.400 ^a	1	6.400	.380	.541	.008
Intercept	2953.538	1	2953.538	175.262	.000	.782
child	6.400	1	6.400	.380	.541	.008
Error	825.757	49	16.852			
Total	9819.000	51				
Corrected Total	832.157	50				

a. R Squared = .008 (Adjusted R Squared = -.013)

Parental Status & Shame

Tests of Between-Subjects Effects

Dependent Variable: shame

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	33.836 ^a	1	33.836	2.244	.141	.044
Intercept	2877.758	1	2877.758	190.846	.000	.796
child	33.836	1	33.836	2.244	.141	.044
Error	738.870	49	15.079			
Total	7552.000	51				
Corrected Total	772.706	50				

a. R Squared = .044 (Adjusted R Squared = .024)

Location of Screen & Stigma

Tests of Between-Subjects Effects

Dependent Variable: stigma

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	21.361 ^a	2	10.680	.632	.536
Intercept	8066.870	1	8066.870	477.567	.000
location	21.361	2	10.680	.632	.536
Error	810.796	48	16.892		
Total	9819.000	51			
Corrected Total	832.157	50			

a. R Squared = .026 (Adjusted R Squared = -.015)

*Location of Screen & Shame***Tests of Between-Subjects Effects**

Dependent Variable:stigma

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	21.361 ^a	2	10.680	.632	.536	.026
Intercept	8066.870	1	8066.870	477.567	.000	.909
location	21.361	2	10.680	.632	.536	.026
Error	810.796	48	16.892			
Total	9819.000	51				
Corrected Total	832.157	50				

a. R Squared = .026 (Adjusted R Squared = -.015)

*Reason for Screen & Stigma***Tests of Between-Subjects Effects**

Dependent Variable:stigma

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	25.061 ^a	5	5.012	.279	.922
Intercept	6928.946	1	6928.946	386.326	.000
reasonscreen	25.061	5	5.012	.279	.922
Error	807.096	45	17.935		
Total	9819.000	51			
Corrected Total	832.157	50			

a. R Squared = .030 (Adjusted R Squared = -.078)

*Reason for Screen & Shame***Tests of Between-Subjects Effects**

Dependent Variable:shame

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	85.999 ^a	5	17.200	1.127	.360
Intercept	5667.364	1	5667.364	371.383	.000
reasonscreen	85.999	5	17.200	1.127	.360
Error	686.707	45	15.260		
Total	7552.000	51			
Corrected Total	772.706	50			

a. R Squared = .111 (Adjusted R Squared = .013)

Whether Screen was Planned & Stigma

Tests of Between-Subjects Effects

Dependent Variable:stigma

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1.491 ^a	1	1.491	.088	.768	.002
Intercept	8345.961	1	8345.961	492.318	.000	.909
planned	1.491	1	1.491	.088	.768	.002
Error	830.666	49	16.952			
Total	9819.000	51				
Corrected Total	832.157	50				

a. R Squared = .002 (Adjusted R Squared = -.019)

Whether Screen was Planned & Shame

Tests of Between-Subjects Effects

Dependent Variable:shame

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	5.290 ^a	1	5.290	.338	.564	.007
Intercept	6432.505	1	6432.505	410.720	.000	.893
planned	5.290	1	5.290	.338	.564	.007
Error	767.416	49	15.662			
Total	7552.000	51				
Corrected Total	772.706	50				

a. R Squared = .007 (Adjusted R Squared = -.013)

Multi-way ANOVA

Stigma, Demographics & Screening Circumstances

Tests of Between-Subjects Effects

Dependent Variable:stigma

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	55.172 ^a	7	7.882	.436	.874
Intercept	2165.057	1	2165.057	119.819	.000
sex	13.804	1	13.804	.764	.387
child	3.249	1	3.249	.180	.674
location	13.728	2	6.864	.380	.686
relationship	2.039	1	2.039	.113	.739
planned	6.280	1	6.280	.348	.559
STI	4.034	1	4.034	.223	.639
Error	776.985	43	18.069		
Total	9819.000	51			
Corrected Total	832.157	50			

a. R Squared = .066 (Adjusted R Squared = -.086)

Multi-way ANOVA

Shame, Demographics & Screening Circumstances

Tests of Between-Subjects Effects

Dependent Variable:shame

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	197.743 ^a	7	28.249	2.113	.063
Intercept	2196.791	1	2196.791	164.292	.000
sex	47.743	1	47.743	3.571	.066
child	41.414	1	41.414	3.097	.086
location	43.943	2	21.971	1.643	.205
relationship	4.608	1	4.608	.345	.560
planned	1.214	1	1.214	.091	.765
STI	19.897	1	19.897	1.488	.229
Error	574.963	43	13.371		
Total	7552.000	51			
Corrected Total	772.706	50			

a. R Squared = .256 (Adjusted R Squared = .135)

Appendix P: Reflective Statement

Reflective Statement

When completing this research I have encountered many obstacles which I have had to overcome. I feel that conducting this research in an NHS context and facing the challenges that have arisen has enabled my growth as a researcher. This reflective statement aims to chronologically outline some of the issues that arose in relation to my research journey.

During the initial stages of this research there were many gaps in the literature and this allowed a lot of choice over which variables to investigate. I had two very supportive supervisors that were open minded to the various ideas that I initially presented to them. After spending time with the outreach Chlamydia team, the direction I wanted to take with this research became clearer. I was fascinated by the fact that so many people used the outreach services in bars and clubs without a second thought. This is something that I remember surprised me when I first came to university. Chlamydia screening was available everywhere and after spending 2 years living in a catholic country where sexual health services were not advertised this seemed different.

My journey through peer review was very smooth and the research was given a favourable outcome. At this point that I started completing all the forms required for ethical review. The ethical review process was one that accompanied building relationships with management in the sexual health clinic, in order to have a site from which I could recruit from. The managers from the clinic seemed very supportive over the research and were keen for me to complete it within their clinic. However, it was difficult to arrange the meetings with the various people that I needed to gain support from. I was under a time pressure to try to get finer points of the procedure clearer so

that I could submit to ethics. Yet this was not everyone else's priority as the research was just an extra thing going on for them.

After the questionnaires and documentation were reviewed by the clinic staff they felt concerned over the questions regarding stigma and shame. It was subsequently agreed that I would pilot the questionnaire at a Saturday clinic in August. This was something that I found reassuring as I ten people agreed to take part in the pilot within an hour and a half. I thought that given people's willingness to take part in the pilot may make recruitment easier than I had anticipated. The pilot feedback was positive and nobody felt the questions caused any distress. At this point the clinicians were reassured and the study went through information governance.

By this time, it was the middle of September and I was ready to book a slot with ethics. I booked a slot with the proportionate review board that were due to meet 2 weeks later. It was now the middle of October. Many of my peers had finished data collection and I hadn't even got through ethics. This was an incredibly anxiety provoking time. The feedback from ethics positive and I was required to make some minor amendments.

I received confirmation that my amendments had been approved in November. I then prepared all the documentation for R&D. The trust that the recruitment site belonged to had recently become a social enterprise, however saw NHS patients. Senior clinicians and managers were unsure who the R&D contact was and this information was not available on any websites. Many emails were exchanged and eventually the name of the R&D lead became apparent. I sent all documentation to both the participating and sponsoring trusts. I received confirmation from the sponsoring trust within 2 weeks. However, it took until the middle of February for the participating trust to grant me a letter of access and approval. When I made enquiries about my application

I was told that other people were in charge of my application and they were unavailable to speak to me. I was told on numerous occasions that it would be approved shortly, although weeks later I had still not received it. This was the most frustrating time of the research journey. I felt as if I had no control over this process. I was also trying to arrange meeting with the team from which I would recruit to arrange recruitment. This was something that was taking time to organise despite my perseverance.

Whilst I was waiting for the R&D feedback I started my systematic literature review (SLR). At a time where I felt I had little control over my research this was something that I could control. I set mini deadlines with my supervisors so that it didn't seem as bigger task and this kept me focused. By the end of February, I had my first draft written. This felt like an achievement, especially given that I still had no data. I felt that the SLR got me re-interested in the topic that I was researching as I had started to feel indifferent about it.

I eventually organised a meeting with the team that I would recruit from. The nurses appeared positive about the research and were keen to help. However, I was told that the number of treatment clinics had decreased. Their priority was to increase their screening figures as the end of the financial year was approaching. I was told there was a clinic every other Saturday and these would be good days to recruit. Other clinics were planned on a week by week basis and they were unsure of the upcoming clinics. I was given the date for the next Saturday clinic and told that I could start data collection then. It was in ten days. I started to feel concerned as I thought that clinics occurred more regularly than this. I started to think "will I ever get the number of participants I need". I felt as if some of the people that I met with earlier in the research process may have exaggerated the number of positive test results and treatment given within the service. It started to occur to me that I may not be able to recruit the minimum people

required for the analyses by the end of May. I started to consider whether I would need to get an extension. I was left feeling confused.

I rang to confirm my attendance at the Saturday clinic a week before. Whilst on the phone I was given more times of treatment clinics that were occurring in the upcoming week. At this point I started to feel more hopeful about recruitment. I was about to start recruitment and was waiting for feedback on my SLR so I proceeded to write up my introduction and method for my empirical paper. This added to my sense of relief. It made me believe that I could write up the empirical paper in time.

It came to the time when I was finally able to recruit participants and by this point it was near the end of March. I had arranged with the nurses to sit in on their consultations and then administer my questionnaire at the end of their session. This was something that I feel enabled me to recruit participants and learn more about the process that participants had gone through. I felt so grateful that people were helping with my research. It was clear that both nurses genuinely wanted me to recruit as many people as possible. I enjoyed recruiting in the clinic and felt re-interested in my research once more. People were agreeing to take part which made recruitment easier and kept me feeling positive. I feel that collecting the data in the clinic allowed me to gauge people's responses to the research and made the process more real.

I gave myself a cut-off point of the 12th May and I decided that I would stop recruitment at this stage so I would have enough time to write up my results and discussion. The 12th May soon arrived and data collection was over. Instead of a sense of relief, it felt as if the hard work was about to begin. Despite knowing that it was all within my control from this point onwards.

I was now trying to complete amendments to my SLR and write up the results and discussion of my empirical paper. It felt like a juggling act of having to switch between both papers. I tried to remain a sense of calmness as I knew if I got too stressed I would not be productive. I focused on individual sections of research that needed to be done so that I could feel like I was achieving something. I managed to get a first draft to my supervisors, with time for them to give me some feedback. My SLR was written by this point and there were only a few amendments that needed to be done.

After discussing the empirical papers in supervision it was clear that a lot of the paper needed re-structuring, including sections such as the introduction which I had received little feedback on previously. I think the problems with the paper became more visible when the paper was read as a whole, but this did not make it any less frustrating. The process of re-drafting my empirical paper was one that initially started with panic. I was able to regain a sense of calm once I had completed the majority of required alterations. My supervisors provided me with timely feedback when it was needed and for this I am very appreciative. This helped me to produce a final version of my paper, which was accompanied by a huge sense of relief.

I chose to submit both papers to the same journal, The Journal of Sex Research (JSR). Both my systematic literature review and empirical paper represent research that could be applicable to a variety of disciplines particularly, in the health and psychology fields. This journal aims to provide an understanding of diverse topics in sexual science, to both researchers and practitioners in the fields of psychology, sociology, education, psychiatry, communication, and allied health. Therefore it felt appropriate to submit to this journal.

Final Reflections

I wish I had the knowledge that I have now before embarking on this research journey. This is probably due to the fact that I have learnt a vast amount about developing and conducting research within an NHS service. Above all, I have learnt not to underestimate the importance of building relationships with people that will support the research to take place.