

SEX ADDICTION: IN THE EYE OF THE BEHOLDER?

**A COMPARISON OF 'SEX ADDICTS' VERSUS 'NON-ADDICTS' ON
MEASURES OF SEXUAL BEHAVIOUR, PERSONALITY,
CATEGORICAL THINKING, SEXUAL ATTITUDES, AND
RELIGIOSITY.**

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Thesis Abstract

Introduction: 'Sex addiction' appears to have been largely accepted within clinical fields and popular culture. However, despite its 30 year history, the concept remains ill-defined and lacking in empirical data. Indeed, proponents of sex addiction continue to debate its terminology, definition, nosology, and aetiology, with a coherent model of the 'disorder' yet to be offered. An alternative account presented by the social constructionist model argues that the reason for this contention is because, rather than a pathological disorder, sex addiction represents a social construction. Those who argue from this perspective suggest that sex addiction has been created to pathologize sexualities which fail to promote dominant sexual norms. Whilst this argument appears convincing, it is not clear why some may be more influenced by these dominant sexual norms and thus pathologize their sexuality, whilst others do not consider their sexuality to be problematic. The answer to this may lie in certain individual differences, in particular, personality, thinking dispositions, sexual attitudes, and religiosity.

Aims: This was an exploratory piece of research which aimed to compare sex addicts (SAs) to 'non-addicts' (NSAs) on the dependent variables: sexual behaviour, the Big Five personality traits, categorical thinking, sexual attitudes, and religiosity.

Design: A convergent parallel design was employed, using questionnaires to collect quantitative and qualitative data.

Method: A self-selecting sample ($N = 214$) was recruited via poster and online advertisements placed in general public sites such as pubs and clubs, and sex addiction and sexual interest forums. Participants completed an online questionnaire comprising: a) an assessment of 'sex addiction' via participant's self-identification and a clinical screening tool (the Sexual Addiction Screening tool; SAST); b) a free text box in which participants explained their self-identification; c)

a questionnaire collecting demographic data and assessing the variables under investigation.

Results: Participants' constructs of sex addiction largely mapped onto the dominant model of sex addiction. This was particularly evident within SAs' responses. Conversely, a number of themes within NSAs' responses diverged from the sex addiction model and expressed a positive view of sex. Subsequent statistical analyses comparing self-identified SAs to NSAs found SAs reported a greater frequency of solo sex and evidenced more categorical thinking. No other significant differences were observed, with the exception of neuroticism whereby SAs scored higher when samples were matched for sexual activity. When the SAST defined the groups, SAs reported a greater frequency of solo sex and anal sex, and reported a higher number of partners for oral sex and anal sex. These SAs also scored significantly higher in neuroticism and were less satisfied with their current sexual activity.

Discussion: The study demonstrates the immersion of the dominant model of sex addiction within sociocultural norms and suggests that SA participants in particular have internalised these norms into their interpretive frameworks. The subsequent comparison between the groups suggests that idiographic factors may interact with these discourses, meaning some are more influenced than others by these discourses. In particular, those with a propensity to think inflexibly (categorical thinking) and/or a predisposition to respond with negative emotionality and worry (neuroticism) may be more likely to appraise their sexuality as problematic and this identify as a SA. The study also lends support to the idea that the SAST tools may unduly pathologize sexual behaviours which are considered 'unconventional'.

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Statement of contribution

I, Danielle Mayes, declare that this thesis is the product of my own original work which I have carried out whilst enrolled on the Trent Doctorate in Clinical Psychology. I have received regular input and supervision from my supervisors, Dr Roshan das Nair and Dr Nima Moghaddam through the development, execution and write up of this research. I carried out the recruitment and data collection for the study. Both supervisors offered consultation during the data analysis and interpretation stages.

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SYSTEMATIC LITERATURE REVIEW

Psychosocial, demographic and sexual behaviour differences between ‘sex addicts’ and ‘non-sex addicts’: A systematic review of the literature

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Abstract

Whilst the concept of 'sexual addiction' has received much attention in both clinical and public domains, it remains ill-defined and in need of further research. In attempt to identify the distinguishing characteristics of sexual addiction, this paper reviews research that compares 'sex addicts' to 'non-sex addicts' on measures of psychosocial, demographic and sexual behaviour variables. Using six electronic databases and hand-searching of reference lists, 13 relevant articles were identified. The articles reported a range of differences between the groups with the most consistent observations reporting sex addicts as more likely to be in a relationship and as suffering greater psychological distress than non-addicts. The results also suggest a lack of consistency in the conceptualisation and assessment of sexual addiction. Theoretical implications for sexual addiction are discussed which include both pathological and social constructivist explanations. Implications for further research include exploration of factors that might influence individuals' appraisal of their sexual behaviour.

Key words: Sexual addiction; Hypersexuality; Sexual compulsivity; Sexual behaviour; Systematic review

1. Introduction

1.1. Background

The problem of excessive sexual behaviour has been reportedly documented for over 100 years (Kafka, 2010), but it was not until 1983 that the term 'sexual addiction'¹ was popularised. Coining the term, Carnes (1983) characterised sexual addiction as a disorder in which the individual suffers excessive and out of control sexual urges, thoughts and behaviours. Since then, the concept has gained popularity, being absorbed into everyday language as well as clinical practice.

However, 30 years after Carnes' popularisation of sexual addiction, and despite being accepted by some, the concept remains ill-defined. The lack of consensus in definition is highlighted by the variety of terminology that has been used to describe the same population/condition: *sexual addiction* (Carnes, 1986; Goodman, 1995), *sexual compulsivity* (Coleman, 1992; 1986), *hypersexuality* (Kafka,

¹ This article does not wish to purport that sexual addiction is a valid construct, rather, it acknowledges that it is a problematic concept and therefore uses the term critically

2012), and *sexual impulsivity* (Barth & Kinder, 1987)². Proponents of sexual addiction as a diagnostic category have also been criticized for failing to discriminate between the sexual thoughts, feelings and behaviours of sex addicts and ‘healthy’ individuals (Gold & Heffner, 1998; Moser, 1992). Indeed, a range of sexual behaviours including the use of prostitutes, having affairs, sexual fantasies, sexual harassment and flirting have been cited as potential indicators of sexual addiction (Keane, 2002).

It further seems that there is a lack of empirical literature to support the establishment of sexual addiction as a mental disorder. The American Psychiatric Association recently rejected calls from proponents of the sexual addiction diagnosis (such as Kafka, 2010) to include hypersexuality disorder within the latest version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; APA, 2013). Instead, the disorder has been included within Section III of the manual, which lists conditions requiring further study.

It therefore is clear that further research is required to better understand the concept of sexual addiction, its presentation, and its validity as a ‘mental health disorder’. One way to do this is to examine the similarities and differences between individuals considered ‘sex addicts’ and those thought to be ‘non-sex addicts’. Such an analysis will enable us to examine whether these two groups can be distinguished in any way and, if so, enable us to consider what these differences tell us about the concept of sexual addiction.

1.2. Aim

Having highlighted a need to better understand this population, this study set out to systematically review the empirical literature that compares ‘sex addicts’ to ‘non-sex addicts’ on psychosocial, demographic, and sexual behaviour measures. In so doing, it sought to determine the similarities and differences between these groups. The secondary aims of the review were to determine how sexual addiction has been defined and assessed within this body of literature, and to consider the theoretical implications offered by these studies for the study of sexual addiction.

² Whilst acknowledging the limitations in doing so, this article employs the term ‘sexual addiction’ to represent all of these concepts.

2. Method

2.1. Search strategy

This review sought empirical research articles that compared groups of sex addicts (SA) to non-sex addicts (NSA). Six search engines were examined in February 2014: AMED, CINAHL, Embase, Medline, PsychINFO, and Web of Science. We employed a broad search strategy, aiming to capture the variety of labels ascribed to this group. Thus, four primary search terms were used to represent the population of interest: sex*³ addict*, sex* compuls*, sex* impulsiv* and hypersex*. These were combined with further terms which sought to identify comparison studies: compar*, community, control*, healthy and non*. The searches were limited to English language and human participants. The results of each search were exported into Refworks reference manager where duplicates were removed and items were screened. An example search strategy is displayed as Appendix 1.

In addition to database searches, the references lists of retrieved articles were hand-searched. The primary author (DM) conducted the searches and extracted the data.

2.2. Inclusion and exclusion criteria

Studies that compared SA to NSA controls were considered for inclusion within the review if they:

- reported quantitative outcome measures of comparison between the two groups
- did not concern SA symptoms as sequelae of neurological disorder
- concerned non-forensic samples (where participants were sampled from prison, probation or forensic hospital settings)
- were published in a peer-reviewed journal

The review sought to include studies which compared groups and thus excluded correlational designs. Studies were also excluded if they grouped participants on the basis of a component of SA, for example, frequency of sexual behaviour (for example Långström & Hanson, 2006) or control over sexual behaviour (Skegg, Nada-Raja, Dickson & Paul, 2010). These exclusion criteria were imposed

in attempt to mirror the clinical conceptualisation of SA as a discrete condition with more than one characteristic.

The rationale for excluding studies which concerned neurological disorders is based on knowledge of existing literature which has identified SA behaviours as sequelae of conditions such as Parkinson's disease, Dementia and traumatic brain injury (Reid, Garos, Carpenter & Coleman, 2011). Conversely, this review was concerned with SA as a primary condition so sought to exclude these latter types of studies. We also excluded forensic samples because we felt that such samples would likely differ from non-forensic samples in the nature of SA by, for example, displaying more non-consensual or coercive sexual behaviour. Indeed, we have seen the conflation of SA with paedophilia in at least one forensic study (Cohen, Nesci, Haeri & Galynker, 2010). This distinction between forensic and non-forensic samples also ties in with Chess Denman's (2004) distinction between 'coercive' and 'transgressive' sexuality. As such, we felt that a focus upon non-forensic samples would lend sufficient specificity to the review.

2.3. Data extraction

Data were extracted from the identified articles using a pro-forma adapted from Torgerson (2003) (Appendix 2).

2.4. Assessment of methodological quality

The appraisal of methodological quality is an important aspect of any systematic literature review. In attempting to examine the quality of non-randomised studies, a range of assessment tools is available (Sanderson, Tatt, & Higgins, 2007). It is advised that tools are specific to the designs of the studies being evaluated (Viswanathan et al., 2012), so we sought to use a tool that was suitable for the assessment of case-control studies specifically. Having reviewed the relevant literature, it was decided that the Newcastle-Ottawa-Scale (NOS) (Wells et al.,) was appropriate for this study. The NOS was specifically created to evaluate observational studies for the purpose of systematic reviews or meta-analyses, offering a checklist or scale assessment for either cohort or case-control studies. This

³ * represents a truncation of the term. Therefore sex* will capture terms such as sexual, sexuality, etc.

review utilised the case-control version of the tool which comprises eight items, divided into three categories: selection, comparability, and exposure. These items yield a score for each paper between zero and nine, with higher numbers indicating the highest quality of study.

The NOS tool is reported to have strong face and criterion validity and high inter-rater reliability (Wells et al., 2009). A meta-analytic study (Li et al., 2008) also found it to be a reliable and valid tool. Furthermore, the Cochrane Collaboration have advocated for the use of the NOS for observational studies although they do suggest that the tool may require adaptation to fit with the review aims (Higgins & Green, 2011). As such, the tool was adapted to fit the aims of this review (see Appendix 3).

For this study, DM and NGM independently appraised the quality of the studies, and any discrepancies were resolved through discussion. RdN arbitrated when needed.

3. Results

Figure 1 summarises the process by which the literature was searched and the number of articles identified.

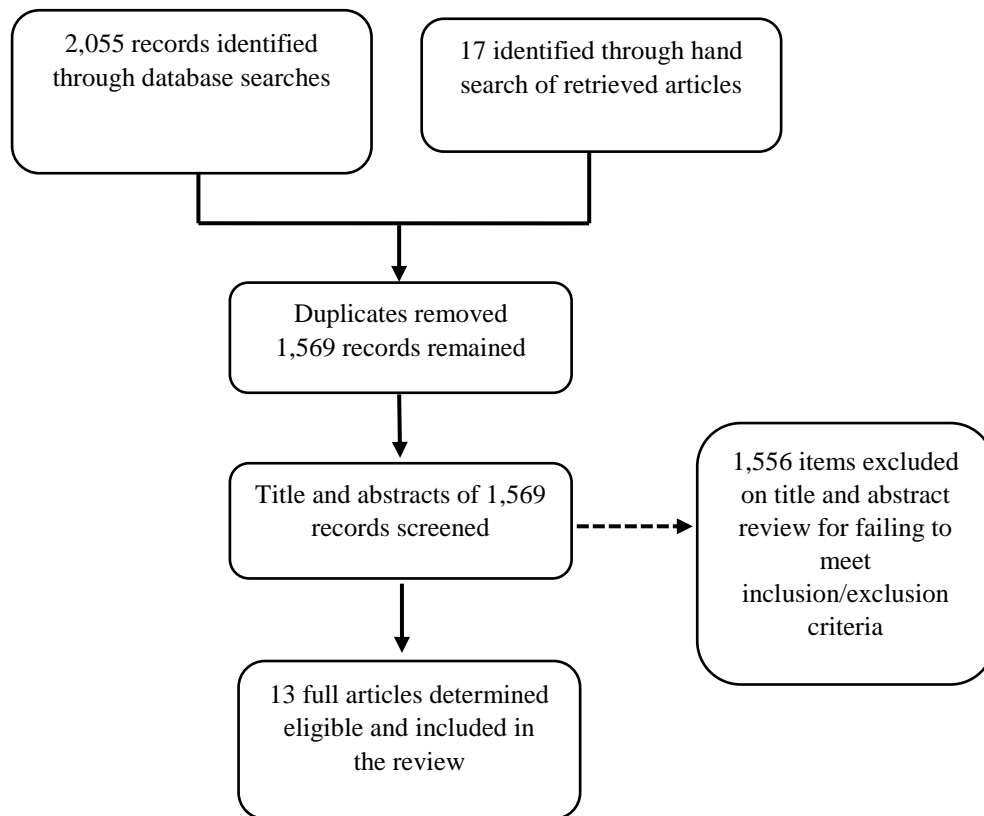


Figure 1: Literature search process

Terminology used

Table 1 offers an overview of terminologies, definitions and assessments of SA adopted by each of the studies. The table shows that the studies used several terms to describe the samples. Sexual compulsivity [2, 3, 4, 5, 11] and hypersexuality [6, 7, 8, 9, 10] were most commonly used. However, it is important to note that in all of the articles where hypersexuality was the choice terminology, Reid acted as the lead author. Sexual addiction was only used focally by one of the studies [1], although this terminology was often acknowledged within other studies as an alternative concept.

The two remaining studies utilised broader terminology. One [12] opted for the term ‘out of control sexual behaviour’. These authors reasoned that until we have a better understanding of patterns and determinants of sexual behaviour that would allow for subgroups of increased sexuality to be identified, such an umbrella term is preferable. Similarly, the other study [13]

adopted the term ‘dyregulated sexuality’ as an umbrella term for those thought to have sexual compulsivity, addiction, or impulsivity.

Definitions

All but one [1] of the studies offered a definition of the terminology used. The most common aspect of the definition was impairment or negative consequences resulting from the sexual behaviour, which was cited in nine of the study definitions [2, 3, 5, 6, 7, 8, 9, 10, 11]. Eight definitions referred to a lack of control [2, 3, 6, 7, 8, 11, 12, 13], six an intensity or excessiveness of sexual behaviour [5, 6, 7, 9, 10, 11], and five recurrent or repetitive sexual behaviour [4, 5, 6, 7, 9]. Distress [5, 6, 7, 10] and obsession [2, 3, 6, 7] featured in four of the definitions, and unwanted sexual behaviour was cited in one [4].

Table 1 Definition and assessment of sexual addiction across the studies

Study number and authors	Terminology	Definition offered	Measures of SA
1. Corley & Hook (2012)	Sexual addiction	None	<ul style="list-style-type: none"> • Self-rating of sex addiction and love or relationships addiction • Scale mirroring the HBI • Scale mirroring the Internet Screening Test (Delmonico & Miller, 2003)
2. Daneback, Ross & Mansson (2006)	Sexual compulsivity	Schneider's (1994) three criteria: (a) a loss of freedom to choose whether to stop or engage in a behaviour; (b) significant life consequences as a result of the behaviour; and (c) obsession with the activity	<ul style="list-style-type: none"> • SCS (1995)
3. Delmonico & Miller (2003)	Sexual compulsivity	As above	<ul style="list-style-type: none"> • SAST
4. Kelly (2009)	Sexual compulsivity	"An insistent, repetitive, intrusive and unwanted urge to perform specific acts often in ritualized or routinized fashions" (Kalichman & Rompa, 1995; p. 587)	<ul style="list-style-type: none"> • SCS (1995)
5. Miner et al. (2009)	Compulsive sexual behaviour	<p>"A clinical syndrome involving excessive sexual thoughts, sexual urges, or sexual activity which cause distress or impairment" (Miner et al., 2009; p. 1 46)</p> <p>Also refer to Coleman et al.'s (2000) criteria requiring "recurrent and intense sexually arousing fantasies, sexual urges, or behaviours over a period of at least 6 months that cause distress or impairment."</p>	<ul style="list-style-type: none"> • Structured Clinical Interview for DSM-IV Patient version (First et al., 1995), authors' research group added a section to measure SC (Raymond et al., 1999) • CSBI
6. Reid (2010)	Hypersexual behaviour	<p>An individual exhibits the following symptoms for a minimum of 6 months:</p> <ol style="list-style-type: none"> 1) Repetitive, increased, intense preoccupation with sexual thoughts, urges, and behaviours 2) Multiple unsuccessful attempts at controlling sexual thoughts, urges and behaviours, and 3) Adverse consequences causing clinically significant distress or impairment in occupational, interpersonal, or social areas of functioning related to the intensity or frequency of sexual thoughts, urges, or behaviours 	<ul style="list-style-type: none"> • HBI (2007)
7. Reid, Karim, McCrory & Carpenter (2010)	Hypersexual behaviour	As above	<ul style="list-style-type: none"> • HBI (2007)
8. Reid, Carpenter & Lloyd (2009)	Hypersexual behaviour	"Difficulty regulating or diminishing sexual thoughts, feelings and behaviour, to the degree that negative consequences are experienced by self or others" (Reid, Carpenter & Lloyd, 2009; p. 48)	<ul style="list-style-type: none"> • HBI (2007)

Study number and authors	Terminology	Definition offered	Measures of SA
9. Reid, Garos, Carpenter & Coleman (2011)	Hypersexuality	“A repetitive and intense preoccupation with sexual fantasies, urges, and behaviours, leading to adverse consequences and clinically significant distress or impairment in social, occupational, or other important areas of functioning” (Kafka, 2010; p. 2228)	<ul style="list-style-type: none"> • HBI (2011) • CSBI
10. Reid, Harper & Anderson (2009)	Hypersexuality	“Significant distress and consequences due to a pattern of persistent, intense sexual urges, thoughts and behaviours that are interfering with daily living...hypersexual behaviour can include either socially deviant or normal manifestations of sexual behaviour involving solo or relational sexual activities” (Reid, Harper & Anderson, 2009; p. 126)	<ul style="list-style-type: none"> • HBI (2007)
11. Schnarrs et al. (2010)	Sexual compulsivity	“A propensity to engage in sexually related activities that occur at escalating levels and have the potential to result in negative consequences to one’s self or others, with higher scores on measures of sexual compulsivity indicative of one’s preoccupation with sex and perceived lack of control over their sexual impulses” (Schnarrs et al., 2010; pg. 563)	<ul style="list-style-type: none"> • SCS (2001)
12. Skegg, Nada-Raja, Dickson & Paul (2010)	Out of control sexual behaviour	“An umbrella term that would encompass thoughts as well as actual behaviours that were perceived as out of control” (Skegg et al., p. 970)	<ul style="list-style-type: none"> • Question: “in the past 12 months, have you had sexual fantasies, urges or behaviour that you felt were out of control?”
13. Winters, Christoff & Gorzalka (2010)	Dysregulated sexuality	“Thoughts, feelings and behaviours that are experienced as distressingly out of control by the individual” (Winters et al., 2010; p. 1029)	<ul style="list-style-type: none"> • Treatment sought for sexual addiction/compulsivity/impulsivity • SCS (2001)
14. Yeagley, Hickok & Bauermeister (2013)	Hypersexual behaviour	“Difficulty regulating or diminishing sexual thoughts, urges, and behaviour, to the extent that the individual or others experience negative consequences” (Reid & Carpenter, 2009, p. 295)	<ul style="list-style-type: none"> • HBI (2011)

CBSI - Compulsive Sexual Behaviour Inventory (Coleman, Miner, Ohlerking & Raymond, 2001); HBI - Hypersexual Behaviour Inventory (Reid & Garos, 2007; Reid, Garos, & Carpenter, 2011); SAST - Sexual Addictions Screening Test (Carnes, 1989); SCS - Sexual Compulsivity Scale (Kalichman & Rompa, 1995; 2001)

Assessment

There was an apparent lack of consistency in the assessment of SA across these studies. Most often used was the HBI, which was adopted in seven studies [1, 6, 7, 8, 9, 10]. However, this finding should be interpreted in light of the fact that Reid is both the author of the HBI and acted as lead author on five of these studies. The SCS was the next most commonly used tool [2, 4, 11, 13], followed by the CSBI [5, 9]. The SAST, participant self-rating, and the Structured Clinical Interview for DSM-IV were all used once [3, 1, 5, respectively]. Additionally, one study [12] determined SA by asking the participant a specific question which linked to the study authors' definition of the problem, which related to control: "*in the past 12 months, have you had sexual fantasies, urges, or behaviour that you felt were out of control?*".

3.2. Description of the studies

Research setting

Table 2 summarises the general characteristics of each study. The table demonstrates that all but two of the reviewed studies were conducted within the US, with the remaining studies from New Zealand [12] and Sweden [2]. This represents a limitation of the studies in that their observations may not be wholly representative of SA within other socio-cultural contexts.

The studies were based in a variety of settings. All of the studies that pre-defined the comparison groups recruited SAs from outpatient clinics which specialised in the treatment of SA [5, 6, 7, 8, 9, 10]; since the controls for these studies were mainly recruited from University settings [6, 7, 8, 10], the comparability of the two groups may be called into question. Other comparison groups included a database of study volunteers [5] and a mixture of University sites and web-based locations [13], which may also be subject to bias, thereby restricting their comparability to the SA groups.

The remaining studies recruited participants from one population, later categorising them into SA and NSA groups based on their responses to SA measures. These studies recruited participants via a portal

site [2], at two large Gay, Lesbian and Bisexual community events in New York [4], through sexuality organisations [1, 3] and within sites likely to be frequented by men who have sex with men [11]. It might be suggested that the specificity of the recruitment sites used by these four latter studies limit their applicability to wider populations.

Participant characteristics

Sample sizes ranged from 16 [5] to 14,656 [13]. All of the studies recruited adults with overall reported age ranges from 18 to 94. Seven studies only recruited males [5, 6, 7, 8, 9, 10, 11] and five concerned both males and females [2, 3, 4, 12, 13]. One study [1] only recruited women. Three studies did not report participants' sexual orientation [3, 5, 12]. One study concerned only homosexual and bisexual participants [4]. The remaining studies reported a mixture of sexual orientations in their sample, with the majority reporting more heterosexual participants than homosexual or bisexual [1, 2, 6, 7, 8, 9, 10, 13]. The results from these studies may not therefore generalize to non-heterosexual populations. Since it was concerned with men who had sex with men, one study [11] reported more homosexual and bisexual participants than heterosexual.

Table 2: General study characteristics

Study and location	Setting of research	Participant characteristics	Comparison variables	Key findings (Cohen's effect-size <i>d</i>)
1. US	Women completing the 2009-2010 Women's Sexuality Survey via the Society of the Advancement of Sexual Health	Total 525 women Age $M=34.28$. No range reported Sexual orientation Heterosexual (n=478) Homosexual (n=28) Bisexual (n=19) Sexual addiction SA (n=101) Addicted to love or relationships (n=177)	SA – general and internet; Internet behaviour; Depression; Withdrawal symptoms	<ul style="list-style-type: none"> SA and those addicted to love/relationships scored higher on general SA (1.76), SA internet behaviour (2.10), cybersex behaviour (0.89), depression (0.74), suicide attempts (0.32) and withdrawal symptoms (0.89) Trend (not significant) towards NSA being more likely to be in a committed relationship (0.18)
2. Sweden	Individuals visiting Swedish portal site, Passagen who report using the internet for sexual purposes	Total 1,458 participants, males (n=802) and females (n=656) Age 18-65 Sexual orientation Heterosexual (n=722) Bisexual (n=64) Homosexual (n=16) Sexual addiction Total (n=82), males (n=61) and females (n=21)	Socio-demographics (gender, age, relationship status, and sexual orientation), number of hours spent online for sexual purposes; offline sexual behaviour; whether the respondent had ever had an STI	<ul style="list-style-type: none"> No homosexual SAs so removed from sample Bisexual more likely to be SA (0.53) Men more likely to be SA than women (0.66) SAs more likely to: be in a relationship (0.40), have had an STI (0.56), spend >15 hours per week online for sexual purposes (2.46), and have increased offline pornography-use since starting to use internet for sexual purposes (0.52) NSA less likely to have used offline pornography before using internet for sexual purposes (0.35)
3. US	Participants visiting SexHelp website	Total 14,656 participants - males (n=5,005) and females (n=1,083) Age Adults (no overall range reported) Sexual orientation Not reported Sexual addiction Total (n=3,422), males (n=2,992) and females (n=530)	Online sexual activity	SA males <ul style="list-style-type: none"> Significantly older than NSA (0.29) and spent more time accessing sexual material online (0.61) SA females <ul style="list-style-type: none"> Spent more time accessing sexual material online (0.44) All SA <ul style="list-style-type: none"> Scored significantly higher on all 7 dependent variables measured by the ISST: online sexual compulsivity (male $d = 2.44$; female $d = 1.46$), online sexual behaviour-social (0.64; 0.92), online sexual

Study and location	Setting of research	Participant characteristics	Comparison variables	Key findings (Cohen's effect-size <i>d</i>)
				behaviour-isolated (1.15; 0.97), online sexual spending (0.66; 0.58), interest in online sexual material (0.60; 0.80), non-home computer use for online sexual behaviour (0.56; 0.49) and accessing illegal sexual material (0.56; 0.56)
4. US	Members of the Gay Lesbian and Bisexual (GLB) community attending two large GLB events in New York	Total 1,543 participants – males (n=1,214) and females (n=329) Age <i>M</i> =37.46 for men (18-78) <i>M</i> =34.03 for women (18-70) Sexual orientation Homosexual – males (n=1,125) and females (n=261) Bisexual – males (n=89) and females (n=68) Sexual addiction Total (n=431)	Sexually related substance use; Sexual behaviours (including 'specialised' sexual behaviours such as exhibitionism and asphyxiation and 'atypical' sexual behaviours such as group sex)	<ul style="list-style-type: none"> SA more likely to have engaged in almost all studied sexual behaviours: alcohol use with sex (0.22), drug use with sex (0.35), any specialised sexual behaviour (0.28), sadomasochism alone (0.43), water sports alone (0.34) and exhibitionism alone (0.34) No significant differences concerning engagement in 'bondage and discipline'
5. US	Men with sexual compulsivity seeking treatment compared with age matched controls from a database of research volunteers	Total 16 men Age 19-51 Sexual orientation Not reported Sexual addiction Total (n=8)	Impulsivity; emotionality; diffusion tensor imaging; SA	<ul style="list-style-type: none"> Higher than expected rate of SA in control group (18%), but SA group scored higher on SA measure (5.11) SA group more impulsive on self-report (1.42) and behavioural (1.47-1.60) indices, had less constraint (1.27) and higher negative emotionality (1.70) Neurological data did not support prediction of inferior frontal white matter disorganisation in SA versus control group
6. US	Men seeking help for hypersexual behaviour compared with a control group of college students	Total 203 men Age 18-54 Sexual orientation Heterosexual (n=191) Homosexual (n=7) Bisexual (n=5) Sexual addiction Total (n=103)	Experience of emotions; SA	<ul style="list-style-type: none"> Higher than expected rate of SA in control group (19%) but SA group scored significantly higher on SA measure (2.20) SA participants showed significantly less positive emotion (0.64) and greater amounts of negative emotionality (0.78)

Study and location	Setting of research	Participant characteristics	Comparison variables	Key findings (Cohen's effect-size <i>d</i>)
7. US	Male hypersexual patients from an outpatients clinic in Utah compared with non-hypersexual men from the community and university population	Total 179 men Age 18-59 Sexual orientation Heterosexual (n=167) Homosexual (n=9) Bisexual (n=3) Sexual addiction Total (n=87)	Executive functioning as measured by the Behaviour Rating Inventory of Executive Function – Adult Version (Roth, Isquith & Gioia, 2005), SA	<ul style="list-style-type: none"> SA scored higher on SA measure (1.98) SA scored higher than controls on a global measure of problems in executive functioning (0.58) and constituent indices of Behavioural Regulation (0.55) and Metacognition (0.53) SAs were more likely to have clinically elevated scores on 5 of 9 subscales; gauging difficulties with: emotion control (0.31), self-monitoring (0.37), initiating problem solving (0.61), shifting between tasks (0.30) and planning/organising (0.31)
8. US	Men recruited from an outpatient clinic that specialised in the treatment of hypersexuality compared with a sample of male college students	Total 113 men Age 19-54 Sexual orientation Heterosexual (n=104) Homosexual (n=7) Bisexual (n=3) Sexual addiction Total (n=59)	Psychological symptoms as measured by the Symptom Checklist-90-Revised; SA	<ul style="list-style-type: none"> SA scored higher on SA measure (2.98) SA had higher obsessiveness (0.61), interpersonal sensitivity (0.65), depression (0.69) and global indicators of distress (0.54-0.69) SA scored higher on psychoticism (1.32), however, this difference reported to be driven by items concerning loneliness/interpersonal distance and guilt over sexual behaviours and thoughts. As such authors suspect this measure is conflated with variables used to define SA No significant differences in anxiety, phobic anxiety, paranoid ideation, somatisation, or hostility
9. US	Males seeking help for hypersexual behaviour compared with non-hypersexual community men recruited in Utah and California via advertisements, word of mouth and from students in community college evening class	Total 60 men Age SA <i>M</i> =33 NSA <i>M</i> =28 Sexual orientation Heterosexual (n=55) Homosexual (n=5) Sexual addiction Total (n=30)	Executive functioning – measured using a variety of tests including Delis-Kaplan Executive Function System; two measures of SA (SCS and HBI)	<ul style="list-style-type: none"> SA scored higher on SA measure (3.66) No significant differences between groups on any measure of executive functioning
10. US	Men from an outpatient clinic specialising in the treatment of	Total 144 men Age	Compass of shame scale (Elison, Lennon & Pulos, 2006), SA	<ul style="list-style-type: none"> Higher than expected rate of SA in control group (18%) but SA group scored higher on SA measure (2.89)

Study and location	Setting of research	Participant characteristics	Comparison variables	Key findings (Cohen's effect-size <i>d</i>)
	hypersexuality compared with undergraduate students	19-54 Sexual orientation Heterosexual (n=135) Homosexual (n=6) Bisexual (n=3) Sexual addiction Total (n=71)		<ul style="list-style-type: none"> Significant differences on all studied variables (coping strategies for dealing with shame) except Avoidance: i.e., SA participants showed greater tendency to Withdraw (0.90), Attack self (0.72) and Attack other (0.58)
11 US	Men who have sex with men within the rural counties of Indiana recruited at various sites including HIV testing sites, AIDS service organisations and online	Total 309 men Age 18-67 Sexual orientation Heterosexual (n=51) Homosexual (n=170) Bisexual (n=61) Unsure (n=9) Sexual addiction Total (n=108)	Demographics; sexual behaviours	<ul style="list-style-type: none"> SA more likely to: be married (0.32), be employed ≥ 35 hours a week (0.38), currently be in a sexual relationship with more than one person (0.55), report a recent history of sex with other men (0.26), have engaged in anal sex without using contraception within the last 30 days (0.25-0.26), have used a phone chat line (0.31) or have visited a cruising spot (0.44); have had sex with someone who they met on the internet (0.33), at a cruising spot (0.33) or at a gay bar (0.33); have had sex with a prostitute or sex worker (0.31), and have been given money for sex (0.40)
12. New Zealand	A cohort of people born in Dunedin, New Zealand between 01.04.72 and 31.03.73, taken from the Dunedin Multidisciplinary Health and Development longitudinal study	Total 940, men (n=474) and women (n=466) Age All 32 Sexual orientation Not reported Sexual addiction Total (n=91), males (n=60) and females (n=31)	Demographics; sexual behaviour; childhood sexual abuse (CSA); personality traits and religiosity measured by the multidimensional Personality Questionnaire (Tellegen et al., 1988)	<p>SA males compared with NSA males</p> <ul style="list-style-type: none"> More likely to have paid for sex in the last year (0.77), but no significant differences in any other heterosexual behaviours studied More likely to have had ≥ 5 same-sex partners in past 6 years (1.44) (but not in the past year) More likely to have suffered CSA (0.83) <p>SA females compared with NSA females</p> <ul style="list-style-type: none"> More likely to engage in 'impersonal sex' including having had ≥ 10 opposite sex partners in the last 6 years (1.50), have had more than one concurrent partner (1.52) to have had sex with someone they had met on the internet (1.82) Higher rates of impulsivity (0.41) Less satisfied with current or most recent relationship sexually (0.74) No significant differences in CSA <p>All SA</p>

Study and location	Setting of research	Participant characteristics	Comparison variables	Key findings (Cohen's effect-size <i>d</i>)
				<ul style="list-style-type: none"> Higher scores on stress reaction (tendency towards nervousness, worrying, changing mood, sensitivity; male <i>d</i> = 0.46, female <i>d</i> = 0.52) No significant differences in religiosity, traditionalism, sensation seeking or socioeconomic status
13. US	Members of the US public recruited via various means including University campus advertisements, a University Research Participation system and web-based recruitment including email snowballing and advertisements on web pages, forums and social networking sites	Total 14, 396, males (n=6,458) and women (n=7,938) Age 18-94, <i>M</i> =28.9 Sexual orientation Heterosexual (n=10,989) Homosexual (n=851) Bisexual (n=1,849) Queer (394) Sexual addiction Total (n= 176)	Demographics; SA; sexual inhibition/sexual excitation scales; sexual desire; total sexual outlet (TSO); sexual behaviours; sexual functioning; desirable responding	SA males compared with NSA males <ul style="list-style-type: none"> Reported being in longer relationships (0.32) Spent more time viewing pornography (0.29) Had a greater ideal weekly frequency of intercourse (0.21) Higher religiosity† Scored higher on dyadic sexual desire (0.32), solitary sexual desire (0.33), SA (1.18) Less sexual satisfaction (0.27) No significant differences in psychological symptoms and affect SA females compared with NSA females <ul style="list-style-type: none"> More psychological symptoms (0.49) and lower affect (0.55) Higher dyadic sexual desire (0.31), solitary sexual desire (0.27), and SA (1.05) Less sexual satisfaction (0.45) No significant differences in hours spent watching pornography, sexual experiences and ideal frequency of intercourse All SA <ul style="list-style-type: none"> Higher sexual excitation (male <i>d</i> = 0.35; female <i>d</i> = 0.54) but lower sexual inhibition due to 'threat of consequences' (0.26; 0.35) More likely to have had sexual experiences with both males and females† Younger age of first sexual interest (0.45; 0.53) No significant differences for frequency of masturbation, partnered sexual activity, TSO

Study and location	Setting of research	Participant characteristics	Comparison variables	Key findings (Cohen's effect-size <i>d</i>)
14. US	Single men aged between 18 and 24 who reported being sexually active with a male partner who they met on a dating website within the past 6 months	Total 366 men Age 18-24, <i>M</i> =21.4 Sexual orientation Homosexual (n=326) Bisexual (n=40) Sexual addiction Total (n= 80)	Demographics; sexual behaviour; partner serodiscordance; decisional balance to use condoms; pleasure interference	<ul style="list-style-type: none"> SA had higher frequency of sexual behaviour within the last month (0.42) and had greater number of unprotected repetitive anal intercourse (0.35) No other significant differences found

Note. 'Large' effects (as defined by Cohen, 1992; i.e., $d \geq .80$) are emboldened; †statistically significant result, but effect-size was not calculable from information provided.

3.3. Comparison measures and their outcome

Socio-demographics

Four studies compared SA to NSA participants on socio-demographic measures [2, 11, 12, 13]. Interestingly, these studies reported SAs as more likely to be in a relationship [2], to be married [11] and to have longer relationships [13] (the latter in the case of male participants). One study reported that SAs were more likely to be men (versus women), and bisexual (versus homosexual or heterosexual) [2]. One of the studies reported SA participants as more likely to work 35 hours or more a week [11]. A further study found no significant differences between the groups on socioeconomic status [12]. In another study, no significant differences were found between the two groups in terms of religiosity [12], however a different study found male (but not female) SAs scored higher on this measure [13].

Sexual behaviour

Seven of the reviewed studies compared the sexual behaviours of SAs and NSAs [1, 2, 3, 4, 11, 12, 13]. These studies reported a higher frequency of a range of sexual behaviours in SA groups including online sexual behaviour [1, 2, 3], time viewing pornography [2], cruising for sex [11], ‘specialised’ sexual behaviours such as fisting, exhibitionism or asphyxiation [4] and ‘atypical’ sexual behaviours such as group sex [4]. However, one study [13] found no significant differences between SA and NSA males and females in the frequency of masturbation, total sexual outlet⁴(Kafka, 1994; 1997), partnered sexual activity, and sexual experiences. The same study reported no significant differences between female SAs and SAs in time spent watching pornography, whereas male SAs spent significantly more time engaging in this sexual activity than NSA males.

Also noted within these comparisons was evidence of greater substance use, with SAs reporting more often using substances such as alcohol, amyl nitrates (‘poppers’), and cocaine within sexual interactions [4] than NSAs. Also, more SAs reported not using contraception during intercourse [11] and SAs were more likely to have contracted a sexually transmitted infection [2], compared to NSAs.

The SA group was more likely to have had sex with someone who they had just met on the internet, and to have had sex with prostitutes [11, 12] than NSAs.

Sexuality

Having grouped SA and NSA participants according to self-classification of SA [1] or treatment-seeker status [5, 6, 7, 8, 9, 10, 13], eight studies compared the groups on SA measurement tools. As predicted, all of these studies found SA groups to score higher on the measures of SA (CSBS, HBI and SCS) – observing large effect-sizes. However, it is interesting to note that four studies reported higher than expected SA scores in the NSA groups [5, 6, 8, 10], finding scores indicative of SA in almost 20% of NSA samples. This is a stark contrast to the estimates of SA in the general population of between 3% and 6% (Black, 2000; Coleman, 1992). The remaining studies did not report the proportion of NSAs whose score on the SA measure indicated SA [1, 7, 9, 13], which represents a significant limitation to these studies.

One study reported male and female SAs to have higher dyadic and solitary sexual desire and higher sexual excitation [13] than NSAs. However, this was coupled with less sexual satisfaction and lower sexual inhibition in the former group.

Mental health indices

The two groups were compared using a range of indices of mental health, yielding a number of statistically significant results. Emotionality was investigated by two studies, both finding SA participants to have higher negative emotionality and experience less positive emotions than NSAs [5, 6]. Scores on measures of depression were higher in SA groups [1, 8] who also reported higher rate of suicide attempts [1] than NSAs. SA participants also displayed more psychological symptoms including obsessive-compulsive behaviour, psychoticism and interpersonal sensitivity (encompassing feelings of inadequacy, self-doubt and an attentional bias towards others' negative evaluations of them) [8] compared to NSAs. However, it should be noted that differences in psychoticism were found to be driven by the loneliness and distress/guilt aspects of this measure. Another study found

⁴ The cumulative total of orgasms achieved in a week by any single or combination of sexual behaviours

SAs to have higher scores on a measure of stress reaction, indicating greater feelings of nervousness, sensitivity, worrying and changing mood [12] compared to NSAs. No significant differences were found between the two groups in terms of anxiety symptoms [8]. Two studies found higher rates of impulsivity in SAs than NSAs, although one of these studies concerned an all-male sample [5], whereas the other only observed this finding within the females of their study [12].

Cognitive/neurological functioning

The two studies reporting on comparisons of executive functioning between the two groups had contrasting results [7, 9]. Whereas the first study reported modest but significant differences in emotional control, problem solving, ability to make transitions and planning tasks, with SAs demonstrating poorer functioning in these areas compared to NSAs, the other study [9] found no significant differences on any measure of executive functioning. However, there is a significant limitation of this study design which must be acknowledged. By definition, SAs will suffer distress due to their perceived disorder and this is likely to depress their executive functioning. By failing to control for this distress, these studies may have conflated their assessment of executive functioning with that of SA.

3.4. Theoretical contributions to the study of sexual addiction

All but one of the reviewed studies [3] considered the implications of their findings for our understanding of SA (see Table 3, below). In attempting to interpret their findings, five of the studies considered how the social construction of sexuality may impact upon individuals' appraisal of their sexual behaviour [2, 4, 6, 12, 13]. These studies suggest that SA may be a product of an incongruence between the individual's sexual urges or behaviours and their beliefs and values (or those of wider society). It is this conflict that leads to the feelings of shame and guilt that are characteristic of SA.

A further common explanation was the idea that SA individuals make use of sex to escape or distance themselves from negative affect. Five studies drew upon this explanation [1, 5, 6, 8, 10], suggesting SA is borne out of attempts to alleviate painful emotions such as depression or restlessness using sex.

Table 3: Theoretical contributions to sexual addiction research offered by the authors of the reviewed articles

Study	Key theoretical contributions
1	<ul style="list-style-type: none"> SAs may have avoidant attachment styles as such individuals tend to feel more isolated, are less likely to seek emotional support and to use addictive behaviour to increase positive affect
2	<ul style="list-style-type: none"> SA is discriminated from high sexual interest/sexual permissiveness due to secrecy of sexual behaviour. Perhaps more of the SA group are in a relationship because they are secretly accessing sexual material. This violates socially accepted relationship scripts, inducing feelings of shame and guilt The distinction between an endorsed, highly sexualised subculture of homosexuality and SA may be different norms Bisexuals may be more likely to be SA because they are in the curious, 'experimental stage' of their sexuality development or early on in the process of coming out The SCS may actually represent a measure of 'latent normativity of sexual behaviour'
4	<ul style="list-style-type: none"> The patriarchal society of sex offers more benefits of sex to males but also means that males have greater exposure to sexual consequences, including SA
5	<ul style="list-style-type: none"> SAs suffer shame and painful experiences and seek to escape/detach from it using sex SA may use anger or rage towards a situation or another person to avoid being held accountable for their unhealthy sexual behaviours
6	<ul style="list-style-type: none"> Contrary to typical clinical observations, some individuals who suffer painful affect such as depression increase their pleasurable activity. SAs use sex to reduce negative affect Guilt in SAs may be a result of a conflict between one's values and beliefs and their sexual thoughts and behaviour
7	<ul style="list-style-type: none"> SAs' deficits in executive functioning may inhibit their ability to modulate sexual urges and behaviours. This leads to consequences which make their sexual thoughts and behaviour problematic
8	<ul style="list-style-type: none"> SAs use sex to inoculate feelings of restlessness and depression Obsessive traits found in SAs inhibit ability to manage intrusive thoughts and preoccupation with sex
9	<ul style="list-style-type: none"> Deficits in executive functioning may only be found in subgroups of SA individuals SAs impulsivity and cognitive rigidity may only manifest in sexual situations
10	<ul style="list-style-type: none"> SAs experience shame and try to escape or detach from it. They use sex to minimise painful affect SAs utilise attack as one strategy to cope with shame, this manifests in anger
11	<ul style="list-style-type: none"> SA behaviours must be understood within the subculture and contexts in which they are positioned
12	<ul style="list-style-type: none"> Female SAs may consider their sexual behaviour 'out of control' because, whilst normative for men, it is considered inappropriate for women. This appears reflective of societal attitudes, rather than harsh self-punishment Since male SAs appeared to engage in more same-sex behaviour than NSAs, their appraisal of their sexual behaviour as 'out of control' may be driven by attitudes towards homosexuality. This appears to be a reflection of societal attitudes. Men may also feel their sexual behaviour was out of control due to sexual risks associated with same-sex behaviour such as transmission of HIV or being 'outed'
13	<ul style="list-style-type: none"> SAs have high sexual desire coupled with insufficient sexual outlets. Their sexual needs are not being met by their longer-term relationships as sexual activity tends to reduce over the length of a relationship. Negative attitudes towards solitary sexual practices may prevent use of this outlet Religiosity found in male SAs may facilitate distress about sexuality Sexual thoughts and feelings may become intrusive and, when attempts to regulate them fail, this results in a perceived loss of control. Attempt to suppress these thoughts and feelings may increase arousal, leading to a maintenance cycle Greater sexual permissiveness for men may explain why female SAs experienced significantly more psychological symptoms and negative affects

Three studies suggested that certain characteristics of those with SA inhibit their ability to cope with unwanted sexual urges and thoughts [1, 7, 8]. This includes deficits in executive functioning [7], obsessive tendencies [8] and attachment styles [1].

3.5. Methodological quality

Using the NOS, the methodological quality of all reviewed studies was assessed independently by DM and NGM. There were no discrepancies between the authors' appraisals. Table 4 summarises the resultant methodological appraisal of the studies, demonstrating some variation in assessed quality.

Selection

All of the studies reported their method of assessing SA and therefore met the first criterion. The representativeness of the samples varied. Five studies utilised self-selecting recruitment procedures in which the participant responded to an advertisement [1, 2, 3, 11, 13] and two studies approached potential participants at venues or events that the target population was likely to attend [4, 11]. Since these procedures were open to obvious bias in selection, none of these studies met the representative quality criterion. One study approached all individuals born in Dunedin, New Zealand between 1 April 1972 and 31 March 1973 [12] and therefore met the criterion. The remaining six studies recruited SA populations from SA treatment sites. Whilst four of these explicitly stated that patients attending these services were selected consecutively [6, 7, 8, 10], the remaining two studies did not report the method by which patients were approached to take part the research [5, 9] and could not therefore be confirmed to have gained a representative sample of cases.

Eight of the studies recruited a NSA sample from the same population as the SA group, thereby satisfying the third criterion. The studies failing to meet this criterion recruited NSA groups from a database of research volunteers [5] and from University student populations, which, although encompassing a more representative sample of individuals from an evening class, were nevertheless derived from a different population to their SA comparators [6, 7, 8, 10].

Table 4: Methodological quality appraisal using a modified version of the NOS

Study	Selection		Comparability			Exposure					Total
	Adequate definition of cases	Representative sample of cases	Controls selected from the same population as cases	Explicitly stated that controls are not SA	Case and controls matched	Matched by second factor	Adjusted by 1 factor if not matched	Acceptable ascertainment of comparison variable	Same method of ascertainment for cases and controls	Response rate reported	
1	✓		✓	✓					✓		4
2	✓		✓	✓					✓		4
3	✓		✓	✓					✓		4
4	✓		✓	✓					✓	✓	5
5	✓			✓	✓				✓		4
6	✓	✓					✓		✓	✓	5
7	✓	✓							✓	✓	4
8	✓	✓								✓	3
9	✓		✓	✓			✓		✓		5
10	✓	✓					✓			✓	4
11	✓		✓	✓					✓		4
12	✓	✓	✓	✓					✓	✓	6
13	✓		✓	✓					✓		4

Given that these studies sought to compare SA to NSA individuals, it was important that the NSA group were assessed as not having an SA. However, four studies did not report an assessed absence of SA in their NSA sample [6, 7, 8, 10]. Instead, they used a measure of hypersexuality as a comparison measure within their analysis.

Comparability

Only one of the studies had participants in the SA and NSA group matched in some way, matching the two groups on age [5]. Whilst not matching the two groups, one study stated that the characteristics of the two groups (age, income and education) were similar to one another [9]. Subsequently only two of the studies made adjustments for potential confounders within their analyses [9, 10].

Exposure

In order to satisfy the first criterion of this quality measure, a study must have assessed the comparison variable via a blinded structured interview or using secure records. None of the studies appeared to have done this, with most utilising participant self-completion methods of assessment. All but one of the studies did, however, use the same method of assessment for SA and NSA groups. Whilst using the same measures for both groups, the remaining study [10] appeared to administer the measure via a clinician for SA groups, whereas NSA participants completed the form themselves. It was considered that the differing method of administration may have affected the results of this study. Finally, six studies reported response rates [4, 6, 7, 8, 10, 12], thereby satisfying the final quality criterion. However, two of these studies [7, 8] only offered response rates for the SA participants in their sample. Reported response rates ranged from 82.9% [4] and 98% [10] and those studies reporting rates for both SA and NSA groups [6, 10] reported similar participation for each group (96% and 93%, 98% and 97%, respectively).

4. Discussion and conclusions

This paper describes a systematic review of the empirical literature that has compared individuals considered to be sex addicts (SAs) to those considered non-sex addicts (NSAs). The review has uncovered a number of interesting findings that contribute to our understanding of SA.

4.1. Summary of evidence

One of the most striking observations within this review is the variety of definitions and assessments of SA adopted by the reviewed studies. This is consistent with our knowledge of the wider SA literature, which suffers a lack of consensus in definition and assessment. It may further explain the lack of uniformity in observations across these studies. Some studies attempted to remedy this problem by employing umbrella definitions of SA [12, 13]. However, whilst receptive to the inadequate definition of SA within the literature, it might be suggested that these studies were over-inclusive in their definition, thereby encouraging heterogeneous observations. This therefore highlights the need for further research to enrich our understanding of people's construction of the concept of SA and allow for a better description of the phenomenon. This also highlights the potential 'perspectives' (or biases) that researchers bring to this area of research, based on their own theories of SA.

By comparing SA to NSA individuals, the studies included in this review have offered insight into the potential distinguishing characteristics of SA. In line with their predictions, all but one of the studies comparing the sexual behaviours of the two groups found SAs to engage in a higher frequency of a range of sexual behaviours [1, 2, 3, 4, 11, 12]. Significant differences between the two populations were also observed in terms of sexual orientation whereby bisexuals were more likely to be SA than homosexuals or heterosexual [2]. One of the most consistent results related to differences in relationships [2, 11, 13] wherein SAs were more likely to be in a relationship than NSAs (although effect-sizes here were small). Comparisons in terms of executive functioning were mixed [7, 9] but findings pertaining to psychological symptoms appeared more consistent. Relative to NSAs, SAs reported stronger tenancies towards obsessive-compulsive behaviours and interpersonal sensitivity

[8], and greater stress reactivity [12]. Furthermore, SAs were generally found to suffer more psychological distress than NSAs, as manifested in higher rates of negative emotions, depression and suicidality [1, 5, 6, 8]. This recurrent finding is consistent with the notions of distress, impairment, and negative consequences, which feature in most of the study definitions of SA. However, this leads to a circular logic: most assessment tools used to identify (or ‘diagnose’) SA state criteria such as ‘distress, impairment and (negative) consequences’ and people who have had this experience (irrespective of their sexual thoughts or behaviours) will endorse these items, thereby creating a ‘group’ of such individuals who differ from those who do not endorse these items. This brings us back to the definition of SA, and it appears that SA is defined as what the SA assessment measures.

This is a major limitation of some SA research, and this paper highlights a number of methodological shortcomings of the reviewed studies, which should be considered when interpreting their findings. For example, it is evident that the majority of the studies failed to appropriately match SAs to NSAs, meaning observed findings may have been influenced by confounding variables such as age or education. Furthermore, the self-selecting methods of recruitment employed by a number of these studies may misrepresent the populations sampled. Sampling from clinics is problematic as these samples are by virtue of their presentation to clinics ‘not well’. Therefore, comparing such samples with non-clinical samples is methodologically poor. It is noteworthy that almost 20% of the ‘control’ (NSA) participants also endorsed items on SA measures, suggesting that these samples are not altogether distinct.

4.2. Implications for sexual addiction research

All but one of these studies considered the implications of their findings for the concept of SA. Some of the studies have offered theoretical contributions that appear to adhere to the dominant conceptualisation of SA within the literature, which implicates the role of underlying pathology (Carnes, 1986; Kafka, 2012). These explanations attempted to link SA to factors such as deficits in executive functioning [7], greater impulsivity [9] and obsessiveness [8]. Additionally, some authors have theorised that SAs use sex to self-medicate against the psychological distress they suffer.

However, some of the theoretical explanations offered diverge from the pathological explanation of SA and instead implicate the role of a third variable in the production of SA ‘symptomology’. Here, a common explanation is that an incongruence between beliefs/values and sexual behaviour causes individuals to pathologize their sexuality – which leads to the psychological distress observed in SAs. Such an explanation draws upon the social construction of sexuality to explain how this conflict arises. It suggests that individuals interpret their sexual urges and behaviours using socially accepted scripts of sexuality (and perceived ‘normality’) in which sexual permissiveness varies as a function of characteristics such as gender and sexuality. This is in fitting with Klein’s (2012) argument which posits:

“...the diagnosis of sex addiction is in many ways a diagnosis of discomfort with one’s own sexuality, or of being at odds with cultural definitions of normal sex, and struggling with that contrast” (pg. 5).

This therefore presents a challenge to the pathological account of SA.

Whilst the above explanation appears to be supported by the results of these studies, what is less clear is why some individuals can engage in highly sexualised behaviour without self-pathologizing? Some observations from these studies suggest that characteristics of SAs may encourage a different appraisal of the sexual behaviour, which may account for this difference. These studies highlighted greater religiosity, interpersonal sensitivity and stress reaction in SAs, indicating a greater propensity to experience feelings such as shame, inadequacy, sensitivity and worrying, particularly when they feel they are violating normative scripts. It is conceivable to suggest that these characteristics mean SAs are more prone to problematize their sexual behaviour.

These studies also raise important considerations about the way in which SA is assessed. As mentioned, psychometric measures of SA identified higher than expected rates of SA in NSA groups

[5, 6, 8, 10], thereby challenging their specificity. This might also suggest that the measures actually feed into the social construction of sex rather than tapping into underlying pathology. Indeed, one study suggested that the SA measure they employed may represent a measure of the latent normativity of sexual behaviour [2]. This can be seen as an overarching limitation of all of the SA measures. Relatedly, it might be suggested that measures of SA demonstrate the tautological nature of SA in that they are both created to assess SA *and* used to confirm the its existence.

4.3. Limitations of the review

This review is not without limitation. By adopting such a broad search strategy concerning SA, the review may have lacked specificity and encouraged the inclusion of a heterogeneous selection of studies. Indeed, a number of the reviewed studies alluded to the idea that subgroups of SA exist, thereby contributing heterogeneity of observations [9, 13]. However, this limitation should be balanced against the fact that the review was exploratory in nature and that satisfactory definition of SA subgroups is currently absent from the literature [13].

Future research

As one study concluded: “*the domain of hypersexuality remains a largely uncharted field that welcomes research by inquisitive investigators*” [8, p. 59] and this review has uncovered several avenues for further research. Firstly, the review has highlighted that studies comparing SAs to NSAs have been mainly concentrated within the US. Although one study reported confidence in the cross-cultural validity of their results [2], another study highlighted the effect of context upon presentation of SA [11]. As such, future research may wish to study individuals within different contexts.

Additionally, we have seen that SA may be driven by factors which affect the individual’s appraisal of their sexual behaviour. Future studies might therefore wish to explore the potential factors which might contribute to the propensity to self-pathologize one’s sexual behaviour.

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Appendices

Appendix 1: Example search strategy (Example PSYCHINFO search strategy)

1. Exp sexual addiction/
2. Exp hypersexuality/
3. Sex* adj compulsiv*.mp
4. Sex* adj impulsiv*.mp
5. 1 OR 2 OR 3 OR 4
6. Compar*.mp
7. Community.mp
8. Control*.mp
9. Healthy.mp
10. Non*.mp
11. 6 OR 7 OR 8 OR 9 OR 10
12. 5 NOT (Parkinson* OR brain injury OR dementia OR kluver*)
13. 11 AND 12
14. Limit 13 to English language and Humans

Appendix 2: Data extraction proforma, adapted from Torgerson (2003)

Data extraction

Author:

Date of publication:

Country of research:

Setting of research:

Terminology used:

Assessment of sexual addiction:

Participant demographics:

Comparison measures and their outcome:

Theoretical contributions:

Appendix 3: Quality criteria, adapted from Wells et al. (2009)

Selection

1) Adequate definition of cases

Point awarded where the study reported on the method of distinguishing between sex addicts and non-sex addicts

2) Representativeness of cases

Point awarded where the study has selected all eligible cases: (i) during a defined period; (ii) in a defined area or (iii) all cases in a defined group or an appropriate sample of these (e.g. random)

3) Selection of controls

Point awarded where the control group was derived from the same population as the cases and essentially would have been cases had they been classed as sex addicts.

4) Definition of controls

Point awarded where the control group has been assessed as not having a sexual addiction

Comparability

1) Comparability of cases and controls on the basis of the design or analysis

A maximum of two points awarded where sex addicts and control group are matched in the design and/or confounders are adjusted for in the analysis (one point for age, one point for other controlled factors). Points are not awarded where the study claims that there were no differences between the groups or that differences were not statistically significant.

Exposure

1) Acceptable ascertainment of comparison variable

Point awarded where assessor blinded to the case/control status of the person being assessed or where secure record used (such as medical records). No point awarded for self-report.

2) Same method of ascertainment for cases and controls

Point awarded where the same method of administering the outcome measure was used for the cases and controls

3) Non-Response rate

Point awarded where the non-response rate is the same rate for cases and controls

JOURNAL PAPER

Sex addiction: in the eye of the beholder?
**A comparison of ‘sex addicts’ and ‘non-addicts’ on
sexual behaviour and personality, attitudes and
thinking styles**

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Abstract

Objectives. To compare ‘sex addicts’ (SA) to ‘non-addicts’ (NSA) on sexual behaviour and psychological variables: the Big Five personality traits, categorical thinking, sexual attitudes, and religiosity.

Design. A convergent parallel design employing a mixed inductive-deductive thematic analysis and comparative statistical analyses.

Methods. A self-selecting sample of males ($N = 214$) was recruited via online forums and posters. Participants completed an online questionnaire comprising: a) assessment of ‘sex addiction’ via participant’s self-identification and a clinical tool (the Sex Addiction Screening tool; SAST); b) participants’ explanation for their self-identification; c) a questionnaire collecting demographic data and assessing the variables under investigation.

Results. Self-identified SAs reported more solo sex, evidenced more categorical thinking and scored higher in neuroticism. SAST-identified SAs reported more solo sex and unprotected anal sex, and more partners for oral sex and anal sex (protected and unprotected). These SAs also scored significantly higher in neuroticism.

Conclusions. Sociocultural concepts of sex addiction and of sexuality more generally are used by individuals to evaluate their own sexuality. A propensity towards polarised thinking and/or a predisposition to respond with concern or worry may make an individual more likely to be influenced by these norms and thus appraise their sexuality as problematic.

Practitioner points

- The focus on behaviour reduction or abstinence in the treatment of sex addiction may be misguided. Instead, interventions aimed at ‘sex addicts’ appraisal of their sexual behaviour may be more appropriate.
- The clinical utility of the SAST tools is questionable. In particular, there are concerns regarding the undue pathologizing of sexual behaviours which are ‘unconventional’

Limitations

- The frequency of sexual activity engaged in by participants was varied, with a significant proportion not currently engaging in any sexual activity. This will have undoubtedly affected the results.
- The collection of self-report data on sexual behaviour represents a limitation of this study. The accuracy of such estimations has previously been noted in sexuality research but is likely to be further thwarted by participants’ distress concerning their sexual behaviour.
- The exploratory nature of this study means that conclusions and recommendations are tentative.

Introduction

The concept of problematic excessive sexual behaviour has allegedly been documented clinically for over 100 years (Kafka, 2010). In 1983 Patrick Carnes popularised the concept of 'sex addiction' defining it as a disorder in which the individual has sexual urges, thoughts and behaviours that are excessive and out of control. However, despite over 30 years of research into sex addiction there remains a lack of evidence in support of its status as a 'mental disorder'. Furthermore, there continues to be a lack of consensus concerning the terminology, definition and nosology of sex addiction leading some commentators to label it a pseudoscience (Szasz, 1990). As such, calls from prominent sex addiction commentators such as Kafka (2010) to include hypersexuality (akin to sex addiction) as a mental disorder within the latest edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychological Association; APA, 2013) were rejected by APA due to insufficient evidence. As such, hypersexuality was placed within Section III of the manual, which lists conditions requiring further study.

Whilst definitions vary, Carnes' (2005) definition of sex addiction appears to encapsulate common components of other definitions. This includes a failure to resist impulses, inordinate amount of time spent on sex, a preoccupation with sex or preparatory activities, continuation despite problems caused in other aspects of life, and aversive mood states if unable to engage in sexual activities. As with other definitions, Carnes does not specify any particular sexual behaviours that are necessarily indicative of sex addiction, but rather, the effect of an urge, thought or behaviour upon the individual's life is key (Goodman, 1992). A number of common 'problematic' behaviours have, however, been identified. These include ego-dystonic promiscuity, anonymous sexual outlets such as pornography or telephone sex, compulsive masturbation, use of prostitutes, sexual harassment, flirting, and 'sexual desire incompatibility', that is, an extreme mismatch between partners' sexual

appetite (Bancroft, 2008; Kafka, 2010; Keane, 2002; Reid, Karim, McCrory, & Carpenter, 2010; Winters, 2010).

Given its contentious evidence base, one might question the validity of this construct. This is the position adopted by a field of professionals who feel that sex addiction represents a social construction, influenced by religious and moral judgments, rather than pathology (Giles, 2006; Keane, 2002; Levine & Troiden, 1988). This argument explains that although we live in a sexualised culture⁵, we simultaneously reside in a sex-negative culture which imposes limits and parameters on sexual behaviours that aim to promote marriage, fidelity and monogamy (Levine, 2010). This culture sees any sexual behaviour which fails to promote these values as problematic and it is said to have created the concept of sex addiction to pathologize individuals who engage in them.

Thus, the above suggests that rather than a pathological disorder, sex addiction may represent an interpretation of one's sexual behaviour in which the individual or those around them label the behaviour as problematic because it contravenes the dominant sexual values of our culture (even if these are non-coercive and consensual sexual acts or behaviours). Klein (2012) offers the following summary of this argument:

“...the diagnosis of sex addiction is in many ways a diagnosis of discomfort with one's own sexuality, or of being at odds with cultural definitions of normal sex, and struggling with that contrast” (pg. 5).

⁵ In considering the role of culture and discourses on sex addiction, this paper is primarily concerned with currently dominant Western social norms, since this is largely the source of the construct of 'sex addiction'. However, in doing so it acknowledges that modern Western societies may include diverse sub-cultures or less dominant discourses.

What is less clear, however, is why some individuals are able to engage in such sexual behaviours without perceiving them to be problematic, whilst others are distressed by their behaviours and seek professional help. The answer to this may lie in certain individual differences.

One such difference may be personality. Indeed, existing research literature indicates that personality traits may affect one's appraisal of their sexuality. For example, a negative association between *extraversion* and sexual nervousness, sexual anxiety and sexual fear has been observed (Barnes, Malamuth, & Check, 1984; Eysenck, 1976; Heaven et al., 2003; Heaven, Fitzpatrick, Craig, Kelly, & Sebar, 2000). *Extraversion* has also been associated with sexual excitement, sexual curiosity and greater level of sexual activity (Eysenck, 1976; Heaven et al., 2000). *Neuroticism*, on the other hand, has been associated with low levels of sexual behaviour, low sexual satisfaction and high sexual guilt and fear (Barnes et al., 1984; Eysenck, 1976; Heaven et al., 2003, 2000). A negative association has been found between *openness to experience* and sexual nervousness in males (Heaven et al., 2000) and those rating high on this trait have been found more likely to find the concept of pornography use and group sex appealing (Heaven et al., 2003). Finally, *conscientiousness* has been associated with infrequent sexual intercourse (Heaven et al., 2000). This therefore suggests that personality may affect the way in which people appraise their own and others' sexual behaviour, as well as influencing the behaviours they engage in.

Individual differences in *thinking dispositions* may also affect appraisal of one's sexuality. Here, anecdotal and clinical evidence suggests that people who present with sex addiction tend to have rigid, categorical thinking styles which often manifest in black and white conceptualisations of what is right and wrong in sex (R. das Nair, personal communication, 12 March 2013). Furthermore, the concept of categorical thinking also resonates with dichotomies of 'good' versus 'bad' and 'healthy' versus 'unhealthy' sex within both conceptualisations of sex addiction (Keane, 2002) and broader sexual discourses (Irvine, 2005).

A third variable, *sexual attitudes*, may be an important factor in understanding the difference between these two groups. Existing research identifies a positive relationship between sexual attitudes, sexual behaviour (Buhi & Goodson, 2007) and sexual satisfaction (Haavio-Mannila & Kontula, 1997). Furthermore, an individual's sexual attitudes are thought to be heavily influenced by media and culture (Lou et al., 2012). It is therefore reasonable to suggest that an individual's sexual attitudes will influence their appraisal of their sexuality.

Finally, *religiosity*, has also been found to influence sexuality. In fact, the social constructionist account of sex addiction considers the influence of religion in pathologising certain sexual practices and creating sex addiction. Subsequent empirical research has found associations between religiosity and conservative views about sex (Ahrold, Farmer, Trapnell, & Meston, 2011; de Visser, Smith, Richters, & Rissel, 2007) and sexual guilt (Fehring, Cheever, German, & Philpot, 1998). Furthermore, men who seek treatment for sex addiction have been found to be more likely to belong to a religion or regard religion as important to them (Ross, Månsson, & Daneback, 2012; Winters, Christoff, & Gorzalka, 2010).

Therefore, we aimed to compare 'sex addicts' (SA) to 'non addicts' (NSA) on self-reported sexual behaviours and a series of psychological variables: the Big Five personality traits, categorical thinking, sexual attitudes, and religiosity. We sought to conduct two strands of analysis: one in which the participants' categorised themselves as SAs and NSAs and one in which a sex addiction screening tool (The Sex addiction Screening Tests; Carnes, 1989; Carnes & Weiss, 2002) was used to categorise participants.

Method

Sample size

Using G*Power 3.1.0 (Faul, Erdfelder, Lang, & Buchner, 2007) an *a priori* power analysis was carried out to determine the sample size required. Results from Reid and Carpenter's (2009) analysis of introversion in individuals with sex addiction were used to estimate an effect size ($d = .73$) and the traditional level of significance for social science research was adopted ($\alpha = 0.05$; Field, 2009). This determined that a minimum sample size of 31 participants for each group would be sufficiently powered ($d = .81$) to detect relevant differences.

Inclusion criteria

This study recruited males over the age of 18. The decision to exclude women was primarily based on pragmatic reasons, that is, a want to minimise the number of variables which may have impacted on our observations. Furthermore, research indicates that sex addiction is primarily a 'male problem' (Black, Kehrberg, Flumerfelt, & Schlosser, 1997; Carnes, 1991; Odlaug & Grant, 2010; Raymond, Coleman, & Miner, 2003). The age limit decreased the likelihood of including participants who were engaged in illegal sexual activities, namely, underage sex.

Procedure

Participants were recruited via online and poster advertisements. Online advertisements were posted on general forums such as Gumtree and a research promotion website as well as sexual interest sites including sex addiction and swinging forums. It was also included within the British Psychological Society Psychology of Sexualities section listserv. Posters were displayed in male lavatories within public houses and clubs, within the waiting rooms of two relationship counselling services and

within a waiting room of a National Health Service sexual health service, all of which were located within Nottingham and Leicestershire.

Measures

Demographics questionnaire: Demographic data including age, sexual orientation and religion was collected. Within this section, the participant was also asked whether they thought they had a sex addiction, with three response options: ‘yes’, ‘no’ and ‘don’t know’. This was followed with a free-text box whereby participants were asked: “*why do you think you do or do not have a sex addiction?*”

Frequency of sexual behaviours: This measure was adapted from the Survey of Sexual Behaviours used by Winters et al.(2010). It asks participants to report the total frequency of partnered (oral, unprotected/protected vaginal and unprotected/protected anal sex) and solitary (masturbation and viewing pornography) sexual activities they had engaged in over the preceding three months. Participants are also asked to report the number of different partners with whom they had engaged in each of the partnered sexual activities within this time period.

The Big Five Inventory (BFI; John & Srivastava, 1999): The BFI is a 44-item measure which assesses the Big Five personality traits, split into corresponding subscales: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. The scale employs a five-point Likert scale from ‘disagree strongly’ to ‘agree strongly’. Higher scores on each of the subscales indicate a greater presence of that personality trait. John and Srivastava (1999) report α ranging from .75 to .90 and test-retest reliabilities between .80 and .90.

Categorical Thinking subscale (Epstein & Meier, 1989; CTS; Katz & Epstein, 1991): The CTS was derived from the Constructive Thinking Inventory (Epstein & Meier, 1989; Katz & Epstein, 1991) and assesses the extent to which an individual makes “*categorical, undifferentiated judgements*

about people, the self and interpersonal relationships” (Epstein & Meier, 1989, p. 337). It comprises three items rated on a five-point Likert scale from ‘*completely false*’ to ‘*completely true*’; “*There are basically two kinds of people in this world, good and bad*”, “*I think there are many wrong ways, but only one right way, to almost anything*” and “*I tend to classify people as either for me or against me*”. Higher scores indicate a greater propensity to think in categorical terms. Burns and Fedewa (2005) report acceptable internal consistency ($\alpha = .75$).

The Sexual Attitudes Scale (SAS; Hudson & Murphy, 1998; Hudson, Murphy, & Nurius, 1983).

The SAS offers an assessment of conservative versus liberal attitudes about a range of sexual activities. There are 25 items which are rated on a five point Likert scale from ‘*strongly agree*’ to ‘*strongly disagree*’. Higher scores indicate more conservative sexual attitudes. The authors of the tool (Hudson, Murphy & Nurius, 1983) report good internal consistency ($\alpha = .94$). Lefkowitz, Gillen, Shearer and Boone (2004) later reported $\alpha = .88$ in a sample of 205 university students.

Religiosity: Religiosity was assessed via two questions: “*How important is religion or spirituality in your life?*” and “*How much does your religion or spirituality influence your life?*”. The questions were designed to assess self-attitude and salience components of religiosity, that is, how religious the person views them self and how influential religion is upon their life. These were each rated on a five point Likert scale from ‘*not at all*’ to ‘*very much so*’. Higher scores indicated greater religiosity.

The Sex Addiction Screening Test (SAST; Carnes, 1989) and the *Sex Addiction Screening Test – Gay Men* (GSAST; Carnes & Weiss, 2002): The SAST is one of the most commonly used and researched assessments of sex addiction (Weiss, 2004). Both measures comprise 25 items with a dichotomous yes-no rating scale, yielding a minimum score of zero and maximum score of 25. The authors of the SAST report respectable internal consistency ($\alpha = .92$) and two studies have reported good internal consistency ($\alpha = .82$) for the G-SAST (Carnes, Green, & Carnes, 2010; Storholm, Fisher, Napper,

Reynolds, & Halkitis, 2011). Three items were removed from the SAST and two from the G-SAST due to ethical concerns: “*Were you sexually abused as a child or adolescent?*” (SAST and G-SAST), “*Have you been sexual with minors?*” (SAST and GSAST) and “*Are any of your sexual activities against the law?*” (SAST). The items were removed due to concern about the potential for cumulative distress (given that the assessment battery contained a range of items tapping into distress), coupled with the researcher’s disconnectedness from the participants. The collection of information concerning illegal activity not known to the police was also considered ethically sensitive. Given these changes, the cut-off scores were changed using an equivalent percentage score to recalculate the new threshold for sex addiction. Thus, the original threshold for the SAST of 13 (Carnes, 1989) was altered to 11, whilst the GSAST threshold of seven remained the same. American terms of reference were replaced with English concepts where appropriate.

Analyses

Qualitative data analysis

Participants’ responses to the question: “*why do you think you have or have not got a sex addiction?*” were analysed using an inductive-deductive approach to thematic analysis (Braun & Clarke, 2006). In considering the strength of a theme, the researcher drew upon both its prevalence and salience within the data.

Statistical analyses

Where variables satisfied parametric assumptions, group differences were assessed using *t*-tests and one way between groups multivariate analysis of variance (MANOVA). Means (*M*) and standard deviations (*SD*) are reported as descriptives for these analyses. For non-parametric variables, Mann-Whitney U tests were carried out with associated medians (*Md*) and interquartile ranges (*IQR*) descriptives reported. Chi-square was used when both comparison variables were categorical.

Results

Participants

Two hundred and sixty eight males undertook the questionnaire. Fifty three participants did not complete the questionnaire and one participant's data was removed as they had offered extreme-end answers for every question, irrespective of question reversing. The validity of their responses was therefore considered too doubtful for inclusion. The remaining 214 men were aged between 18 and 69 ($M = 30.9$; $SD = 11.8$). Forty nine (22.9%) participants defined themselves as a SA, 131 (61.2%) as a NSA and 34 (15.9%) were unsure whether they had a sex addiction. Only nine (4.2%) participants reported having sought professional help for their sex addiction. Participants described their sexual orientation as; heterosexual (65.9%), bisexual (12.1%), homosexual (12.1%), asexual (4.2%), pansexual (2.8%) and 'other' (2.9%).

Participant definitions of 'sex addiction'

Error! Reference source not found. shows themes identified within SAs' ($n = 49$) and NSAs'⁶ ($n = 131$) explanations of why they thought they did or did not have a sex addiction. Here, the size of the theme indicates its occurrence and salience (Braun & Clarke, 2006). The overlapping of themes indicates conceptual overlap. These have been plotted against Carnes' (2005) definition of sex addiction to allow for comparison.

⁶ This study forms part of a larger Doctoral project which incorporates those within the 'don't know' category within its analyses

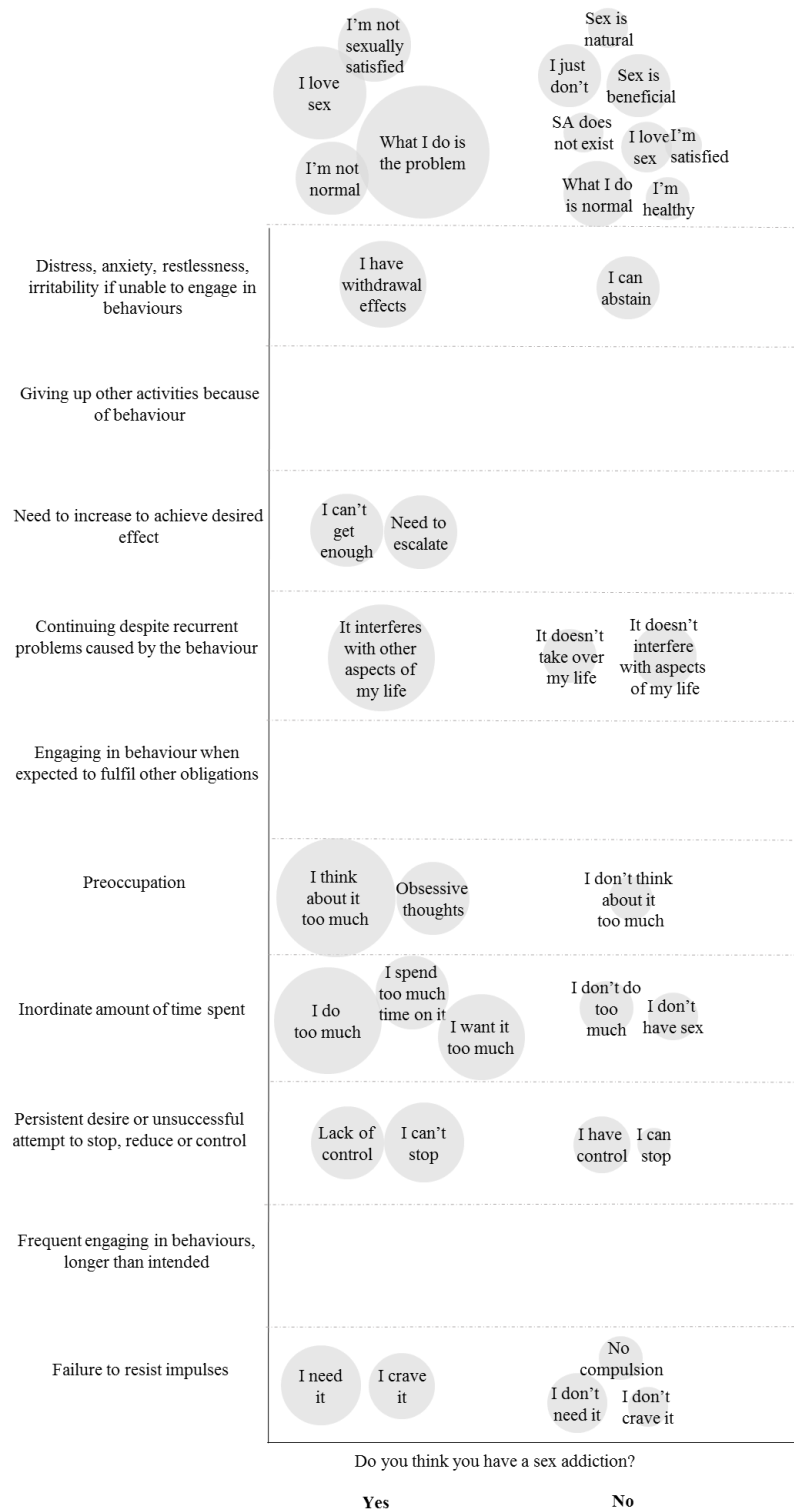


Figure 2: Thematic diagram of participant responses to the question: “why do you think you have or have not got a sex addiction?” mapped alongside Carnes (2005) definition of sex addiction

Participants' explanations shared a number of commonalities with Carnes' definition of sex addiction. Here, both SAs and NSAs drew upon concepts of control, urges, excessiveness, consequences of the behaviour, and withdrawal as key markers of sex addiction, for example:

"I get angry and restless if I go without any sexual contact for a day" (29 year old heterosexual SA)

"I'm a very sexual person but I have it under control, if I'm not in a relationship, I try to keep my sexual activity to a minimum" (21 year old homosexual NSA)

The presence or absence of these factors helped them determine whether they had a sex addiction. Notions of excessiveness, encompassing too much sexual activity and too frequent sexual thoughts, represented particularly strong themes within SAs' responses. A further theme within SAs' responses reflected the idea that they could not get enough of sex or had to escalate their sexual behaviours to gain satisfaction.

Further themes were identified which sat outside of Carnes' definition. The strongest themes within the data reflected the idea that sex addiction could be determined by the type of sexual behaviour, urge or thought which the individual engaged in. For example:

"Interest in porn/images/posts/ads/hook-ups that do not match my sexual orientation. Lack of interest to "vanilla porn" but only interested in females in real life" (24 year old heterosexual SA)

“I don’t [think I have a sex addiction] because I don’t need or desire any taboo or unusual sexual needs” (28 year old heterosexual NSA)

As the above quotes demonstrate, participants often discriminated between what is ‘healthy’ or ‘normal’ versus what is ‘unhealthy’ or ‘abnormal’ in determining whether what they were doing was problematic. This theme was particularly strong within SA responses.

Both groups also communicated a love of sex:

“I love sex and would be doing it all day with as many partners as possible if I could” (42 year old bisexual SA)

“I love sexual activities” (57 year old heterosexual SA)

This theme often overlapped with the theme of sexual satisfaction. Here, SAs’ love for sex was often coupled with sexual dissatisfaction and it was this mismatch which led them to pathologize their sexuality. Conversely, a number of NSAs expressed both a love for sex and sexual satisfaction, leading them to conclude that their sexuality was not problematic.

Further themes relating to a positive view of sex were identified within NSAs’ responses. This included a general sense of sex being beneficial, a view of sex as natural and therefore not pathological and the idea that sex is not a valid construct, for example:

“Because there is no such thing as sex addiction. Sex and the drive for sexual pleasure is completely normal.” (46 year old homosexual NSA)

A final theme within NSAs responses offered no explanation for not considering themselves to have a sex addiction:

“I haven’t got an addiction” (18 year old heterosexual NSA)

These participants either offered definitive statements about the absence of addiction, such as that offered above, or expressed an inability to explain why they felt they were not addicted to sex.

Comparing self-identified ‘sex addicts’ to ‘non-addicts’

This series of analyses compared individuals who self-identified as SAs ($n = 49$) and NSAs ($n = 131$).

Sexual behaviour. Descriptives concerning SAs and NSAs reported sexual activity and sexual partners are displayed in Table 1. A series of Mann-Whitney U tests were carried out to see if there were any significant differences between the groups. Using a Bonferroni adjusted alpha level of .007, SAs reported a significantly higher frequency of masturbation ($U = 2043.5$, $z = -3.77$, $p = .000$) and time spent viewing pornography ($U = 2229$, $z = -3.18$, $p = .001$).

Using a Bonferroni adjusted alpha level of .01, there were no significant differences between the two groups in the frequency of partnered activities studied ($U = 2840-3061$; $p. = 163-.630$) nor in the number of sexual partners reported ($U = 2819-3-65$; $p. = .106-.527$).

Table 5: Descriptives for self-identified ‘sex addicts’ and ‘non-addicts’ reported sexual activity

	Sex addicts	Non-addicts
Variable	Median (interquartile range)	Median (interquartile range)
Masturbation (instances in an average week)	7 (3-10)	4 (2-6)
Viewing pornography (hours spent in an average week)	3 (1-8.5)	2 (1-4)
Frequency of sexual activity within the last 3 months:		
Oral sex	6 (0.5-17.5)	5 (0-12)
Unprotected vaginal sex	1 (0-20)	0 (0-10)
Protected vaginal sex	0 (0-4.5)	0 (0-1)
Unprotected anal sex	0 (0-0)	0 (0-1)
Protected anal sex	0 (0-0)	0 (0-0)
Number of sexual partners within the past 3 months:		
Oral sex	1 (0-2)	1 (0-1)
Unprotected vaginal sex	1 (0-1)	0 (0-1)
Protected vaginal sex	0 (0-0)	0 (0-1)
Unprotected anal sex	0 (0-0)	0 (0-1)
Protected anal sex	0 (0-0)	0 (0-0)

The Big Five personality variables. A one way between groups MANOVA was carried out to compare the groups on the Big Five personality variables. Using Wilks’s statistic, there was no

significant effect of sex addiction on any of the personality variables, $F(5, 173) = 1.09, p = .37$; Wilks' Lambda = .97⁷.

Sexual attitudes. There were no significant differences between SAs ($Md = 45$; $IQR = 35.5-62.5$) and NSAs ($Md = 43$; $IQR = 0.25-6.91$) in sexual attitudes, $U = 11,488, z = -1.18, p = .24$.

Religiosity. A chi-square test of independence found no relationship between self-identification as a SAs and affiliation to a religion or spirituality; $X^2(1, N = 180) = 1.18, p = .28$. Furthermore, there were no significant differences in religiosity between SAs ($Md = 4$; $IQR = 2-6.5$) and NSAs ($Md = 3$; $IQR = 1-6$), $U = 2983.5, z = -.84, p = .40$.

Categorical thinking. SAs scored significantly higher ($M = 7.88$; $SD = 3.19$) than NSAs ($M = 6.50$; $SD = 2.98$) on the measure of categorical thinking, $t(178) = -2.72, p = .007$; $d = -.41$ ⁸.

Comparing SAST-identified 'sex addicts' to 'non-addicts'

This series of analyses compared individuals who were placed in the first and last category of the SAST measure, that is, SAST-identified SAs ($n = 58$) versus NSAs ($n = 133$).

Sexual behaviour variables. Descriptives concerning SAs and NSAs reported sexual activity and sexual partners are displayed in Table 6. A series of Mann-Whitney U tests were carried out to see if there were any significant differences between the groups. Using a Bonferroni adjusted alpha level of .007, SAs reported a significantly higher frequency of masturbation ($U = 2896.50, z = -2.75, p = .006$), time spent viewing pornography ($U = 2863.50, z = -2.86, p = .004$) and unprotected anal sex ($U = 3133.50, z = -2.73, p = .006$).

⁷ A sensitivity analysis using a case matching approach which balanced for any differences in sexual activity found SAs to have significantly higher scores in neuroticism.

⁸ A sensitivity analysis using a case matching approach which balanced for any differences in sexual activity produced the same result, with SAs scoring higher in categorical thinking.

Using a Bonferroni adjusted alpha level of .01, the SA group reported a greater number of sexual partners in the same timeframe with whom they engaged in oral sex ($U = 2874.50$, $z = -2.98$, $p = .003$; $r = -.22$), unprotected anal sex ($U = 3043$, $z = -3.11$, $p = .002$; $r = -.23$) and protected anal sex ($U = 3194.50$, $z = -2.94$, $p = .003$; $r = -.21$). No significant differences were found in frequency of oral sex and protected and unprotected vaginal sex ($U = 3488.5-3805$; $p = .17-.82$) nor in the amount of partners with whom they had protected and unprotected vaginal sex ($U = 3737-3744$; $p = .59-.65$).

Table 6: Descriptives for SAST-identified ‘sex addicts’ and ‘non-addicts’ reported sexual activity and sexual partners

	Sex addicts	Non-addicts
Variable	Median (interquartile range)	Median (interquartile range)
Masturbation (instances in an average week)	5 (3-10)	4 (2-7)
Viewing pornography (hours spent in an average week)	3 (1.75-7)	2 (1-4.5)
Frequency of sexual activity within the last 3 months:		
Oral sex	4 (1-15)	5 (0-15)
Unprotected vaginal sex	0 (0-10)	1 (0-13)
Protected vaginal sex	0 (0-0)	0 (0-3)
Unprotected anal sex	0 (0-1.25)	0 (0-0)
Protected anal sex	0 (0-1)	0 (0-0)
Number of sexual partners within the past 3 months:		
Oral sex	1 (0-3)	1 (0-1)
Unprotected vaginal sex	0 (0-1)	0 (0-1)
Protected vaginal sex	0 (0-.25)	0 (0-1)
Unprotected anal sex	0 (0-1)	0 (0-0)
Protected anal sex	0 (0-1)	0 (0-0)

The Big Five personality variables. A one way between groups MANOVA was carried out to compare the groups on the Big Five personality variables. Using Wilks’s statistic, there was a significant effect of SAST-identification of sex addiction on personality, $F(5, 184) = 3.69, p = .003$; Wilks’ Lambda = .91. Using a Bonferroni adjusted alpha level of .01, results from the separate dependent variables revealed that there were significant differences between these groups on

neuroticism: $F(1, 188) = 7.40, p = .006$, partial eta squared = .03. Inspection of the mean scores indicated that SAs scored significantly higher on this trait ($M = 24.43; SD = 5.69$) than NSAs ($M = 21.81; SD = 6.20$)⁹.

Sexual attitudes. There were no significant differences between SAs ($Md = 46; IQR = 35-63$) and NSAs ($Md = 44; IQR = 33.5-60$) in sexual attitudes, $U = 3600, z = -.73, p = .46$.

Religiosity. A chi-square test of independence found no relationship between SAST-identification of sex addiction and affiliation to a religion or spirituality; $X^2(1, N = 191) = 0.64, p = .80$.

Furthermore, there were no significant differences in religiosity between the SAs ($Md = 4; IQR = 2-8$) and the NSAs ($Md = 3; IQR = 2-6$), $U = 3463.50, z = 1.17, p = .24$.

Categorical thinking. There were no significant differences between SAs ($M = 7.55; SD = 3.35$) and NSAs ($M = 6.83; SD = 3.07$) in categorical thinking, $t(189) = -1.46, p = .15$.

Agreement between self and SAST identification of sex addiction

Table 3 displays a cross-tabulation comparing self and SAST identification of SAs and NSAs.

These have included the third category which represents an uncertain classification: ‘don’t know’ for self-identification and ‘potential sex addiction’ for SAST identification.

⁹ A sensitivity analysis which adopted the original threshold for the SAST measures to define SA found no significant differences between the groups on any of the personality variables, after a Bonferroni adjustment was made.

Table 7: Cross-tabulation showing agreement between self and SAST identification of sex addiction

		Do you think you have a sex addiction?			Total
		Yes	No	Don't know	
SAST category	Sex addiction	29	20	9	58
	No sex addiction	13	98	22	133
	Potential sex addiction	7	13	3	23
	Total	49	131	34	214

In order to assess the strength and significance of the agreement between the self and SAST categorisations, a Cohen's k analysis was carried out. This suggested a fair strength of agreement; $k = .27$ (95% CI, .18 to .38), $p = .000$. Of course, one must be cautious in interpreting comparisons between the third categories: 'don't know' (self-identified) and 'potential sex addiction' (SAST defined) since these measures may not be directly comparable. However, inspection of the

frequency counts within the cross-tabulation reveals a high frequency of disagreement within the certain categories¹⁰.

Discussion

This exploratory study compared SAs to NSAs on a series of sexual behaviour and psychological variables. For the purpose of the analyses, sex addiction was determined two ways: via participants' self-identification as being a sex addict or not and using an established sex addiction screening tool, the SAST and G-SAST (Carnes, 1989;; Carnes & Weiss, 2002).

Participant constructs of 'sex addiction'

Given that the study asked participants to categorise themselves into SA and NSA groups, it was first necessary to explore their reasons for their categorisations. An inductive-deductive thematic analysis of participant responses to the question "*why do you think you do or do not have a sex addiction?*" allowed for this and illuminated a number of themes in participants' constructs of sex addiction. The themes identified largely mapped onto Carnes (2005) definition which reflects the dominant model of sex addiction. This was particularly evident within SAs' responses. This is perhaps indicative of the immersion of the dominant model of sex addiction within sociocultural norms (Reay, Attwood, & Gooder, 2013) and participants' subsequent internalisation of these norms into their interpretive frameworks.

Whilst other themes in participant responses sat outside Carnes' definition, these very much fit with the broader conceptualisation of sex addiction. Interestingly, a dominant theme here was the idea that the type of activity, urge or thought one engages in can indicate sex addiction. This was a

¹⁰ A sensitivity analysis which employed the original SAST thresholds for sex addiction found a slight level of agreement; $k = .13$ (95% CI, .04 to .21), $p = .006$.

particularly strong theme within SAs' responses. Whilst specific sexual behaviours are not necessarily implicated in sex addiction, Keane (2002) argues that the model very much discriminates between what is healthy and unhealthy. Indeed, despite the absence of specific behaviours within definitions of sex addiction, the SAST tools enquire about specific sexual activities including purchasing of pornography and paying for sex. Subsequently, for some participants their only rationale for believing they had a sex addiction was that they were engaging in was 'not normal'. This finding resonates closely with Klein's (2012) description of sex addiction as emerging due to a mismatch between one's sexuality and the cultural definitions of normal sex, rather than underlying pathology.

A number of themes within NSAs' responses expressed a positive view of sex. This included a view of sex as beneficial, pleasurable and natural, and of sex addiction as an invalid construct. These positive notions of sex therefore diverge from discourses on sex addiction and indeed the broader sex-negative culture (Levine, 2010).

Comparing 'sex addicts' to 'non-addicts'

Some differences between self-identified SAs and NSAs were observed. First, whilst SAs reported more solo sexual activities (masturbation and viewing pornography), there were no significant differences between the groups in terms of partnered sexual activity. One explanation for this finding is that these SAs do indeed engage in more solo sex. Perhaps by problematizing their sexuality they increase its salience, leading them to engage in more, rather than less of the unwanted behaviour. Indeed, when something becomes salient it said to dominate one's thoughts, feelings and behaviour (Griffiths, 1996). This certainly resonates SAs' notions of obsessive and uncontrollable thoughts about sex. Given that solo sex is the most readily-available outlet, it may therefore become the focus of this self-reinforcing, self-fulfilling prophecy.

The study largely found no significant differences between the groups on most of the Big Five personality traits, with the exception of the trait of neuroticism. Here, when participants were matched in terms of the frequency and type of sexual activity, SAs scored significantly higher in neuroticism. Given that this trait is characterised by anxious, self-conscious and fragile forms of emotional distress (McCrae, Gaines, & Wellington, 2012), it is conceivable that those scoring highly would be more likely to experience concern or distress about various aspects of their lives, including sexuality. This personality trait may therefore influence a negative appraisal of one's sexuality, and thus self-identification as a SA.

A further significant difference between these two groups was in categorical thinking, whereby SAs scored significantly higher. Given this finding, it is possible that the problematizing of one's sexuality may be influenced by thinking dispositions, specifically, polarized thinking. This is certainly reflected within participants' dichotomous conceptualisations of 'healthy' versus 'unhealthy' sex which was particularly evident within SAs' responses. However, given this finding, one would also expect the groups to differ in sexual attitudes as these will guide evaluations of sexual behaviour as problematic. However, no differences were observed between the groups on this measure. This finding may reflect a lack sensitivity to modern nuances in sexual norms in the measurement of sexual attitudes by the SAS. Indeed, the datedness of this tool represents a significant limitation.

This study found no differences in religiosity between self-identified SAs and NSAs. This finding may be due to the process of secularization whereby the influence of religion upon one's sexuality is not as strong as it once was (Farmer, Trapnell, & Meston, 2009). Indeed, the median ratings for religiosity were low for all comparison groups, suggesting that religion had low importance and influence for most of these participants.

When the SAST measure categorised participants SAs reported more masturbation, viewing pornography and unprotected anal sex and more sexual partners for all sexual activities except vaginal sex. This finding may be explained by the heteronormative nature of the concept of sex addiction and the SASTs, that is, a positive bias towards heterosexual sex and pathologizing of anything which contravenes this. Indeed, vaginal sex does not appear to be problematized by this tool whilst the other sexual behaviours, which have no reproductive value and are more likely to be culturally sanctioned (Levine, 2010) do. The heteronormativity of the SASTs are also evident within the differences in clinical thresholds between the SAST (13) and the SAST for homosexual and bisexual men (6). A rationale for this difference has not been offered by the authors (Hook, Hook, Davis, Worthington, & Penberthy, 2010).

Those deemed by the SAST to have a sex addiction also scored higher on the measure of neuroticism. Given that the tool asks a number of questions relating to concerns about one's sexual behaviour, it is again not surprising to find this difference.

Taken together, these findings suggest that dominant discourses concerning sex addiction and sexuality more broadly offer a gauge of normalcy for one's sexual behaviours. In turn, this will influence whether an individual considers themselves to have a sex addiction or not. The study highlights that idiographic factors may interact with these discourses, meaning some will be more influenced than others by these discourses. In particular, those with a propensity to think inflexibly (categorical thinking) and/or a predisposition to respond with negative emotionality and worry (neuroticism) may be more likely to heed to these influences in the appraisal of their sexuality as problematic and thus identify as a SA.

These findings carry significant clinical implications. Indeed, if sex addiction is rooted in a mismatch between one's sexuality and cultural concepts of what is 'normal', then the solution is not to eradicate that part of the individual's sexuality, but to target the evaluations of that behaviour. A

focus on the individual's appraisal of their sexuality and the challenging of broader discourses influencing these evaluations may therefore help to alleviate distress.

Self versus SAST identification of sex addiction

A comparison of self versus SAST identifications of sex addiction revealed a 'fair' level agreement in categorisations. Whilst this level of agreement may in part be due to the third uncertain categories ('*don't know*' and '*potential sex addict*') being entered into the analysis which may not be directly comparable, it remains that there was a significant amount of disagreement in identification of SAs and NSAs.

Given that self-diagnosis is an important component of sex addiction (Reay et al., 2013) and in light of participants' drawing upon dominant sex addiction discourses, we might have expected to see a greater level of agreement between the two categorisations. This finding therefore suggests a difference between lay and professional conceptualisations of sex addiction.

Limitations

A limitation of the study lies in the variability in participants' sexual activities. Whilst the recruitment procedure of this study targeted those who were likely to engage in high frequency of sexual behaviour, participants who engaged in a low frequency of sexual behaviour were still included within the sample. For example, 6.5% of the overall sample described themselves as not currently sexually active. This will undoubtedly have affected the results. For instance, individuals who engage in a high frequency of sex and consider themselves to be a NSA may differ significantly from those who abstain from sex and consider themselves a NSA. Attempt was made to control for this by propensity score matching participants on the basis of sexual activity, finding observations were largely replicated. However, future research may wish to further explore the potential subgroups of SAs and NSAs.

Particular caution must also be exercised in accepting participants' estimations of sexual behaviours on face value. Indeed, there is a wealth of literature which describes the problem of recall bias in the collection of sexual behaviour data (Fenton, Johnson, McManus, & Erens, 2001). Given that many of these participants reportedly suffered distress in relation to their sexual behaviour, this methodological problem may be particularly heightened within this study. However, this represents a limitation of most self-report assessments, including the SAST.

Conclusions

The results of this exploratory study offer support for the idea that individual differences in thinking dispositions, namely, categorical thinking, may influence whether one pathologizes their sexuality and ultimately considers themselves to have a sex addiction. Here, those with a more categorical thinking disposition may be more inclined to rigidly impose sociocultural norms about normal and abnormal sex upon their behaviour, leading them to self-pathologize their sexuality. Those rating high in neuroticism may also be more prone to such negative evaluations.

The findings present clinical implications for the treatment of individuals who consider themselves to be addicted to sex. In particular, it suggests that an abstinence model may be misguided and that instead, treatment should focus upon the individuals' interpretations of their behaviours and rigid thinking styles. The study also raises important questions about the use of the SAST. In particular, the potential that the tool may too readily pathologize individuals' sexuality where they engage in activities which are considered 'unconventional'. However, in light of the exploratory nature of the study, these implications should be treated as tentative.

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EXTENDED PAPER

1. EPISTEMOLOGY

This research adopts a realist social constructionism epistemology (Elder-Vass, 2012). Falling within the constructivist epistemology, this position considers how social constructions are developed through language, discourse and/or culture. Yet it diverges from pure social constructionism by combining with realist ontology (Harper, 2011). Elder-Vass (2012) states that “*social constructionism’s potential is best realised by separating it from the anti-realist baggage it has often been expected to carry, and linking it instead to an explicitly realist ontology of the social world*” (p. 9). The stance therefore accepts the existence of a ‘reality’ but acknowledges that this is made sense of via discursive constructs in language (Harper, 2011), thereby acknowledging the potential for social constructionism and realism to be compatible and complimentary.

The rationale for this position is that the research seeks to challenge the concept of sex addiction and in doing so, draws upon social constructionist theory. It seeks to test the theory that the concept of sex addiction represents a cultural judgement about what sexual behaviour is acceptable or not rather than a pathological disorder. However, whilst being critical of the concept of sex addiction, the researcher draws upon the taxonomic perspective which purports that we are able to identify groups of traits using realist measures (in this case, personality traits, thinking dispositions and attitudes). In doing so, it does, however, acknowledge that we cannot access these constructs directly using psychometrics and that instead, our measurement of these constructs will be affected by various biases. As such, it values the practice of critical reflection when using such tools.

2. BACKGROUND

The aim of this section is to supplement the journal article by situating the research within a more detailed synopsis of the background literature. The following discussion therefore walks the reader through the historical background, current status of research literature and a critical account of the concept of sex addiction.

2.1. The construct of sex addiction

2.1.1. History

The historical course of sex addiction has very much been guided by political, scientific, religious, and media influences. This began with the medicalization of excessive and uncontrollable sex in the nineteenth century which occurred against a backdrop of a wave of advances in scientific research (Irvine, 1995). During this time Irvine (1995) explains that sexual issues became the subject of scientific study and with this, the medical profession began to supersede religious and moral authorities in the creation of sexuality discourses, including those relating to inappropriate and pathological sex.

These early conceptualisations of what is now largely referred to as 'sex addiction' were very much concerned with the female form of the disorder, termed *Satyrism* as opposed to male form, *Don Juanism* (M. D. Griffiths, 2001; Groneman, 1994). This contrasts with contemporary literature which suggests sex addiction is more prevalent within male populations (Black, Kehrberg, Flumerfelt, & Schlosser, 1997; Carnes, 1991; Raymond, Coleman, & Miner, 2003). Griffiths (2001) suggests that this was likely a product of sexual double standards in which the permissiveness of high rates of sex was reliant upon gender.

By the mid-twentieth century sexology, the scientific study of sexuality, had grown immensely with contributors from variety of disciplines including physicians, social scientists, sex workers, educators, and health activists (Irvine, 2005). However, despite this, it continued to be dominated by the scientific profession. Subsequently

Irvine (2005) explains that Sexologists continued to illuminate sex by bringing it into public discourses, defining healthy and unhealthy, good and bad sex. This, the author explains, included the definition of new sexual diseases which offered a powerful regulator of sexuality.

The late 1970s saw a re-emergence of the concept of excessive, uncontrollable sex (Irvine, 1995). This development was greatly influenced by the sexual revolution of the 1960s in which many restrictions on sexual permissiveness had been lifted. As Levine and Troiden (1988) explain: “*The concepts of sex addiction and compulsion constitute an attempt to repathologize forms of erotic behaviour that became acceptable in the 1960s and 1970s*” (p. 349). Other contributors to this resurgence included the growth of the addiction discourse, competing conservative Christian and radical feminist sexual ideologies and the unrest borne out of the emerging AIDs epidemic (Irvine, 1995). It was during this time that Patrick Carnes popularised the term ‘sex addiction’ (Carnes, 1989).

In the present day, the emersion of sex addiction within popular culture including film, novels and the media means the concept is very much alive and familiar to the lay individual (Reay et al., 2013). Furthermore, a more recent strain of sex addiction, that which concerns cybersex, is receiving increased attention within clinical and non-clinical fields (see, for example Patrick Carnes, Delmonico, & Griffin, 2007). This is very much in keeping with the historical adaptability of sex addiction to shifts in culture (Reay et al., 2013).

2.1.2. Terminology

A debate concerning the nomenclature of sex addiction persists within the literature. Various terminologies continue to be ascribed to this population. These include *compulsive sexual behaviour* (Coleman, 1991; Quadland, 1985), *sexual impulsivity* (Barth & Kinder, 1987), *sex addiction* (Carnes, 1989; Aviel Goodman, 1992) and *hypsersexuality* (Kafka, 2010). The choice of terminology is important as it carries connotations for the theoretical positioning of the ‘disorder’. Indeed, this

field continues to debate whether sex addiction represents an addictive, obsessive-compulsive or impulsive disorder (see below).

Whilst acknowledging the difficulties associated with terminology, this thesis has chosen to adopt the term 'sex addiction' as this appears to be the most common employed label (Gold & Heffner, 1998). By doing so, it does not wish to assert that sex addiction fits within an addiction framework, nor does it wish to accept the construct as an entity. Rather, is adopted for ease of reference. Equally, by referring to sex addiction as a 'disorder', it does not seek to support its designation as a mental health disorder.

2.1.3. Definitions

Sex addiction theorists have yet to agree upon a comprehensive definition of the concept. However, whilst definitions vary, there do appear to be a number of common features amongst behavioural typologies. A systematic review of existing literature which compares sex addicts (SAs) to non-addicts (NSAs) (Mayes, Moghaddam, das Nair, 2014) found definitions commonly described sex addiction as comprising sexual fantasies, urges or behaviours which:

- result in negative consequences
- are experienced as 'out of control'
- are intense and excessive
- are recurrent or repetitive
- cause distress
- are obsessive
- are unwanted

Most of these characteristics appear to have been encapsulated within Carnes' (2005) definition (see **Table 8**).

Table 8: Definition of sex addiction proposed by Carnes (2005)

-
- A.** A minimum of three criteria during a 12 month period:
1. Recurrent failure to resist impulses to engage in specific sexual behaviour
 2. Frequent engaging in these behaviours to a greater extent or longer duration than intended
 3. Persistent desire or unsuccessful efforts to stop, to reduce, or to control behaviours
 4. Inordinate amount of time spent in obtaining sex, being sexual, or recovering from sexual experiences
 5. Preoccupation with the behaviour or preparatory activities
 6. Frequent engaging in the behaviour when expected to fulfil occupational, academic, domestic, or social obligations
 7. Continuation of the behaviour despite knowledge or having persistent or recurrent social, financial, psychological, or physical problem that is caused or exacerbated by the behaviour
 8. Need to increase intensity, frequency, number, or risk of behaviours to achieve desired effect or diminished effect with continued behaviours at the same level of intensity, frequency, number or risk
 9. Giving up or limiting social, occupational, or recreational activities because of behaviour
 10. Distress, anxiety, restlessness, or irritability if unable to engage in behaviours
- B.** Has significant personal and social consequences (such as loss of partner, occupation or legal implications)
-

Whilst there are no particular behaviours thought to indicate sex addiction, a number of common problematic behaviours have been identified. These include ego-dystonic promiscuity, anonymous sexual outlets such as pornography or telephone sex, compulsive masturbation, use of prostitutes, sexual harassment, flirting, and 'sexual desire incompatibility', that is, an extreme mismatch between partners' sexual appetite (Bancroft, 2008; Kafka, 2010; Keane, 2002; Reid et al., 2010; Winters, 2010). A significant body of the sex addiction literature also

concerns the commission of 'risky' sexual behaviour by sex addicts (SAs) (Dodge, Reece, Cole, & Sandfort, 2004; Kalichman & Rompa, 1995). However, Winters (2010) cautions that the higher frequency of 'risky' sexual behaviours in cohorts of SAs may merely represent a higher frequency of sex generally. However, it is said that the presence of any of these identified behaviours will not necessarily imply addiction, rather, the clinician must determine the effect upon the individual's life (Goodman, 1992).

2.1.4. Nosology

Whilst there is a consensus within the literature that pathological sexual behaviours can be divided into paraphilic and non-paraphilic disorders (Suarez, O'Leary, Morgenstern, Allen, & Hollander, 2002), commentators diverge in terms of the theoretical frameworks they ascribe sex addiction to. This section will review the three diagnostic categories which have been applied to sex addiction: addiction, obsessive-compulsive, and impulsive-control disorders. **Table 9** provides an overview of current conceptualisations of each classification of disorder according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013).

The addictive model of sex addiction is largely based upon what is now classed as the substance use and addictive group of disorders. This largely concerns addictions to chemical substances such as alcohol or illicit drugs, however, it also captures behavioural addictions, such as that to gambling, within the 'non-substance-related disorders' section. Within the manual it is explained that although the term 'addiction' is no longer used as a diagnostic label, it is still commonly used within clinical and everyday language (APA, 2013).

The obsessive-compulsive disorders group together a spectrum of disorders including obsessive-compulsive disorders, body dysmorphic disorder, trichotillomania, and obsessional jealousy. These disorders had existed separately within previous versions of the manual (Moran, 2013) but are brought together on

the basis of growing evidence in support of their diagnostic similarity and due to clinical utility (APA, 2013).

The impulse-control disorders have also been subject to change within the DSM-5. These disorders are now grouped within the disruptive, impulse-control and conduct disorders which consists of a range of disorders characterised by problems with emotional and behavioural self-control. Examples include: oppositional defiant disorder, conduct disorder, impulse-control disorder, pyromania, and kleptomania. Subsequently, some disorders formerly captured within DSM-IV's (American Psychiatric Association, 1994) 'impulse-control disorders not elsewhere classified' have now been placed within the 'obsessive-compulsive and related disorders' chapter (Regier, Kuhl, & Kupfer, 2013). This includes trichotillomania and body dysmorphic disorders. Furthermore, gambling disorder was removed from this category into substance-related and addictive disorders, on the basis of mounting scientific evidence attesting to its conceptual similarities with these disorders (Reilly & Smith, 2013).

Table 9: Descriptions of substance use, obsessive-compulsive and impulse-control disorders from the Diagnostic and Statistical Manual of mental disorders (APA, 2013)

Diagnostic category	DSM-5 description
	Two to three of the following criteria indicate mild substance use disorder, four to five is moderate and six to seven is severe:
	A. Impaired control
	1. Taking the substance in larger amounts, over a longer period than intended
	2. Persistent failed attempts to reduce or stop using the substance
Substance use and other addictive disorders	3. A great deal of time spent obtaining using, or recovering from use of the substance
	4. Intense desire or urge for the substance amounting to a craving
	B. Social impairment
	1. Failure to fulfil major obligations such as work, school, or home
	2. Continued engaging in substance use despite persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance
Substance use and other addictive disorders	3. Important social, occupational, or recreational activities may be given up or reduced because of substance use
	C. Risky use
	1. Recurrent substance use in situations in which it is physically hazardous
	2. Continued use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance
	D. Pharmacological effects

Diagnostic category	DSM-5 description
	<p>1. Tolerance signalled by requiring a markedly increased dose of the substance to achieve the desired effect or markedly reduced effect when the usual dose is consumed</p> <p>2. Symptoms of withdrawal which are likely to vary greatly amongst classes of substances</p>
Obsessive-compulsive disorders	<ul style="list-style-type: none"> • <i>Obsessions</i>: recurrent and persistent thoughts, urges, or images that are experienced, at some time during the disturbance, as intrusive and unwanted, and that in most individuals cause marked anxiety or distress AND the individual attempts to ignore or suppress such thoughts, urges, or images, or to neutralize them with some other thought or action (i.e. by performing a compulsion) and/or; • <i>Compulsions</i>: Repetitive behaviours (e.g. hand washing, ordering, checking) or mental acts (e.g., praying, counting, repeating words silently) that the individual feels driven to perform in response to an obsession or according to rules that must be applied rigidly AND behaviours or mental acts which are aimed at preventing or reducing anxiety or distress, or preventing some dreaded event or situation; however these behaviours or mental acts are not connected in a realistic way with what they are designed to neutralised or prevent, or are clearly excessive; • The obsessions or compulsions are <i>time-consuming</i> (e.g., take more than one hour per day) or cause <i>clinically significant distress or impairment</i> in social, occupational, or other important areas of functioning
Disruptive, impulse-control, and conduct disorders	<ul style="list-style-type: none"> • Problems in emotions and behavioural control; • Associated behaviours violate the rights of others and/or bring the individual into significant conflict with societal norms or authority figures

Table 10 offers an overview of the evidence for and against the three different conceptualisations of sex addiction. This is by no means an exhaustive account, but is intended to offer an impression of the existing evidence-base. Evidence largely falls into two categories: that which suggests topological similarities, that is, that sex addiction ‘looks’ like this group of disorders, and that which implies some shared underlying structure or process driving sex addiction and the group of disorders.

The first group, addictive disorders, represent the dominant model of sex addiction. Indeed, a large proportion of sex addiction commentators place the disorder within an addiction framework (Carnes, 1989; Schwartz & Brasted, 1985). However, given that definitions of sex addiction such as those offered by Carnes’ (2005; **Table 8**) have largely been designed to map onto the DSM criteria for addictive disorders, this former type of evidence may represent a tautology. Indeed, by claiming that similarities in the disorders, which are based on the same criteria, evidence the addictive pathology of sex addiction, proponents of this model may be offering a circular argument.

The obsessive-compulsive model argues that sex addiction is “*a symptom of an underlying obsessive compulsive disorder in which anxiety-driven behaviour happens to be sexual in nature*” (Coleman, 1990, p. 12). This argument has again been supported by evidence which suggests the disorders are both descriptively and structurally similar.

The final model, impulse-control disorder, sees compulsion as the driving force behind pathological sexual behaviours (Goodman, 1997). The main proponents of this model, Barth and Kinder (1987), largely drew upon correlates between sex addiction and DSM-III criteria for impulse-control disorders (American Psychiatric Association, 1985) in support of its status as an impulse-control disorder. However, the DSM-5 saw a number of changes to the positioning and make-up of this

disorder, which mean Barth and Kinder's (1987) arguments may no longer be relevant.

Table 10: Evidence pertaining to addictive, obsessive-compulsive, and impulse-control frameworks of sex addiction

Nosology	Supportive evidence	Evidence against
Addictive disorder	<ul style="list-style-type: none"> • Topological similarities to this group of disorders (Carnes, 2001; Goodman, 1997; Kor, Fogel, Reid, & Potenza, 2013): <ul style="list-style-type: none"> ○ Repeated failure to control the behaviour ○ Continuation of the behaviour despite harmful consequences ○ Excessive amount of time spent seeking sexual partners which increases as the disorder persists and time spent is longer than intended ○ Persisting with behaviour despite consequences • Evidence suggesting a shared underlying structure or process: <ul style="list-style-type: none"> ○ SAs often have comorbid addictions (Carnes, 1989; Frascella, Potenza, Brown, & Childress, 2010) • The same brain reward systems have been implicated in sexual and other addictions (Carnes, Murray, & Charpentier, 2005). For example, dopamine is implicated in the appetitive, preparatory and consummatory phases of these addictions by facilitating arousal, motivation and reward (Hull, 	<ul style="list-style-type: none"> • Topological differences to this group of disorders: <ul style="list-style-type: none"> ○ Sex addiction (and some other behavioural addictions) do not concern foreign substances but behaviours which comprise a vital part of human existence (Barth & Kinder, 1987) ○ SAs do not appear to experience withdrawal or physical tolerance (Hughes, 2010): “<i>abrupt withdrawal from sexual behaviour does not lead to forms of physiological distress</i>” (M. P. Levine & Troiden, 1988, p. 357) • Evidence suggesting different underlying structures or processes: <p>Individuals with substance misuse disorders, gambling addictions and impulsive disorders such as kleptomania tend to have poorer white matter integrity when compared to matched controls (Grant, Correia, & Brennan-Krohn, 2006; Yip et al., 2013) whereas SAs have been found to have higher superior frontal region mean diffusivity when compared to controls (Miner, Raymond, Mueller, Lloyd, & Lim, 2009)</p>

Nosology	Supportive evidence	Evidence against
	Muschamp, & Sato, 2004; Melis & Argiolas, 1995)	
Obsessive-compulsive disorder	<ul style="list-style-type: none"> • Topological similarities to this group of disorders (Coleman, 1992): <ul style="list-style-type: none"> ◦ Repetitive, exaggerated and ritualistic behaviours ◦ Behaviours function to reduce anxiety and other negative affects • Evidence suggesting a shared underlying structure or processes: <ul style="list-style-type: none"> ◦ SAs often have comorbid anxiety disorders (Raymond et al., 2003) <p>A path analysis of addictive use of internet pornography found the obsessive-compulsive trait of checking significantly influenced addiction (Egan & Parmar, 2013)</p>	<ul style="list-style-type: none"> • Topological differences to this group of disorders: <ul style="list-style-type: none"> ◦ The DSM-5 states that: “<i>obsessions are not pleasurable or experienced as voluntary</i>” (APA, 2013, p. 238) ◦ Whilst the SA will seek and experience pleasure in the commission of their sexual behaviour, a person with OCD will seek a reduction in anxiety (Aboujaoude & Koren, 2008) • Evidence suggesting different underlying structures or processes: • Differences in response to newer versus older antidepressants. Namely, those with OCD respond more strongly to the newer antidepressants which increase serotonin activity, whilst SAs show similar responses to both forms of the drug (Kafka, 1991)
Impulse-control disorder	<ul style="list-style-type: none"> • Topological similarities to this group of disorders (Barth & Kinder, 1987): <ul style="list-style-type: none"> ◦ Failure to resist an impulse ◦ Repeated engaging in the behaviour despite knowledge of adverse consequences ◦ Increase in arousal before the commission of the pleasurable behaviour 	<ul style="list-style-type: none"> • This model appears to have less of a presence within the sex addiction literature than the addiction and obsessive-compulsive models • Many of the component disorders within the impulse-control group of disorders have been transferred into addictive or obsessive-compulsive disorders

Nosology	Supportive evidence	Evidence against
	<ul style="list-style-type: none"> o Relief following commission of the behaviour <p>ICD-11 Working Group on Obsessive-Compulsive and Related Disorders recommend its retention within the impulse-control group of disorders within the next revision of the manual (Grant et al., 2014)</p>	<p>The model is said to have “<i>little explanatory value beyond inferring a problem with self-control</i>” (Bancroft & Vukadinovic, 2004, p. 225).</p>

2.1.5. Prevalence and incidence

The aforementioned controversies concerning the definition of sex addiction present a number of methodological challenges when attempting to estimate the prevalence of sex addiction. This is perhaps one reason why there are currently no large-scale epidemiological studies which have assessed the prevalence of sex addiction. However, estimates of the prevalence of sex addiction within the general population range from 3-6% (Carnes et al., 2012; Garcia & Thibaut, 2010). Some incidence studies have reported a surprisingly high incidence of sex addiction within non-clinical samples (Miner et al., 2009; Reid, 2010; Reid, Carpenter, & Lloyd, 2009; Reid et al., 2010).

Whilst sex addiction commentators are unclear about how many people are considered to have the disorder, they suggest that its prevalence is rising 'at an alarming rate' (O'Donohue & Sbraga, 2004). This is thought to be related to the increasing use of modern technology, particularly the internet, which provides access to a broad range of sexual outlets. For one commentator, the rapid increase in incidences of sex addiction threatens "*the next tsunami of mental health*" (McCall, 2011).

Prevalence studies suggest that males are over-represented in cohorts of SAs. Here, it has been reported that the majority of people presenting for treatment for sex addiction are male (Raymond et al., 2003), that more males meet the criteria for sex addiction in samples of college students (Odlaug & Grant, 2010) and that males are over-represented in studies of sex addiction where participants are recruited via advertisements (Black, Kehrberg, Flumerfelt, & Schlosser, 1997; Carnes, 1991; Raymond et al., 2003).

2.1.6. Aetiology

Whilst much discussion has been awarded to issues of terminology, definition, and nosology, Bancroft (2008) argues that this has very much been at the expense of causal explanations, which have received much less attention. That literature which does exist includes social, psychological, and biological accounts of the development of sex addiction (Griffiths, 2001). An overview of the dominant explanations within the literature is provided below.

Sexual abuse hypotheses

The link between childhood trauma and sex addiction has received considerable attention from academic commentators (Anderson & Coleman, 1991; Carnes, 1991). This has also been identified as the dominant explanation held by sex addiction treatment providers and treatment seekers (Hughes, 2010). The theory emerged from empirical evidence indicating an over-representation of sexual abuse in cohorts of SAs. For example, in a survey of 900 SAs presenting for treatment, Carnes (1991) found an 82% incidence of childhood sexual abuse. It is, however, worth noting that within some of these families familial sexual abuse was described by the author as 'not overt', but rather, the environments were said to be characterised by a heightened sense of sexuality with children being exposed to sexually explicit material, sexual comments and a lack of privacy. This suggests that the author employed a somewhat loose and subjective definition of sexual abuse which may have been over-inclusive (Schneider, 1991). The incidence of sexual abuse in SA populations has, however, been documented elsewhere (Kuzma & Black, 2008; Whitfield, 1998).

Some authors have subsequently hypothesised about the etiological mechanisms which underpin this association. Firstly, some have suggested that psychological consequences of sexual abuse are directly linked to symptoms of sex addiction. For example, Coleman (1986) suggests that an 'intimacy dysfunction' may result from child abuse or neglect, leading to a predisposition to use sexual behaviours to

alleviate emotional pain. Here, the early experience of sexual arousal or interest coupled with negative mood may prevent the individual from incorporating their sexuality into an intimate, sexual relationship (Bancroft & Vukadinovic, 2004).

In their model of the effects of childhood sexual abuse, Finkelhor and Browne (1985) identify one traumatic factor, 'traumatic sexualisation', which may be linked to sex addiction. The authors suggest that the experience of sexual abuse may inappropriately shape the child's sexuality in a number of ways. This includes teaching the child that sexual behaviour can be used to manipulate others into satisfying their developmentally appropriate needs (such as affection, attention, and privileges), giving distorted importance to parts of the child's anatomy or creating misconceptions or confusion about sexual behaviour and sexual morality. The authors suggest that these factors may then facilitate the development of sexual preoccupation, a component of sex addiction.

Of course the association between sexual abuse and sex addiction does not necessarily imply a direct, causative link between the two variables. Indeed, it is important to acknowledge that not all individuals who suffer sexual abuse develop a sex addiction and not all SAs have been sexually abused. In light of this, some authors posit that the association between the variables is indirect, mediated by other factors such as serious psychopathology including borderline personality disorder (Rickards & Laaser, 1999; Rizvi & Linehan, 2005) and disturbed family environments (Benedict & Zautra, 1993; Kendler et al., 2000). As such, sexual abuse may merely represent a marker for other pathogenic factors which contribute to the development of sex addiction (Goodman, 1997).

Thus, whilst the sexual abuse hypothesis is a widely held theory of sex addiction, it remains that more empirical research is required to explore both the presence and nature of the link between these two variables (Hughes, 2010).

Cognitive-behavioural theories

A number of authors have drawn upon cognitive-behavioural explanations of sex addiction. Firstly, Schwartz and Brasted (1985) describe sex addiction as originating with an irrational belief system which comprises a poor self-image, anticipation of failure and feelings of helplessness. This, the authors suggest, gives rise to “*a destructive means of coping with stress, guilt, and passive rage*” (p. 104). Within this model, religious beliefs and social expectations are thought to further facilitate the development of the disorder by inducing feelings of low self-esteem, shame and guilt. This results in a cycle in which sexual behaviours are used to cope with negative affect, whilst paradoxically inducing similar mood states. With its focus on irrational belief systems, this theory is very much compatible with cognitive approaches to other disorders such as depression (Beck, 1973). However, a significant limitation of the explanation is that it fails to explain how these belief systems develop and does not discriminate between those with low self-esteem who will go on to develop a sex addiction, those who will develop other disorders such as depression and those who do not develop a disorder.

Coleman (1986, 1987) offers a more comprehensive account of the development of sex addiction which addresses some of these limitations. He suggests that sex addiction begins with a predisposition to compulsively use substances or behaviours to alleviate unpleasant feelings. This, the author suggests, is likely to be rooted within a dysfunction in intimacy within the individual’s family of origin, most commonly via childhood abuse or neglect. From these experiences, the child develops feelings of shame, unworthiness and inadequacy, creating this predisposition. Coleman explains that a second dynamic will then lead these predisposed individuals to select sexual behaviours as their coping strategy. The author (Anderson & Coleman, 1991; Coleman, 1986, 1987) has hypothesised that exposure to an environment which is restrictive or characterised by conservative sexual attitudes may create this dynamic, meaning these individuals opt for sexual behaviour as a ‘fix’ for their negative emotions. Akin to Schwartz and Brasted’s

(1985) account, Coleman then sees the SA as using sexual behaviours as a means to alleviate painful feelings and provide temporary relief.

The cognitive-behavioural theory of sex addiction has received some empirical support, particularly that which evidences an association between compulsive sexual behaviours and affect. Indeed, this relationship is considered to play a central role in the maintenance of most, if not all, cases of sex addiction (Bancroft & Vukadinovic, 2004). We know that many SAs fit the criteria for mood and anxiety disorders (Black et al., 1997; Kafka & Hennen, 2002; Raymond et al., 2003) and that compulsive sexual urges are often triggered by emotional states, most commonly depression, loneliness, and happiness (Black et al., 1997). Of course this contrasts with the common observation of a loss of libido during negative mood states (Beck, 1973; Taylor, Walters, Vittengl, Krebaum, & Jarrett, 2010). Subsequently negative affect such as feelings of shame are commonly found to follow compulsive sexual behaviours (Black et al., 1997).

Whilst such research offers support for a link between compulsive sex and affect, we must consider alternative explanations for this association. The findings may indeed reflect the use of sex to regulate one's mood, that is, to improve negative affect. However, for some individuals, this may represent 'excitation transfer' whereby states of high arousal such as anxiety may transfer into sexual arousal (Bancroft & Vukadinovic, 2004). This may then give rise to a cycle which begins with the experience of anxiety being transferred into sexual arousal, an intrinsic drive towards sexual release, followed by a sexual act and accompanying experience of orgasm which brings transient pleasure and calm. This pattern may then be reinforced by the future use of sexual thought or the seeking of sexual stimuli in response to negative affect.

These cognitive-behavioural accounts of sex addiction appear to offer a consistent, comprehensive theoretical account of the phenomenon. However, it appears that these explanations rest upon specific adverse developmental experiences,

specifically dysfunctional family backgrounds. This is not in fitting with the descriptions of cohorts of SAs as heterogeneous (Giugliano, 2003), and may further be perceived as blaming. In addition to this, the model does not appear to be able to explain gender differences in both incidence and presentation (Carnes, 1989; Schwartz & Brasted, 1985).

Psychoanalytic theories

Freud (1897) himself discussed the matter of sex addiction in which he argued: "*masturbation is the one great habit that is a 'primary addiction,' and that the other addictions, for alcohol, morphine, tobacco, etc. only enter into life as a substitute and replacement for it*" (p. 51). Subsequently a body of psychoanalytic literature has emerged which attempts to understand sex addiction in psychoanalytic terms (Giugliano, 2003; Goodman, 1997). In fact, Goodman (1997) suggests "*the psychoanalytic literature includes more material that pertains to sex addiction than does literature of all other areas of psychiatry and psychology combined*" (p. 514). It is not within the remit of this discussion to engage with this broad literature, so the following discussion offers only a cursory overview. A more comprehensive review is offered by Goodman (1998).

Psychoanalytic explanations have tended to source the development of sex addiction within the mother-child relationship (Goodman, 1997). Here, it is thought that within the first two to three years of life, rather than consistently relating to their child as separate beings, the mother uses their child to meet their own emotional and narcissistic needs such as to feeding their self-esteem. As a result, the child may struggle with separation-individuation that is, differentiating between themselves and their mother and developing their own sense of identity and cognitive abilities. They may also suffer a distorted gender identity and high levels of aggression. Furthermore, by thwarting the process of internalisation, these early experiences may hinder the child's development of a psychic structure, abilities to

self-regulate and a sense of self. In response, the individual may turn to external sources of self-regulation, in this case, sex (Grant et al., 2006).

2.1.7. Treatment

Borne out of the addiction model is the 12-step treatment approach, the most widespread group therapy for sex addiction (Goodman, 1997). These groups are based on the Alcoholics Anonymous model, adopting a 'brain-disease' explanation of addiction. Carnes and Adams (2013, p. 116) outline the essential assumptions of the 12-step programme as:

- Addiction is a disease
- Individuals with an addiction require support from other recovering, addicted members
- Reliance on 'power greater than self' is necessary for recovery
- Abstinence from the addicted behaviour is the foundation of recovery
- Recovery is a lifelong process
- Helping other addicted people is essential to long-term stable abstinence from addictive behaviour
- Acceptance of the realistic limits of being human is imperative

At present there is a paucity of empirical research concerning the effectiveness of these groups (Stewart & Fedoroff, 2014). That research which does exist appears to support their effectiveness, however, the mechanisms which contribute to this are thus far unclear (Wright, 2010). Further research is therefore required to better understand this treatment approach (Stewart & Fedoroff, 2014).

The implications of this addiction model for treatment have been subject to criticism. Firstly, Satel (1993) argues the adoption of the 'brain disease' model is misleading as sex addiction is not organic disease nor is it a discrete condition, but rather, it represents an arbitrary point on a continuum of sexuality. Furthermore, whilst the adoption of the disease model may have been motivated by a want to reduce stigma and minimise blame, it may actually have the effect of reducing the individual's agency, increasing passivity and encouraging the abdication of responsibility (Satel & Lilienfeld, 2014). The adoption of abstinence as a necessary treatment goal is also problematic. As Coleman (1986) points out, it makes the erroneous assumption that the individual is addicted to all sexual behaviours.

2.1.8. Summary

This section has highlighted the continuing controversies concerning the terminology, definition, and nosology of sex addiction. Continued iterations of diagnostic criteria have thus far failed to refine the concept of sex addiction with *"little evidence either of theoretical refinement or advancement in the collection of empirical research data"* (Reay et al., 2013, p. 16). For Irvine (1995), the imprecision in the definition of sex addiction leads to a lack of specificity: *"Claims about what constitutes sex addiction are so vague... that they can potentially include large numbers of the population"* (p. 438). Her argument has subsequently been realised in the findings of higher than expected rates of sex addiction in non-clinical samples (Miner et al., 2009; Reid, 2010; Reid et al., 2009, 2010). One must therefore be cautious in accepting evidence pertaining to the incidence of sex addiction, since the outcome of such investigations will largely depend on the authors' conceptualisation of sex addiction.

Whilst maintenance factors are well-described, the current sex addiction literature has yet to offer convincing evidence or theory which explains how sex addiction develops. Those developmental theories which have been offered, have rooted sex addiction within early aversive experiences such as sexual abuse, exposure to

‘over-sexed’ environments, and a lack of attunement to one’s caregiver. However, such developmental accounts are not likely to explain many SAs’ experiences, particularly given the apparent high instance of the ‘disorder’ within non-clinical samples (Miner et al., 2009; Reid, 2010; Reid et al., 2009, 2010).

To conclude, no one model has thus far offered a perfect fit to sex addiction. What is clear, however, is that attempts to establish a unitary account of sex addiction are likely to be overly simplistic and ignore the great variation in the aetiologies, presentation and maintenance factors of sex addiction (Giugliano, 2003).

2.2. A critical appraisal of the concept of ‘sex addiction’

The journal article highlights a lack of research and scientific data supporting the concept of sex addiction, however, there are also a number of conceptual problems with the construct which will be discussed here. The first problem concerns the subjective nature of many of its criteria. For example, a common component of sex addiction is that negative impairment or consequences result from the individual’s sexual behaviours, urges or fantasies. This criterion is very much reliant upon the individual’s and/or others’ interpretation of ‘problematic’ sexuality. This is not denied by proponents of the model, who acknowledge: “*what is healthy sexual behaviour for many people may be unhealthy for others*” (Schneider, 1991; p. 3) and that there is an “*ever-changing continuum if what is considered normal and abnormal*” (Griffiths, 2001, p. 21). However, by moving away from the objective, diagnosis is left exposed to bias.

Definitions of sex addiction have also drawn upon the use of sexual behaviour in response to negative affect. Winters (2010) identifies a number of reasons why this too is problematic. Firstly, the criterion does not account for the possibility that sexual behaviours may be used to ameliorate negative affect arising from an underlying disorder such as anxiety or depression. If this were the case, sexual behaviour would not represent a symptom of its own distinct disorder, but rather a

coping strategy in response to an underlying affect disorder. Winters (2010) also criticises this criterion for pathologising the repeated use of sex to improve affect. He questions why excessive levels of other, non-sexual behaviours or activities have not been pathologised to the same degree. For example, some individuals may engage in excessive levels of shopping, working, exercising, or watching television to improve their mood and these may interfere with their day to day living. Yet such behaviours have not captivated the attention of clinicians or academics to the same degree as sexual behaviours.

2.3. A social constructionist model of sex addiction

As the journal article explains, the aforementioned problems with the concept of sex addiction have led some to consider its status as a social construction. As Ley (2012) argues:

“The reason why clear medical terminology cannot be created in over thirty years of effort is because this is not a medical issue, but a moral and social one” (p. 28)

However, just as the concept of excessive sex is not new, nor is this idea that society may seek to repress our sexuality via the construction of pathology. A similar argument has previously been voiced by radical feminist scholars such as Rubin (1984). Furthermore, in his *History of Sexuality Vol I*, Foucault (1990) asserted that pleasure-driven sex started to be viewed as a hindrance to the development of capitalism during the rise of the Victorian bourgeoisie. As such, only sex that occurred within the confinement of marriage was condoned. Whilst norms and typical family-life cycles will undoubtedly have shifted since this time, some vestigial notions remain, for example, whilst marriage may have declined,

assumptions around monogamous coupling are still prevalent (Erens et al., 2001). These critical ideas concerning sexuality are therefore well-established.

It is argued that sex addiction has been created to pathologize any sexual behaviours which fail to promote dominant sexual norms (Levine, 2010). Supporting this, Levine and Troiden (1988) identify the common theme running throughout sex addiction behaviours: their motives are not for procreation and they do not occur within a committed, monogamous, heterosexual relationship but instead promote the norm of reproductive heteronormativity¹¹. Sex addiction can therefore be seen as a vehicle of social control in which individuals are dissuaded from engaging in activity which may undermine the family, religion or marriage. Furthermore, some see sex addiction as a lucrative disorder which is constructed and maintained by the addiction treatment industry (Strossen & Klein, 2012).

One of the leading sex addiction commentators, Patrick Carnes, has developed a series of measures which can be used to identify sex addiction (the Sex Addiction Screening Tools; SASTs; Carnes, 1989; Carnes & Weiss, 2002). By examining the content of the SASTs we can find further support for the idea that sex addiction represents a social judgment. For example, the Womens' SAST asks whether the respondent has ever engaged in sado-masochistic behaviours, something that does not appear within the heterosexual male test. One might therefore presume that sado-masochism is only seen as pathological in women. Furthermore, the SAST for homosexual men includes a number of items not found in the SAST for heterosexual men, including whether the respondent has ever been caught having sex in a public place. It therefore seems that certain sexual activities are considered problematic for one population, yet not for another.

¹¹ Berlant and Warner (1998) describe heteronormativity as the way in which heterosexuality has been constructed with a sense of rightness, normalcy and privilege. The authors explain: "*Heteronormativity is more than ideology, or prejudice, or phobia against gays and lesbians; it is produced in almost every aspect of the forms and arrangements of social life: nationality, the state, and the law; commerce; medicine; and education; as well as in the conventions and affects of narrativity, romance and other protected spaces of culture.*" (pp. 554-555).

Empirical support for the social constructionist argument comes from Levine's (2010) analysis of the case details of 30 males presenting to his clinic for sex addiction. Levine found that only 25% of cases adequately fit the conception of sex addiction, 25% could be described as paraphilic and the remaining 50% did not fit into addiction, compulsivity, impulsivity or relationship incapacity models. Instead, the author felt that sex addiction had acted as a convenient label for this latter group, used to excuse behaviour that contravened cultural sexual values. This included a group of clients who had violated their partner's restrictive rules by, for example, using pornography; a group of men who had kept sexual behaviours (such as masturbation) private from their partners; and a group who had 'discovered' commercial or chat room sex. Levine concluded that care should be taken in the use of sex addiction as a diagnosis. He argues that by too readily applying this label to sexual behaviours because they are disapproved of, they contravene sexual contracts between partners or are seen as subversive forms of sex, clinicians will likely mislead the therapy process.

Further support for the idea that culture may influence sex addiction comes from a study by Needell and Markowitz (2004). The authors examined the prevalence of sex addiction in two samples of psychiatric patients: Hasidic Jews versus non-Hasidic Jews. The former group are said to ascribe to more conservative and rigid views about sexuality including the beliefs that masturbation and homosexuality are sinful. The authors found a significantly greater incidence of sex addiction in the Hasidic Jewish population compared to the control group. The authors cite these findings as evidence in support of a link between culture and the presentation of sex addiction.

The social constructionist argument therefore seems to offer a persuasive account of the concept of sex addiction. Subsequently, the increasing failures of the sex addiction movement to scientifically support the disorder and their continued attempts to have its diagnostic status recognised mean that the argument continues to gain momentum.

2.4. An alternative explanation

If we were to accept the idea that sex addiction represents a social construction what remains unclear is why some individuals are able to engage in these sexual behaviours without perceiving them to be problematic, whilst others are so distressed by their behaviours that they seek professional help. The journal article considers whether one explanation for this is that certain characteristics make SAs more likely to appraise their sexual behaviour as problematic than 'non-addicts' (NSAs). It presents four potential variables which may account for these differences: personality, thinking dispositions, sexual attitudes, and religiosity. An extended review of these variables is offered below.

2.4.1. Personality

Perhaps one of the most commonly employed descriptions of personality traits is the Five Factor model (FFM; Digman, 1990; John, Naumann, & Soto, 2008). The FFM has been assessed as reliable and valid measure of personality which is stable across cultures (Schmitt, Allik, McCrae, & Benet-Martínez, 2007). It describes a taxonomy five personality traits: extroversion, agreeableness, neuroticism, openness to experience, and conscientiousness (McCrae & John, 1992) which are outlined in **Table 11**.

Table 11: Descriptions of each personality trait within the FFM (adapted from McCrae, Gaines & Wellington, 2012)

Extraversion	<p><i>High scorers</i> prefer intense and frequent interpersonal interactions and are energised and optimistic, warm, sociable, dominant, active, fun-loving, cheerful</p> <p><i>Low scorers</i> are reserved and tend to prefer a few close friends to large groups of people: distant, solitary, unassertive, slow-paced, unadventurous, sombre</p>
Agreeableness	<p><i>High scorers</i> regard others with sympathy and act unselfishly: trusting, honest, generous, forgiving, humble, merciful</p> <p><i>Low scorers</i> are not concerned about other people and tend to be antagonistic and hostile: suspicious, manipulative, selfish, stubborn, arrogant, cold-blooded</p>
Neuroticism	<p><i>High scorers</i> experience many forms of emotional distress, have unrealistic ideas and troublesome urges: anxious, irritable, gloomy, self-conscious, impulsive, fragile</p> <p><i>Low scorers</i> are emotionally stable, do not get upset easily, and are not prone to depression: calm, even-tempered, contented, confident, controlled, resilient</p>
Openness to Experience	<p><i>High scorers</i> seek out new experience and have a fluid style of thought: imaginative, artistic, empathic, novelty-seeking, curious, liberal</p> <p><i>Low scorers</i> are traditional, conservative and prefer familiarity to novelty: down-to-earth, philistine, unemotional, old-fashioned, concrete, dogmatic</p>
Conscientiousness	<p><i>High scorers</i> control their behaviour in the service of their goals: efficient, organised, scrupulous, ambitious, self-disciplined, careful</p> <p><i>Low scorers</i> have a hard time keeping to a schedule, are disorganized, and can be unreliable: inept, untidy, lax, lazy, weak-willed, hasty</p>

Having adopted a realist social constructionism epistemology, the author appreciates the problems in employing structuralist approaches such as the categorisation of personality. As Gould points out: (1991) “*taxonomy is always a contentious issue because the world does not come to us in neat little packages*” (p. 158). From a social constructionist standpoint such taxonomies do not

represent 'true' underlying entities but are merely created for convenience (Millon, 1991). Such theorists also argue that the notion of personality can create inequalities and locate blame of emerging difficulties within the person (Cromby & Nightingale, 1999). However, this thesis diverges from the purely social constructionist position by considering the existence of individual 'realities' which we make sense of via discursive constructs such as language. As such, it sees constructs such as personality traits as an attempt to make sense of individual differences.

The relationship between sexuality and personality is not a new research interest. Indeed, having developed a model of personality, Hans Eysenck went on to explore links between personality types and various aspects of sexuality. The author felt that personality would be key in understanding the huge amount of variance observed in human sexuality. His, and subsequent other, research investigations have found a number of significant associations between each of the personality traits and sexual variables which are described within the journal article.

What these findings suggest is that personality traits are associated with various aspects of sexuality. Two types of explanation may be applied to this association. Firstly, an interpersonal model would assert that personality traits bring about certain life events (Fisher & McNulty, 2008). For example, being extraverted may create more opportunity for sexual encounters by bringing others closer, therefore accounting for higher levels of sexual activity in this group (Eysenck, 1976; Heaven et al., 2000). Conversely, Fisher and McNulty (2008) explain that an intrapersonal model focusses upon the influence of personality type upon the individual's interpretation. For example, a neurotic personality may influence negative appraisals of one's relationship experiences, accounting for a higher instance of marital distress and dissatisfaction (Heaven et al., 2000).

2.4.2. Sexual attitudes

The journal article highlights a number of links between sexual attitudes and sexuality. The mechanism behind this association may be interpretation, that is, that an individual's attitudes towards sex influences how they appraise their own and others' sexualities. Indeed, Winters (2010) suggests that an individual with conservative views about sex will be more likely than someone with more liberal views to interpret their sexual thoughts as problematic. Furthermore, the development of these sexual attitudes will undoubtedly be affected by cultural influences including discourses (Belgrave, Van Oss Marin, & Chambers, 2000). As such, assessing an individual's sexual attitudes may offer insight into their internalisation of sexual norms (Hynie, Lydon, Côté, & Wiener, 1998).

2.4.3. Religiosity

Throughout history, religion has exerted a major influence upon sexuality (DeLamater, 1981). In fact, DeLamster (1981) cites religion as one of two major social institutions that have controlled our sexual activities, the other being family. The author explains that these sources of control have influenced our sexuality by, firstly, outlining a set of assumptions and norms which “*defines reality for adherents and thus serves as a basis for self-control*” (p. 264). In the case of religion, these norms have tended to reflect an endorsement of sexual practice for the purpose of reproduction only, with pleasure-driven activities such as sodomy, homosexual sex and masturbation largely being condemned (Paige, 1977). The norms are then said to be utilised in interactions by institutional figures, giving rise to informal methods of control. Subsequently, anyone who contravenes the norms may be sanctioned by the institution, further encouraging conformity.

Some of these ideas may be somewhat outdated. Indeed, the secularization hypothesis suggests that the influence of religion upon modern secular life is in

demise (Farmer et al., 2009). However, the concept of religiosity¹² is still very relevant today (Sedikides, 2010). For instance, the 2011 UK Census demonstrated that, whilst the number of people with no religion had increased more than twofold since 2001, the majority of people still ascribed themselves to a religion (Office for National Statistics, 2013). Furthermore, given the influences of religious thinking upon sexuality, it is not surprising to find a growing body of contemporary literature exploring the link between religiosity and sexuality. Some of the findings from this research are of particular interest to this thesis.

The journal article describes a number of studies which have found associations between religiosity and aspects of sexuality. However, whilst the relationship between religiosity and sexual attitudes appears robust, the relationship between religiosity and sexual behaviour is less clear. A number of studies have found the conservative views of those rating high on religiosity do indeed translate into their behaviour (Burris, Smith, & Carlson, 2009; Lefkowitz et al., 2004; McCree, Wingood, DiClemente, Davies, & Harrington, 2003; Rostosky, Wilcox, Wright, & Randall, 2004). For example, religiosity has been associated with a later age at first sexual experience (Rostosky et al., 2004), greater sexual precautions including use of condoms (McCree et al., 2003), and fewer lifetime sexual partners (Lefkowitz et al., 2004).

Other studies have, however, failed to find a definitive association between these two variables (Farmer et al., 2009; Fehring et al., 1998; Luquis, Brelsford, & Rojas-Guyler, 2012; Puzek, Štulhofer, & Božičević, 2012). For example, Sheeran, Abrams, Abraham, and Spears (1993) found that whilst religiosity was associated with participants' sexual attitudes and their anticipation of having sexual intercourse, it did not relate to actual sexual behaviour. To the contrary, the authors found in one instance religiosity was associated with increased sexual behaviour. Here, participants who had a Catholic upbringing expressed more negative sexual

¹² The construct of religiosity refers to the intensity, salience and importance of religion to the individual (Huber & Huber, 2012)

judgements of others and had more conservative sexual standards, yet they were more sexually active than their non-Catholic counterparts. The authors hypothesised that this may represent psychological reactance, whereby high levels of restrictions placed upon sexuality actually have increased sexual interest rather than dampening it. Similarly, whilst religious conflict has been cited as the primary reason viewing pornography is problematic for the user it only appears to account for only a small amount (3%) of variance in the decision to use it (Twohig, Crosby, & Cox, 2009). Noting the high frequency of sexual behaviour by participants from all affiliations, Farmer et al. (2009) hypothesised that religion may have minimal influence upon regulation of sexual behaviour.

Thus, whilst religiosity appears to influence psychological aspects of sexuality such as attitudes, judgements and guilt, this does not seem to translate into the frequency of sexual behaviour. If this is the case, there is reason to believe that religiosity may contribute to negative appraisals of one's sexuality and thus self-identification as a SA. For example, Catholic participants in Sheeren et al's (1993) study are likely to have problematized their sexual behaviour which is at odds with their conservative sexual standards.

2.4.4. Categorical thinking

A pertinent characteristic of sex addiction is that it makes clear distinctions between what is seen as sexually healthy and unhealthy (Keane, 2002). We have seen from the journal paper that this appears to have been observed clinically in individuals who identify as SAs. As such, it is conceivable to suggest that those with concrete, black and white thinking styles may be more likely to classify sexual behaviour as problematic.

The concept of categorical thinking appears to fit here. Indeed, Epstein (1998) explains that categorical thinking can lead to different forms of distress. The author explains that whilst thinking in this way allows for quick and convenient

organisation of information, it is likely to produce too broad and inflexible categorisations.

2.4.5. Summary

The social constructionist perspective seems to have developed a convincing argument against the concept of sex addiction. Reference to the historical course of sex addiction as well as the evolving conceptualisation of the 'disorder' certainly point towards a social construction of the disorder. However, this critical body of literature is very much based on theoretical discussion, with little empirical research being presented in support of the argument. This study therefore hopes to contribute to this field of research.

2.5. Aims and research questions

This was an exploratory piece of research in which the primary objective was to compare a group of men who considered themselves to be addicted to sex (SAs) to those who did not think they were addicted to sex (NSAs) in terms of the following dependent variables: sexual behaviour, the big five personality traits, categorical thinking, sexual attitudes, and religiosity. Due to its exploratory approach, two-tailed hypotheses were employed.

The secondary objective of the research was to use SAST identification of sex addiction as the grouping variable (SAs versus NSAs) and compare the two groups using the above dependent variables.

Encompassed within these aims were the following research questions:

1. a) *How do SAs, NSAs and those who are not sure whether they have a sex addiction explain their self-identification?*
1. b) *What are the similarities and differences in the three groups' explanations?*

2. *Are there any differences between self-identified SAs and NSAs on measures of sexual behaviour, personality traits, categorical thinking, sexual attitudes, and religiosity?*
3. *Are there any differences between SAST-identified SAs and NSAs on measures sexual behaviour, personality traits, categorical thinking, sexual attitudes, and religiosity?*
4. *To what extent do self-identifications and SAST-identifications of SAs and NSAs agree?*

Having addressed these research questions, the study will then consider the conceptual and clinical implications of its findings.

3. METHODS

The aim of this chapter is to offer a more detailed, critical account of the empirical study reported in the journal paper. The section also describes supplementary analyses carried out which further contribute to the research aims.

3.1. Design

This study employed a convergent parallel design (Creswell & Clark, 2010). This involves the concurrent collection of quantitative and qualitative data which, following analyses, are integrated and interpreted together. The study used self-completion questionnaires to capture both types of data.

3.2. Ethics

Ethical approval to carry out the study was obtained from the University of Lincoln, College of Social Science ethics board. Further approval was obtained from the local Research and Development department to place a recruitment poster within a waiting room of a National Health Service (NHS) sexual health clinic.

3.2.1. Key ethical issues

The topic of sexuality

We have seen that sexuality can often be seen as a taboo topic in which there is great variability in permissiveness. As such, it was acknowledged that the research and the content of the questionnaire would be sensitive to some and may induce feelings of discomfort and anxiety. It was therefore considered imperative that potential participants were sufficiently informed of the types of questions they would be asked as well as allowing them to withdraw from the questionnaire should they feel uncomfortable. As a further precaution, the researcher ensured that the research was advertised in appropriate places. For example, it is felt that within the public, male lavatories were an appropriate site to advertise as this meant that

individuals could read the posters and scan the QR code/remove a pull tab without fear that others would see and judge them for doing so. This also alleviated concern about causing offence to those who were not interested in the research.

Participant distress

Given the nature of the questions asked to participants, it was considered possible that some participants may become concerned about their sexuality through their participation in the research. In addition to this, the British Psychological Society's (2007) ethical guidelines highlight the potential for the researcher to identify problems which the participant had not been aware of. They suggest that in such an instance, the researcher will have a responsibility to act. This ethical issue is said to be particularly heightened in internet research where the participant is both unidentifiable and uncontactable by the researcher. As such, the Society recommends that, as a minimum, research of this kind employ debriefing information such as contact details for support groups. This research therefore heeded this advice by providing contact details for a range of support services within the debrief.

Conducting research online

Internet-based research has broadened the possibilities for the study of sexuality. For example, by offering participants complete privacy and anonymity and allowing the researcher to access hard to reach groups (Binik, Mah, & Kiesler, 1999) it can facilitate the investigation of a range of phenomena. However, this research also carries with it greater exposure to certain ethical issues. A particular difficulty lies within the researcher's disconnectedness from the participant, meaning that they are unable to monitor the participant's reactions to the questions asked or encourage them to access support if required. This was therefore borne in mind when designing the study.

3.3. Participants

3.3.1. Inclusion and exclusion criteria

This study concerned males only. The decision to exclude woman was primarily based on pragmatic reasons, that is, a want to minimise the number of variables which may have impacted on our observations. Indeed, we know that females are greatly under-represented within SA populations (Black et al., 1997; Carnes, 1991; Odlaug & Grant, 2010; Raymond et al., 2003) and sex addiction commentators suggest that the addiction profiles of males and females are quite different (Carnes, 1991).

The study sought to include males aged 18 and over. This decreased the likelihood of participants disclosing illegal sexual activities, namely, underage sex. These inclusion criteria were therefore communicated within recruitment material and participants were required to confirm they met the criteria before completing the questionnaire.

3.3.2. Description

As detailed in the journal paper, the sample comprised of 214 men. The journal paper reported descriptive statistics concerning participants' age, self-identification of sex addiction, and sexual orientation. **Table 12** offers further descriptive statistics concerning relationship and sexual activity status. This shows that most of the sample were in a relationship and the majority of participants were currently engaging in monogamous sexual activity.

Table 12: Sexual and relationship descriptive statistics for all participants

Variable	Frequency (percentage)
Relationship status:	
• Not in a relationship	83 (38.8)
• In a relationship, living separately	34 (15.9)
• Living with a partner, not married	35 (16.4)
• Married/civil partnership	56 (26.2)
• Separated/divorced	5 (2.3)
Sexual activity status:	
• In a monogamous sexual relationship	89 (41.6)
• In a non-exclusive/non monogamous sexual relationship	28 (13.1)
• Sexually active with others but not in a relationship	39 (18.2)
• Only sexually active with yourself	42 (19.6)
• Not currently sexually active at all	14 (6.5)

Data was also collected on participants' religious affiliation. Here, most participants described themselves as having no religion (29.9%) or being atheist (24.8%). The remaining participants described themselves as Christian (19.2%), Catholic (14.5%), Hindu (3.7%), other religion or spirituality (3.7%), Buddhist (2.3%), or Muslim (1.9%).

3.4. Measures

The journal paper describes the measures used to assess each of the variables. This section offers an extended, critical review of these measures. An extract from

the questionnaire can be found in **Appendix 5**. The full version has not been supplied due to copyright restrictions.

3.4.1. Survey of Sexual Behaviours (SSB; Winters et al., 2010)

The journal article explains that the SSB was used to collect data on sexual behaviours. Other measures of sexual behaviour are available and were considered. One commonly used alternative is Kinsey, Pomeroy and Martin's (1998) total sexual outlet (TSO). This measure asks the respondent to report the cumulative number of orgasms achieved via any sexual behaviour(s) per week within the six months prior to testing. This measure has been used in a number of sexuality studies, including those on sex addiction (for example Winters et al., 2010). However, as a standalone measure, the TSO fails to capture descriptive information concerning the nature of the sexual activities engaged in. Since this study was not just concerned with the frequency of sexual activity, but the types of sexual behaviours engaged in, the TSO was considered to offer a too restrictive measure of sexual behaviour. Furthermore, it was felt that the time frame for participants' estimations of six months was too long and may therefore invite a high proportion of inaccuracy in participants' reports.

Of course, the SSB does not encapsulate all sexual behaviours. Many more 'specialist' sexual activities such as 'fisting' or 'cam-sex' fall outside of these categories and are therefore likely to be missed within the data. Furthermore, the measure does not capture the context of the sexual activity, for example, whether it took place within a monogamous interaction or with multiple partners. Whilst the value in collecting this type information was acknowledged, it was felt the SSB achieved the right balance between breadth and brevity, given the exploratory nature of this study.

3.4.2. The Big Five Inventory (BFI; John & Srivastava, 1999)

The BFI was developed due to a need for a short measure of the Big Five personality traits and takes five minutes to complete (John & Srivastava, 1999). Each item consists of a phrase which is based upon prototypical trait adjectives relating to one of the five traits, such as: “*I am someone who is talkative*” (extraversion) and “*I am someone who can be moody*” (neuroticism). It is one of the most frequently used measures of the Big Five personality traits (Nofle & Shaver, 2006) which is said to be easy to administer, amenable to cross-culture translation and psychometrically sound (Schmitt et al., 2007). The scale has been found to have good test-retest reliability (from .80-.90; Rammstedt, 2007) and substantial convergent validity according to peer-ratings (averaging .55; John, Robins, & Pervin, 2008).

A shortened, ten item version of the BFI (BFI-10; Rammstedt, 2007) has been developed and was reviewed by the author. However, since such shortened versions of personality measures such as the BFI are thought to inflate the chances of both Type 1 and Type 2 errors, it is recommended that the full measures are used where possible (Credé, Harms, Niehorster, & Gaye-Valentine, 2012). Given that the full version of the measure only takes five minutes to complete, the BFI-10 was deemed unnecessary.

Other measures were considered. For example, the NEO-Five-Factor Inventory (Costa & McCrae, 1992) is perhaps one of the most widely used personality assessments (Komarraju, Karau, Schmeck, & Avdic, 2011). However, it was felt that even the short version of the measure, containing 60 items, was too lengthy for the purpose of online administration, particularly when combined with the other measures. Furthermore, the BFI items are considered to be much easier to understand than some of the more complex items encompassed within the NEO (John et al., 2008). As such the BFI was considered sufficiently brief to complete, whilst offering a robust measure of all five personality variables.

3.4.3. Categorical Thinking subscale (Epstein & Meier, 1989; Katz & Epstein, 1991)

The CTS was chosen as a measure of categorical thinking. It comprises three items rated on a five point Likert scale from completely false to completely true. Sample items include: “*there are basically two kinds of people in this world, good and bad,*” and “*I think there are many wrong ways, but only one right way, to almost anything*”.

An alternative measure was considered here. Derived from the Scale of Adult Intellectual Development (Martin, Silva, Newman, & Thayer, 1994), the Absolutism subscale assesses the respondent’s tendency to see things in absolute, undisputable terms. An individual rating high on this subscale would likely view any given opinion as either right, wrong or insincere with no appreciation for areas of ‘grey’. However, upon review of the measure, it was decided that the items including “*authorities have the true facts*” and “*little true conflict exists*” were somewhat difficult to interpret so the measure was not used.

3.4.4. The Sexual Attitude Scale (SAS; Hudson & Murphy, 1998; Hudson, Murphy & Nurius, 1983).

This scale offers an assessment of conservative versus liberal attitudes about a range of sexual activities. Sample items include “*movies today are too sexually explicit*” and “*people should not masturbate*”. This tool seemed particularly relevant to the current study as it assesses attitudes concerning a range of sexual outlets, rather than sexual intercourse alone.

Upon review of the available sexual attitude measures, there was a notable lack of contemporary measures. Indeed, a review of the most commonly used sexual attitudes measures revealed only one measure published in the twenty first century (Fisher, Davis, Yarber, & Davis, 2013). That measure is the Brief Sexual Attitudes Scale (BSAS; Hendrick, Hendrick, & Reich, 2006), which is based on the Sexual

Attitudes Scale (Hendrick & Hendrick, 1987). However, the BSAI does not offer an overall score for sexual attitudes, rather, the authors state that the four subscales (permissiveness, birth control, communion, and instrumentality) should be treated separately. Given the high number of variables already under study, it was decided that the unitary measure of sexual attitudes offered by the SAS would be employed.

3.4.5. Religiosity

Some authors have taken a broad view of religiosity by, for example assessing the presence of religion within the person's upbringing, their engagement in rituals/behaviours and their affiliation, in addition to measures of influence (see, for example Sheeran et al., 1993). However, this study wished to focus upon the self-attitude and salience components of religiosity, that is, how religious the person views them self and how influential religion is upon their life. On the basis of the literature review, it was felt that these aspects of religiosity were most likely to impact upon one's appraisal of sexual behaviour and thus their self-definition of sex addiction.

Thus, two items were devised to assess religiosity: "*How important is religion or spirituality in your life?*" and "*How much does your religion or spirituality influence your life?*". Whilst other, more extensive measures of religiosity were available (for example Huber & Huber, 2012), it was felt that these two items would offer an economical assessment of the components of religiosity under investigation. Furthermore, the validity of single item measures of religiosity has been demonstrated within the literature (Gorsuch & McFarland, 1972). Data on participants' religious affiliation was also collected, however, since it is said to offer a weak indication of religiosity (Field, 2014) this was collected as a descriptive statistic.

Of course there are limitations with this single item approach. A particular concern is that the researcher cannot be sure what criteria the participant is using to reach

their answer (Huber & Huber, 2012). For example, one participant may draw upon behavioural counts such as the frequency of church visits to determine how religious they feel they are, whereas another may consider how it affects their daily decisions. However, the author of this study felt the subjective importance of religion for participants was key, regardless of how participants gauged this. It was felt that the two items sufficiently tapped into this variable.

3.4.6. The Sex Addiction Screening Test (SAST; Carnes, 1989) and the Sex addiction Screening Test – Gay Men (G-SAST; Carnes & Weiss, 2002)

The SAST tools are largely considered to be the gold standard in the assessment of sex addiction (Weiss, 2004) and are frequently used in both clinical and research contexts (Marshall & Marshall, 2010). Given its status within sex addiction fields, as well as the focus of this research on sex addiction, it is worth considering the development of this battery of tools here.

To develop the SAST, Carnes and colleagues consulted clinicians who had experience working with SAs, asking them to assess the face validity of over 100 items. Fifty of these items were then retained and administered to a sample of 73 SAs who were either part of a Sexual Addicts Anonymous (SAA) group or were accessing outpatient treatment for their sex addiction. Twenty five items were then chosen on the basis of clinical judgement and factor analysis. Sample items include: “*have you attempted to stop some parts of your sexual activity?*” and “*do you ever feel badly about your sexual behaviour?*”. The authors reported that at this stage, 90% of the variance was explained by awareness that one’s sexual behaviour was problematic and out of control and that help was needed.

The psychometric properties of the tool were then supported in Carnes’ (1989) application of the SAST to a sample of 191 SAs and 67 NSAs. The author reported the presence of a single factor which has high internal consistency for SAs ($\alpha = .92$) and NSAs ($\alpha = .85$). Subsequent studies have reported high alpha values for the tool (Carnes, 1989; Marshall & Marshall, 2010; Nelson & Oehlert, 2008;

Seegers, 2003). The scale has, however, been found to have poor item-total correlations (see Carnes et al., 2010).

In creating the SAST, Carnes (1989) cautioned that care must be taken in applying the tool to those whose sexual behaviour may carry heavy cultural sanctions such as those engaged in by homosexual clients. He explained that for these individuals, experiences of secrecy, shame and guilt may be common and thus run parallel to the experiences of SAs. Yet the author warned that these individuals may not have a sex addiction. The author therefore set out to create an alternative measure for bisexual and homosexual men, the G-SAST (Carnes and Weiss, 2002).

Whilst the process of developing the SAST is rather well-documented, it is unclear from the literature how the G-SAST was created. This is particularly problematic since the majority of items within the G-SAST differ from the SAST. For example, a number of behavioural items are exclusive to the G-SAT including: *“have you ever paid for sex”* and *“have you spent time worrying about being HIV positive, and continue to engage in risky or unsafe sexual behaviour anyway?”*, so too are items relating to psychological characteristics such as: *“do you have trouble maintaining intimate relationships once the “sexual newness” of the person has worn off?”*. One might assume that the same process for the development of the SAST was followed, however, this is not confirmed within the literature. Furthermore, the G-SAST is less supported by psychometric data (Hook et al., 2010).

The way in which threshold scores were established for the SAST is documented by Carnes (1989). In a sample of 258 men recruited from a SAA group and convenience sample of non-addicted men, the author found that 96.5% of individuals who scored 13 or more were later confirmed to be SAs. It was using this data that the author established the threshold scores displayed within **Table 13**. It is evident from this table that the threshold scores for the G-SAST are quite

different. Unfortunately Carnes and Weiss (2002) do not appear to offer an account of how these scores were reached (Hook et al., 2010).

Table 13: Threshold scores for SAST and G-SAST tools

Classification	SAST	G-SAST
No problem	0-9	0
Cause for concern	NA	1-3
Professional assessment warranted	10-12	4-6
Sex addiction	13+	7+

Whilst acknowledging the limitations of G-SAST, the study adopted the test on the basis that the sex addiction literature considers it most appropriate for use with homosexual and bisexual men (Carnes, Green & Carnes, 2010; Keane, 2002).

Critique

A particular limitation of the SAST measures is that they are not unidimensional tools. Whilst some items tap into various components of sex addiction definitions including failure to stop one's sexual behaviour, negative consequences and affect disturbance, other items do not map onto sex addiction criteria. For example, the item asking whether the individual regularly purchases pornography magazines is at odds with descriptions of the disorder as having no necessary characteristic behaviours. Whilst the use of pornography has been identified as a behaviour commonly found in SAs (Bancroft, 2008; Kor et al., 2013), one would question why other common behaviours such as 'excessive' masturbation are not also included. Furthermore, the tool taps into other supposed associated characteristics such as being the victim of sexual abuse and engaging in illegal sexual behaviours

including having sex with minors. These appear to have been included despite the lack of robust data supporting a link between sex addiction and these variables (Hughes, 2010). Furthermore, one might also suggest that by including items on illegal sexual activity, the measure serves to conflate paraphilic with non-paraphilic sex addiction, disorders which are considered to be distinct (Suarez et al., 2002). These limitations should therefore be borne in mind when using the tool and interpreting outcomes of each measure.

Item removal

The journal article explains that three items were removed from the SAST and two items from the G-SAST tool. These items were: “*are any of your sexual activities against the law?*” (SAST), “*have you been sexual with minors?*” (SAST and G-SAST) and “*were you sexually abused as a child or adolescent?*” (SAST and G-SAST). It is acknowledged that the removal of items from any established measure is a controversial research practice so it is worth considering this decision further here.

The decision to remove these items was primarily motivated by ethical concerns. This is because the assessment battery contained a range of items which tapped into participants’ potential distress about their sexual behaviour. It was felt that the three items were particularly sensitive and there was concern about a cumulative effect of distress, coupled with the researcher’s disconnectedness from the participants. These issues have been discussed elsewhere in the literature. Binik, Mah and Kiesler (1999), for example, highlight asking of potentially distressing questions such as those about childhood sexual abuse as a significant ethical concern in internet sexual research. The authors explain that whilst safeguards such as the provision of contacts for support agencies can ameliorate any risk of harm, it remains that the researcher is not able to monitor and respond to participants’ reactions. The British Psychological Society (BPS; 2007) also highlight

this lack of researcher control as a pertinent ethical issue in internet-based research.

In addition to the above concerns, the researcher did not wish to access information from participants concerning illegal activity not known to the police. Whilst it is acknowledged that the researcher would not have a duty to pass this on information to the appropriate authorities (given the lack of identifiable information), it remains that such a disclosure would present cause for concern.

The rationale for removing these items was further strengthened by reference to their psychometric properties. Here, all three of these items have been found to have poor item-total correlations (.09 - .33; Carnes, Green, & Carnes, 2010), yet it is recommended that items with correlations below .3 be removed (Ferketich, 1991). Furthermore, in Carnes et al.'s (2010) principal component analysis, only two of these items appeared within a factor solution (factor 4: Associated features) and this factor, which included one further item, only accounted for 5.71% of the variance in SAST scores. Subsequently, these items have not been included in more brief versions of the measure such as the PATHOS questionnaire (Carnes et al., 2012)

In order to assess the extent to which the change in threshold affected observations in this study, sensitivity analyses were carried out in which duplicate analyses were run using the original SAST threshold to divide the sample into SA and NSA participants.

Alternatives to the SAST

Given the lack of consensus in the definition of sex addiction, it is not surprising to find variability in its assessment. Indeed, a number of different measures have been used to assess sex addiction. These measures, which include the Compulsive Sexual Behaviour Inventory (Coleman, Miner, Ohlerking, & Raymond, 2001), Hypersexual Behaviour Inventory (Reid, Garos, & Carpenter, 2011), and the

Sexual Compulsivity Scale (Kalichman & Rompa, 1995), were considered for inclusion in this study. However, the status of the SAST tools as the leading sex addiction assessments in both research and academic fields, coupled with the established evidence base for the SAST, led to a decision to adopt this measure.

Having decided to use the SAST tool, the researcher was faced with a choice of different versions of the tool itself. Firstly, a brief version of the SAST was created by Carnes et al. (2012); the PATHOS questionnaire. This comprises six items from the full SAST which the authors report have respectable sensitivity and specificity in the identification of SAs. These items relate to the six components of SA considered by the authors to be key in assessment: preoccupied, ashamed, treatment, hurt others, out of control, and sad. Whilst this offers a concise assessment of sex addiction, it is intended as a screening measure and therefore has less specificity than the full SAST measure.

The SAST was revised in 2010 (Carnes et al., 2010) and consideration was made to use this version of the measure within the study. However, it appears that this new measure is not well documented within the research literature and, as such, there is a lack of information reporting its psychometric properties. Thus, given that the original test is well cited within sex addiction literature and appears to be the benchmark used to assess sex addiction in research studies (for example Gordon-Lamoureux, 2007; Lee, Kim, Lee, Park, & Lim, 2013) it was adopted for this study.

3.5. Procedure

The journal article explains that a purposive sampling strategy was employed in which recruitment efforts were mainly concentrated in sexual interest and sex addiction forums. Indeed, the study was particularly interested in those who engage in a high frequency of sexual behaviour and those who see their sexual

behaviour as problematic, it was not focused on generating results that could be generalised to the general population.

The study was advertised via two means of communication: posters and online posts. Following permission from the site manager, posters (**Appendix 2**) were displayed in male lavatories in bars, near till points in adult shops and in waiting rooms of Relate, a service offering counselling and support for those with relationship problems, including sex addiction. These sites were all based in Leicester, Loughborough and Nottingham. Posters were also displayed within the waiting room of a Nottingham NHS sexual health clinic.

In order to avoid 'spamming' (The British Psychological Society, 2007), permission was gained from the site moderator or administrators before posting in online forums and only one post was made per site. Online advertisements (**Appendix 3**) were posted on sex addiction (for example www.recoverynation.com) and sexual interest (for example www.trueswingers.com) forums, gumtree and reddit, a user generated news site. It was also advertised via the British Psychological Society sexualities listserv.

Mid-way through the data collection it was apparent that the NSA sample had been fulfilled so recruitment materials were subsequently changed to target self-defined sex addicts specifically.

3.6. Qualitative data analysis

This study employed thematic analysis (Braun & Clarke, 2006) to analyse participants' qualitative responses. This is a flexible method which can be moulded to fit any given theoretical framework (Smith & Firth, 2011). It can be used inductively (Boyatzis, 1998) in which data are coded 'bottom-up', or deductively (Crabtree & Miller, 1999) where a pre-existing coding framework is applied to the data, based on existing theory (Braun & Clarke, 2006). This study adopted a hybrid of these two approaches. This is because the aim of the analysis and of the

research more broadly was exploratory in which it sought to explore participants' conceptualisations of sex addiction. An inductive approach therefore allowed for all participants' conceptualisations to be captured by the analysis. However, the researcher who carried out the analyses was very much aware of existing definitions of sex addiction which these participants were also likely to have been exposed to. This awareness will have undoubtedly influenced her interpretations so a deductive component to the analysis was included. This included being guided by Carnes' (2005) definition of sex addiction in the organisation of the themes.

The free-text box method of data collection will inevitably invite a range of responses which vary in length. As such, the analysis largely employed latent level interpretation, in which the analyst attempts to identify the underlying ideas, assumptions, and conceptualisations within the data (Braun & Clarke, 2006). However, it was acknowledged that some more brief responses may not warrant this level of interpretation and may therefore lend better to semantic-level interpretations. Both forms of interpretation were therefore used.

In considering the strength of a theme, the researcher drew upon both its prevalence and salience within the data. Whereas content analysis makes quantified measures of the prevalence of themes (Wilkinson, 2000), thematic analyses will typically avoid numeric representations of a theme's strength and instead consider both its occurrence *and* its relevance to the research questions (Braun & Clarke, 2006). This study therefore adopted this latter approach.

3.7. Statistical analyses

3.7.1. Testing assumptions for parametric analyses

Each set of data subject to analysis was tested to see if it met the assumptions for parametric testing. Where the data violated these assumptions, non-parametric tests were used. **Appendix 6** offers a step-by-step example of assumption testing

for one of the variables tested. The parametric assumptions tested as part of this process are described below.

Normal distribution

In order to assess the normality of the data, measures of skew (asymmetry) and kurtosis (peakedness) were used. The values for both of these statistics were calculated using SPSS then transformed into z-scores. Where the samples were below 50, a critical value of 1.96 was adopted, based on advice from Kim (2013). This meant that any z-score exceeding this value was considered to indicate a non-normal distribution. For samples over 50, the critical value was 3.29.

The Kolmogorov-Smirnov tests were also calculated. However, this test can be particularly sensitive when used with large samples (Field, 2009). As such, these tests were interpreted in conjunction with the measures of skew and kurtosis, as well as Q-Q plots (see below).

A final assessment of normal distribution was made using an 'eyeball test' of Q-Q plots. The Q-Q chart plots the expected values (should the data be normally distributed) against the observed values (Field, 2009). Should the observed data be normally distributed, one would expect to see the two plots closely aligned, with little deviation by the observed plots.

Outliers

Any outliers within the data were identified via boxplots. Where an outlier was identified, it was located within the data and the participants' responses examined to determine data validity. Only if the participants' data clearly indicated false responding would it be deleted. For example, where the participant had provided extreme answers for all questions which did not alter when the item was reversed. Otherwise, outliers were substituted for the next highest (or lowest) score in that data set that was not an outlier (Field, 2009).

Homogeneity of variance

To ensure the two populations tested had equal variances, Levene's test for equality of variances was consulted. SPSS presents this statistic alongside outputs from parametric tests, in this instance, *t*-tests and MANOVAs. Here, a *p*-value exceeding 0.05 indicates equal variances between the groups (Tabachnick & Fidell, 2007). Where the test indicates this assumption has been violated, SPSS offers alternative statistics which are more robust. However, these were not required for any of the analyses carried out.

3.7.2. Further assumption testing for multivariate analyses of variance (MANOVAs)

This study utilised MANOVAs to compare groups. In addition to the above parametric assumptions, this statistical test requires that the following assumptions are met.

Multivariate normality

Multivariate normality was checked using the mahalanobis distance value. Where this value exceeded the critical value, further analysis was carried out to identify the multivariate outliers. The critical values cited by Tabachnick and Fidell (2007) were adopted. Here, values depend on the number of dependent variables within the analysis, for example, where five dependent variables are used (as was the case in analyses concerning the Big Five personality variables), the critical value is 20.52.

Any multivariate outliers identified by this process were examined to see if there were any errors in the data which may have accounted for its deviation from the rest of the data. If no errors were identified, Santos-Pereira and Pires' (2002) method was adopted in which the outlier was removed from the data set and the mahalanobis statistic was re-run to ensure the assumption was now met.

Linearity

This assumption was tested by generating scatterplots between each pair of dependent variables (Pallant, 2010). The scatterplots were then checked to ensure a linear relationship existed between the variables, evidenced by the clustering of data points within a linear direction.

Multicollinearity and singularity

MANOVA analyses also require the data to be only moderately correlated. Highly correlated dependent variables would imply that they are not distinct from one another. On the other hand, a weak correlation would indicate singularity of the variables which would be better analysed using univariate analysis of variance (Pallant, 2010). This assumption was tested by carrying out a correlation between the dependent variables. Any correlations that exceeded .8 were taken to indicate a violation of this assumption.

Homogeneity of variance-covariance matrices

This is the assumption that both the variances in each dependent variable are roughly equal. Additionally, the correlation between any two dependent variables is also assumed to be the same in all groups (Field, 2009). The assumption was tested by reference to Box's M Test of Equality of Covariance Matrices which is produced by SPSS alongside the MANOVA. Where the significance for this statistic is larger than .001, this assumption has not been violated (Tabachnick & Fidell, 2007)

3.7.3. Inferential statistics

Where the data met the assumptions for parametric testing, parametric tests such as *t*-tests or one way between MANOVAs were performed. Where more than one dependent variable was entered into the analysis, Bonferroni corrections were made to reduce the chance of Type I error.

4. RESULTS

4.1. Thematic analysis of participant responses

The journal article explains that participants' response to the question: "*why do you think you do or do not have a sex addiction?*" were analysed using a mixed inductive-deductive thematic analysis. This extended review of the results documents the analysis of all participants' responses, comprising three groups of participants: self-identified SAs ($n = 49$), NSAs ($n = 131$) and those who did not know if they had a sex addiction or not (DK; $n = 34$). The themes identified within participants responses are displayed within **Error! Reference source not found.**. An extended discussion of these themes is offered below under two headings: themes which mapped onto Carnes' (2005) definition and theme which sat out of his definition.

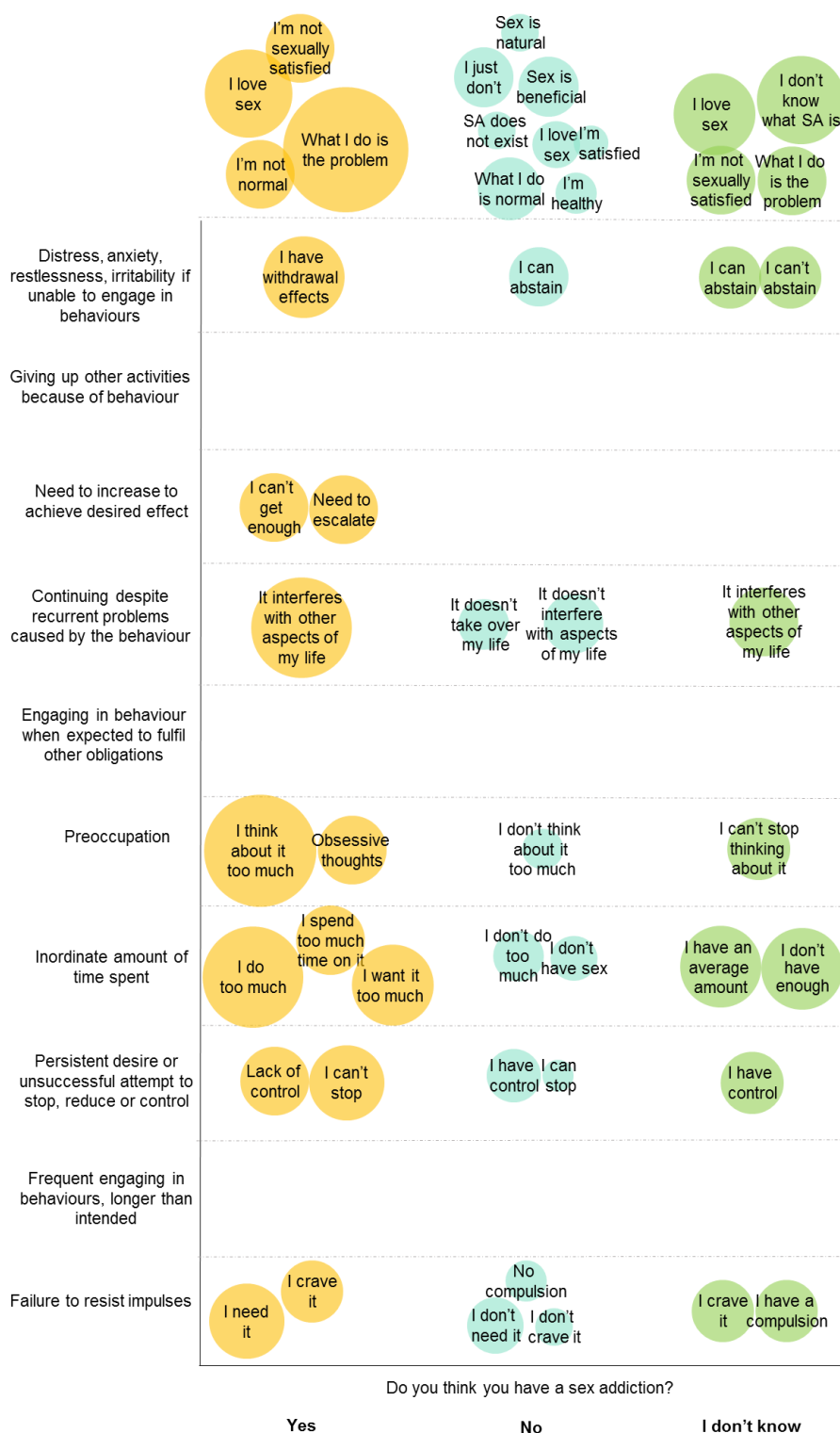


Figure 3: Thematic diagram of participants' responses to the question: "why do you think you do or do not have a sex addiction?", mapped against Carnes' (2005) definition

4.1.1. Themes which mapped onto Carnes (2005) definition of sex addiction

In explaining whether or not they thought they had a sex addiction, the three groups of participants drew upon a number of concepts which resonate with components of Carnes' (2005) definition. These are described below.

Failure to resist impulses

Participants often communicated an impulsive view of sex addiction with themes reflecting a need or craving for sex:

"I crave sex. It doesn't matter what mood I am in" (25 year old heterosexual SA)

"It doesn't drive me to need it" (18 year old heterosexual NSA)

"Sometimes I have intense cravings to view pornography/masturbate but always do so privately so have it under control to some degree" (39 year old heterosexual DK)

These responses reflected the idea that a SA is driven to seek out sex due to urges or cravings. Those in the NSA and DK groups also referred to the concept of a compulsion:

"It is not a habitual compulsion with me" (48 year old pansexual NSA)

"I have often used pornography compulsively in binges and it has affected my relationships with women, my self-esteem, my spirituality and other

areas of my life in negative ways (guilt, lost time and energy, shyness)” (32 year old homosexual DK)

Thus, for these participants, sex addiction is characterised by an impulsive or compulsive drive to gain sexual gratification.

Persistent desire or unsuccessful attempts to stop, reduce or control

The concept of control was also a strong theme within participants’ responses and this maps onto Carnes’ third criteria. Here participants referred to the amount of control they did or did not have over their sexuality, as well as their ability to stop thinking about or engaging in sexual activities:

“I spend hours every night masturbating and having camsex, to the point of being exhausted the next day. I spend hours at work watching porn and compulsively checking contact sites and sex chatrooms. I can’t stop thinking about it and I can’t stop doing it” (46 year old bisexual SA)

“I’m a very sexual person but I have it under control, if I’m not in a relationship, I try to keep my sexual activity to a minimum” (21 year old homosexual NSA)

“It’s like another part of me I need to control but without feeding it the hunger gets worse” (25 year old heterosexual DK)

As the above extracts demonstrate, these responses often reflected the idea that one’s sexuality needs to be controlled. For some, control was demonstrated by the ability to stop or minimise one’s sexual thoughts or activities. From these quotes,

and indeed a number of other contributors to this theme, there is a sense that one's sexuality is almost a separate part of them which must be managed to avoid a loss of control.

Inordinate amount of time spent

A number of themes in participant responses reflected the idea that sex addiction is characterised by sexual activity which consumes an inordinate amount of time. Here, a strong theme in the responses from SAs reflected the idea that they engage in too much sexual activity, spend too much time on it, or that their desire for sex was excessive:

“Constant need for sex. Everything I see leads to sexual thoughts. Watch porn every morning before work, on lunch, after work and before bed” (31 year old heterosexual SA)

Like the above participant, for some of these men, they felt sex had very much dominated their life. Conversely, NSAs and DKs felt that their sexualities were not excessive since they engaged in an average or below average range of sexual activity:

“I probably have less sex than most my age” (36 year old heterosexual NSA)

“I’m not sure, I wouldn’t call it an addiction as I don’t seek out sex often enough for it to classify, it’s more like a random act of impulse, in the heat of, well, being horny” (20 year old bisexual DK)

Thus, for these participants, an excessive amount of sex indicates addiction and further, if one does not engage in a high frequency of sex, they cannot be deemed to have a sex addiction. Their responses imply that one would be able to tell if their sexual activity was 'too much'. For some, including the NSA above, they imply that this could be gauged by comparing oneself to others. Subsequently, a smaller theme within NSA responses reflected the idea that the participant could not have a sex addiction since they were not currently sexually active.

Preoccupation

The concept of excessive or obsessive thoughts also featured within participant responses. This was particularly prevalent within SAs' answers:

"I always dream and think of sex" (36 year old heterosexual SA)

"I just don't. I don't think about it that often" (18 year old pansexual NSA)

"I can't stop thinking about something that I know really isn't going to do me any good, so in that sense I'd say it is a compulsion" (32 year old heterosexual DK)

These responses primarily drew upon the frequency of one's thoughts to determine whether they were indicative of an addiction. However, SAs also considered the 'obsessiveness' of their sexual thoughts which fitted particularly well with Carnes' (2005) criteria of preoccupation.

Continuing despite recurrent problems caused by the behaviour

Interference or consequences for other aspects of one's life featured within responses from all three groups of participants. Here, participants conceptualised

sex addiction as something which has a negative effect on one's life generally, their relationships, or their work:

"I think about it almost all the time during the day and night. At work I stare at the women sexually (if they're wearing provocative clothing such as yoga pants, tight jeans, skirts, etc.). I work in two retail jobs so there's a lot of people I run into so it is a bit distracting. I think about the women I run into and imagine sexual scenarios with them. I have had to pay for the sexual encounters that I listed (the five up there in the survey) and have urges to look for more encounters when I am financially struggling to even get gas or food for myself (thankfully live with my parents)" (24 year old straight SA)

"Nobody complains about my masturbating. I only do it at home. No compulsions. I don't spend money on it" (64 year old heterosexual NSA)

"Well when I have a girlfriend I constantly think about how much fun it would be to have sex with loads of girls, and kind of resent my girlfriend for preventing me. And when I was single I used to always think about how amazing it would be to have sex with loads of different girls, but when I actually did have casual sex it was never as good in reality as it was in my head" (32 year old heterosexual, DK)

As these quotes illustrate, participants identified a range of consequences of sex addiction. These included personal consequences such as a negative impact on one's finances, religion or spirituality, interference with one's ability to work, problems caused in one's relationships with others, and a general sense of disruption (or lack of) caused to one's life. A further theme was identified within the NSA group which reflected the idea that their life was not engulfed by sex and that sex was not important to them.

Need to increase to achieve desired effect

A theme identified within SAs' responses reflected a need to escalate sexual activities to gain satisfaction:

"I keep trying to engage in it but I am less and less satisfied each time so I keep trying to engage more" (18 year old pansexual SA)

As the above quote demonstrates, these participants appeared to be 'chasing a high' by increasing the intensity of their sexual activities in attempt to achieve sexual gratification. A further related theme was identified in which participants suggested they could not get enough sex. However, these participants did not indicate whether this was due to a lack of opportunity or whether no amount of sex would satisfy their appetite.

Distress, anxiety, restlessness, irritability if unable to engage in behaviours

The three groups of participants also drew upon the idea that a sex addict will experience adverse effects if they were to go without sex:

"I get angry and restless if I go without any sexual contact for a day" (29 year old heterosexual SA)

"I don't feel compelled to have sex constantly nor do I get anxious if I don't have it" (21 year old heterosexual NSA)

"I can go weeks without sex" (47 year old bisexual DK)

Whilst the majority of participants did not specify the nature of present or absent 'withdrawal effects', some in the NSA and SA groups described particular effects of

abstaining from sex suffered by those who are addicted to sex. These included feeling 'cranky', anxious, angry, awkward, and restless.

4.1.2. Further themes

Further themes were identified which sat outside of Carnes' definition. These have been grouped under overarching headings and described below.

Healthy versus unhealthy sexualities

The strongest themes within the data reflected the idea that sex addiction could be determined by the type of sexual behaviour, urge or thought which the individual engages in. Here, a theme within responses from participants in the SA and DK category suggested that the thoughts, urges, or behaviours they engaged in signified a sex addiction:

"Interest in porn/images/posts/ads/hook-ups that do not match my sexual orientation. Lack of interest to "vanilla porn" but only interested in females in real life" (24 year old heterosexual SA)

"I might have, I seem to masturbate a lot over women and 'shemales'" (54 year old homosexual, DK)

This theme was particularly strong within the SA group. The majority of SAs contributing to this theme specified particular sexual interests which they felt demonstrated their addiction to sex. These included paying for sex, engaging in 'risky' sexual behaviours, meeting people online for sex, using phone applications to 'hook-up' with gay men, and nudism. A related theme within SAs' and NSAs' responses implied that the sexual behaviours they engaged in were either normal or abnormal, leading them to conclude whether or not they had a sex addiction:

“I feel I am not normal” (40 year old heterosexual SA)

“I don’t [think I have a sex addiction] because I don’t need or desire any taboo or unusual sexual needs” (28 year old heterosexual NSA)

Many of these participants did not specify the type of sexual activity they engaged in, but merely stated that these were or were not normal.

A love of sex

A theme reflecting a love of sex was found within all three groups:

“I love sexual activities” (57 year old heterosexual SA)

“I do love having sex but my life does not depend on it or is influenced in an unhealthy way” (45 year old heterosexual NSA)

“I just love to have sex” (28 year old heterosexual DK)

For the majority of SAs contributing to this theme, this was their only rationale for self-identifying as a SA, suggesting that an excessive passion for sex can amount to addiction. For the NSAs however, participants tended to qualify this love for sex as one that was healthy or normal.

As the journal article explains, this theme overlapped with another theme communicating either satisfaction or dissatisfaction with one’s sexuality. Here, SAs and participants in the DK category tended to attribute their dissatisfaction with their sexuality to a mismatch between what they wanted to do and what they could do:

“I love sex and would be doing it all day with as many partners as possible if I could” (42 year old bisexual SA)

“I want to have sex, but I cannot find someone who is willing and meets my standards” (18 year old heterosexual DK)

Conversely the NSAs contributing to this theme communicated a satisfaction with their sex life:

“I believe it is healthy to have a sexual attraction to my partner and I am satisfied with our sex life” (18 year old heterosexual NSA)

Thus, for this participant, his positive view of sex was coupled with sexual satisfaction, leading him to deny any problems with his sexuality.

A positive view of sex

A number of themes within NSAs' responses communicated a positive view of sex. Firstly, the theme labelled as 'sex is beneficial' acknowledged the positive effects of sex:

“I believe that engaging in sexual activities is normal, healthy and pleasurable” (29 year old heterosexual, NSA)

For these individuals, sex appears to be something that can be enjoyed and benefited from, without the need to restrict it. A further theme reflected the idea that sex is natural:

“I believe sex is normal/natural and necessary for the continuance of the species” (61 year old heterosexual NSA)

For these participants, sex comprises a necessary part of being a human and is therefore unproblematic.

The construct of sex addiction

A smaller theme within the responses from NSAs reflected the idea that sex addiction is not a valid construct:

“[I don’t think I have a sex addiction] because there is no such thing as sex addiction. Sex and the drive for sexual pleasure is completely normal” (46 year old homosexual NSA)

These participants suggested that the concept of sex addiction unnecessarily pathologizes normal sexual behaviours and for some, represents a social construction.

Conversely, a number of participants within the DK category acknowledged a lack of understanding about sex addiction:

“I’m not entirely sure what would qualify as a sex addiction or compulsion” (37 year old bisexual DK)

These participants communicated that since they were unsure what a sex addiction is, they were unable to define themselves as a SA or NSA.

No explanation

A final theme within NSAs responses offered no explanation for not considering themselves to have a sex addiction:

“I haven’t got an addiction” (18 year old heterosexual NSA)

“I can’t explain, I just don’t” (34 year old bisexual NSA)

As the above quotes illustrate, these participants either offered definitive statements about the absence of addiction or expressed an inability to explain why they felt they were not addicted to sex.

4.2. Psychometric properties of measures

The internal consistency of each measure used was calculated. Cronbach's alpha values are reported in **Table 14**.

Table 14: Tests of internal consistency for each measure used

Measure	Cronbach's alpha
The Big Five personality inventory:	
• Extraversion	.86
• Agreeableness	.72
• Conscientiousness	.80
• Neuroticism	.83
• Openness to experience	.75
Categorical thinking subscale	.76
Religiosity	.94
Sex addiction screening test	.90
Sex addiction screening test – Gay men	.85
Sexual attitude scale	.94

This table demonstrates that all measures showed an acceptable level of reliability, with all alpha values exceeding .70 (Pallant, 2010).

4.3. Comparing self-identified 'sex addicts' to 'non addicts'

This set of analyses compared individuals who had identified themselves as SAs ($n = 49$) to those who identified as NSAs ($n = 131$).

4.3.1. Supplementary analyses

Comparisons on sexuality and relationship variables

Table 15 displays the frequencies of sexual orientation, relationship status and sexual orientation variables for the two groups. The table also provides the significance value of either Chi-square or Fisher's tests which indicate whether differences between the groups were significant.

These analyses indicate that there were no significant differences between the two groups on any of these variables.

There were no significant differences between SAs ($M = 3.18$; $SD = 1.44$) and NSAs ($M = 3.56$; $SD = 1.30$) in their reported satisfaction with current sexual activity, $t(178) = 1.67$, $p = .368$; $d = .25$. Nor were there any significant differences between SAs ($Md = 2.17$; $IQR = 0.33-11.71$) and NSAs ($Md = 2.08$; $IQR = 0.25-6.91$) in the length of their longest relationship, $U = 11,437$, $z = -1.35$, $p = .18$.

**Table 15: Sexual orientation, relationship status and sexual activity:
Frequencies and differences**

	Self-identified sex addicts <i>n</i> (%)	Self-identified non addicts <i>n</i> (%)	Chi-square or Fisher's exact test <i>p</i>
Sexual orientation:			
• Heterosexual	31 (63.2)	82 (62.6)	NS
• Bisexual	6 (12.2)	17 (13.0)	NS
• Homosexual	3 (6.1)	22 (16.8)	NS
• Asexual	3 (6.1)	5 (3.8)	NS
• Pansexual	4 (8.2)	2 (1.5)	NS
• Other	2 (4.1)	3 (2.3)	NS
Relationship status:			
• Not in a relationship	13 (26.5)	52 (39.7)	NS
• In a relationship, living separately	12 (24.5)	17 (13.0)	NS
• Living with a partner, not married	7 (14.3)	24 (18.3)	NS
• Married/civil partnership	14 (28.6)	37 (28.2)	NS
• Separated/divorced	3 (6.1)	1 (.8)	NS
Sexual activity status:			
• In a monogamous sexual relationship	16 (32.7)	63 (48.1)	NS
• In a non-exclusive/non monogamous sexual relationship	11 (22.4)	15 (11.5)	NS
• Sexually active with others but not in a relationship	10 (20.4)	21 (16.0)	NS
• Only sexually active with yourself	8 (16.3)	24 (18.3)	NS
• Not currently sexually active at all	3 (6.1)	8 (6.1)	NS

Note: NS = non-significant

Sensitivity analysis: propensity score matching for sexual activity

This study aimed to recruit individuals who engaged in topographically similar sexual behaviours, but differed in their interpretation of those behaviours (i.e. SAs versus NSAs). The authors therefore attempted to purposively sample on this basis. This statistical analysis was therefore employed to strengthen confidence in the assumption that groups were similar in terms of sexual behaviour by testing whether differences remain when differences in behaviour are controlled for.

Propensity score matching (Rosenbaum & Rubin, 1983) was therefore carried out to match SAs to NSAs on sexual activity. This allowed for the confounding influences of sexual activity to be controlled. Participants within the SA group were matched with participants from the NSA group using the 1:1 nearest neighbour method. A caliper of .20 of the standard deviation of the logit of the propensity score was set to avoid bad matches.

Paired samples *t*-tests were then carried out between matched pairs on each of the variables under investigation, except sexual behaviour. These analyses largely replicated observations from the main analyses. However, a further significant difference was found in terms of neuroticism ($p = .01$), with SAs scoring significantly higher.

4.4. Comparing SAST-identified 'sex addicts' to 'non addicts'

This set of analyses compared individuals defined by the SAST or GSAST as SAs ($n = 58$) to those classed as NSAs ($n = 133$).

4.4.1. Supplementary analyses

Comparisons on sexuality and relationship variables

Table 16 displays the frequencies of sexual orientation, relationship status and sexual orientation variables for the two groups. The table also provides the significance value of a Fisher's test which indicates whether differences between the groups were significant.

These analyses indicate that SAs were more likely to be bisexual or homosexual and more likely to be sexually active with others, but not in a relationship and in a non-monogamous relationship. Non-addicts were more likely to be heterosexual and were more likely to be in a monogamous relationship.

Further significant differences between SAs ($M = 3.02$; $SD = 1.45$) and NSAs ($M = 3.63$; $SD = 1.24$) were identified in their reported satisfaction with current sexual activity, with NSAs reporting greater satisfaction; $t(190) = 3.01$, $p = .003$; $d = .44$.

There were no significant differences in length of longest relationship ($M = 5.73$; $SD = 7.96$) between the SAs ($Md = 2.13$; $IQR = .31-10.04$) and the NSAs ($Md = 2.23$; $IQR = .29-8.70$), $U = 3790$, $z = -.191$, $p = .848$.

**Table 16: Sexual orientation, relationship status and sexual activity:
Frequencies and differences**

	SAST-defined sex addicts <i>n</i> (%)	SAST-defined non addicts <i>n</i> (%)	Fisher's exact test <i>p</i>
Sexual orientation:			
• Heterosexual	22 (37.9)	107 (80.5)	.000
• Bisexual	13 (22.4)	8 (6.0)	.000
• Homosexual	14 (24.1)	7 (5.3)	.000
• Asexual	4 (6.9)	5 (3.8)	NS
• Pansexual	2 (3.4)	4 (3.0)	NS
• Other	2 (3.4)	2 (1.5)	NS
Relationship status:			
• Not in a relationship	20 (34.5)	50 (37.6)	NS
• In a relationship, living separately	8 (13.8)	25 (18.8)	NS
• Living with a partner, not married	11 (19.0)	21 (15.8)	NS
• Married/civil partnership	15 (25.9)	36 (27.1)	NS
• Separated/divorced	4 (6.9)	1 (.8)	NS
Sexual activity status:			
• In a monogamous sexual relationship	16 (27.6)	68 (51.4)	.003
• In a non-exclusive/non monogamous sexual relationship	13 (22.4)	13 (9.8)	.003
• Sexually active with others but not in a relationship	15 (25.9)	17 (12.8)	.003
• Only sexually active with yourself	9 (15.5)	28 (21.1)	NS
• Not currently sexually active at all	5 (8.6)	6 (4.5)	NS

Note: NS = non-significant

Sensitivity analysis: applying original SAST and GSAST thresholds to define sex addiction

Given that the author removed items from the SAST and GSAST and subsequently altered the threshold scores to account for removal, a sensitivity analysis was carried out to see whether this impacted on the observations. The original threshold scores dictated by the authors of the tool were used to categorise participants into SA and NSA groups. The comparison analyses were then re-run to identify any differences in the results.

These analyses largely replicated the original analyses. This was with the exception of neuroticism whereby no significant differences were detected between the groups.

4.5. Overview of comparisons

Table 17 offers an overview of the significant and non-significant differences found between SAs and NSAs, according to self and SAST identifications.

Table 17: Overview of significant and non-significant differences between groups of sex addicts and non addicts across all variables studied

Dependent variable	Self-identified sex addicts versus non addicts	SAST-defined sex addicts versus non addicts
Sexual orientation:		
• Heterosexual		•
• Bisexual		•
• Homosexual		•
• Asexual		
• Pansexual		
Relationship status:		
• Not in a relationship		
• In a relationship, living separately		
• Living with a partner, not married		
• Married/civil partnership		
• Separated/divorced		
Length of longest relationship		
Sexual activity status:		
• In a monogamous sexual relationship		•
• In a non-exclusive/non monogamous sexual relationship		•
• Sexually active with others but not in a relationship		•
• Only sexually active with yourself		
• Not currently sexually active at all		

Dependent variable	Self-identified sex addicts versus non addicts	SAST-defined sex addicts versus non addicts
Satisfaction with current sexual activity		•
Frequency of sexual activities:		
• Masturbation	•	•
• Viewing pornography	•	•
• Oral sex		
• Protected vaginal sex		
• Unprotected vaginal sex		
• Protected anal sex		
• Unprotected anal sex		•
Number of sexual partners:		
• Oral sex		•
• Protected vaginal sex		
• Unprotected vaginal sex		
• Protected anal sex		•
• Unprotected anal sex		•
Big Five personality traits:		
• Extraversion		
• Agreeableness		
• Neuroticism	(•)	•
• Openness to experience		
• Conscientiousness		
Sexual attitudes		

Dependent variable	Self-identified sex addicts versus non addicts	SAST-defined sex addicts versus non addicts
Categorical thinking	•	
Affiliation to a religion/spirituality		
Religiosity		
Note: Brackets indicate that significant result was only detected when propensity score matching was carried out for sexual activities		

5. DISCUSSION

5.1. Summary of findings

5.1.1. Participant conceptualisations of sex addiction

As the journal article highlights, the thematic analysis of participants' responses to the question: "*why do you think you have or have not got a sex addiction*" supplemented the subsequent quantitative analyses by offering insight into participants' reasons for categorising themselves within the SA, NSA or DK groups. The results indicate that participants' accounts very much mapped onto Carnes' (2005) definition of sex addiction. The article suggests that this is indicative of an immersion of the dominant model of sex addiction within sociocultural norms. This shall be considered further here.

We have seen from the literature review that the concept of sex addiction is very much alive within popular culture (Reay et al., 2013). This has undoubtedly been facilitated by media representations of the construct. For example, the public documentation by celebrities such as David Duchovny and Russell Brand of struggles to overcome their addictions to sex (Iwen, 2014) have promoted an illness model of the sex addiction and a rehab model of treatment. Similar portrayals have been seen within film, for example, a recent romantic comedy *Thanks for Sharing* follows three characters' "*struggle together against a common demon: sex addiction*" (Blumberg, 2013). It is not therefore surprising to find participants drawing on common conceptualisations of sex addiction which included notions of uncontrollability, excessiveness, and damaging consequences.

The finding that themes mapping onto the dominant construct of sex addiction were stronger within SA samples is not surprising. It is certainly reasonable to suggest that, having identified as a SA, these individuals are likely to have given more thought to the concept of sex addiction and the aspects of their sexuality which fit with the construct. However, these results may also indicate the greater

internalisation of dominant discourses by SAs in comparison to NSAs. This is certainly reflected by themes within NSAs' responses that diverged from sex addiction discourses, which included claims that sex addiction does not exist.

Broader discourses concerning sexuality may also have influenced participants' evaluation of their sexual behaviours. Indeed, it is these discourses which define the sexual scripts used to gauge of normalcy or deviance of one's sexuality (Levine & Troiden, 1988). Such discourses have tended to offer negative conceptualisations of sex. For example, in their White paper concerning the health benefits of sexual expression, Planned Parenthood stated:

"Today's public discourse about sexuality is almost exclusively about risks and dangers: abuse, addiction, dysfunction, infection, paedophilia, teen pregnancy, and the struggle of sexual minorities for their civil rights. Public discourse about the physiological and psychosocial health benefits of sexual expression has been almost entirely absent." (2007, p. 1)

This description certainly resonates with participants' notions of sex as something which needs to be limited or controlled. Furthermore, some SAs offered their love of sex as the only reason they identified as a SA. However, these findings were contrasted with themes within NSA responses portraying a positive view of sex. The notions of sex offered by these participants as beneficial, natural and unduly pathologized go against dominant discourses and lent to these participants' conclusions that they were not addicted to sex.

5.1.2. Comparing self-identified ‘sex addicts’ to ‘non-addicts’

Most empirical studies concerning sex addiction have recruited treatment-seeking SAs (Mayes, Moghaddam, das Nair, 2014). However, we know that identification of sex addiction is first reliant upon one’s self-diagnosis whereby the individual or their loved one’s label their sexuality as problematic (Reay et al., 2013). This therefore represented the first way of comparing participants; on the basis of their self-identification as a SA or NSA.

Individuals in this study who self-identified as SAs reported a higher frequency of solitary sexual behaviours than those who felt they were not addicted to sex. These individuals reported a higher frequency of both masturbation and viewing pornography within the prior three months. No other differences across the sexuality and relationship variables were found, including reported number of sexual partners, sexual orientation, relationship status, sexual activity status, and sexual satisfaction.

The finding that SAs reported a greater frequency of solo sexual activity partially resonates with notions of excessive sex which comprises a significant, but not necessary, criterion within definitions of the disorder (for example Carnes, 2001; Kafka, 2010). Furthermore, sex addiction commentators have described the SA’s primary sexual outlet being masturbation and pornography (Bancroft, 2008; Kinsey et al., 1998; Kor et al., 2013) which was reflected in this finding. Much of the sex addiction literature has also concerned itself with the commission of ‘risky’ sex as a manifestation of the disorder (Dodge et al., 2004; Kalichman & Rompa, 1995). Along with excessiveness, the concept of risky sex has been identified as one of the driving forces behind the sex addiction movement (Winters, 2010). Given this, we would have expected to see a greater frequency of the ‘riskier’ sexual behaviours within the SA group, that is, unprotected as opposed to protected vaginal and anal sex. However, the groups did not differ significantly on either of these measures.

The journal article considers the role of salience in this finding. However, an alternative explanation is that concern about one's sexual behaviour may have influenced an over-estimation of one's sexual activity. This represents a limitation of the self-report method which is discussed further below.

Given the numerous associations between personality traits and sexuality variables identified within the literature, it was somewhat surprising to find no significant differences between SAs and NSAs on the Big Five personality traits. However when participants were matched on sexual activity, SAs were found to score significantly higher in neuroticism. From an intrapersonal perspective (Fisher & McNulty, 2008), this may indicate that those higher in neuroticism are more likely to appraise their sexual experiences as cause for concern. Those who have a neurotic disposition may therefore be more likely to pathologize their sexual behaviour and thus identify as a SA. This certainly resonates with associations between neuroticism and sexual guilt and fear (Barnes et al., 1984; Eysenck, 1976; Heaven et al., 2003, 2000)

Given that SAs appear to be drawing upon sexual scripts in determining whether their sexuality was problematic or not, we would expect to have seen evidence of the internalisation of these scripts within their more conservative sexual attitudes (Hynie et al., 1998). However, no significant differences were found between the groups on this measure.

The journal article suggests that this may at least in part be attributed to the measure used, the SAS. Whilst the study employed the most recent version of the tool, this was published in 1991, more than 20 years prior to the commission of the study. It is therefore likely that attitudes about sex have moved on considerably since its publication. This is certainly reflected in some of the items within the measure which appear somewhat outdated, for example "*heavy petting should be discouraged*". Kimberly, Werner-Wilson and Motes (2014) discuss the same difficulty in relation to the Brief Sexual Attitudes Scale (BSAS; Hendrick et al.,

2006). These authors suggest that social changes in matters such as sexuality, gender, religiosity, feminism, and technology may not be reflected by these tools. Kimberly et al (2014) do, however, suggest that future research may be able to develop the BSAS further so that it can be reactive to social change. Should this be the case, the BSAS may represent a candidate for future research.

Self-identified SAs scored more highly on the measure of categorical thinking. This finding supports the anecdotal clinical observations that individuals presenting to therapy with sex addictions often appear to have rigid, black and white thinking styles (R. das Nair, personal communication, 12 March 2013).

The journal article considers how the disposition towards thinking in this way may create a greater propensity towards interpreting one's sexuality as problematic or pathological, and thus lead to one to self-identify as a SA. However, an alternative explanation for this finding is that these categorical thinking styles are manifestations of an underlying 'mental health disorder' such as depression. Indeed, we know that those with depression often engage in 'black and white' which plays a significant role in the maintenance of the disorder (Beck, Rush, Shaw, & Emery, 1987). Furthermore, those who are considered to have a sex addiction, often meet the criteria for comorbid mood disorders, including depression (Black et al., 1997; Kafka & Hennen, 2002; Raymond et al., 2003). As such, it is possible that this finding represents an indirect relationship between sex addiction and categorical thinking which is mediated by depression.

This study found no associations between religiosity and self-classification of sex addition. There are a number of potential explanations for this. As suggested within the journal article, this finding may support the secularization hypothesis whereby the influence of religion upon one's sexuality is not as strong as it once was. Indeed, over half of the sample described themselves as either having no religion or being atheist. This was then reflected in ratings for both measures of religiosity, the means for which were somewhat low.

However, this finding may also be explained by reference to the sources of recruitment. Here, most of the participants were recruited from online forums, particularly sexual interest sites. It may be that those who rate highly on religiosity would be less likely to seek out this type of forum. Furthermore, certain religious affiliations may have been under-represented in this sample due to the sources of recruitment. For example, just under 2% of the sample were ascribed to the Muslim faith, compared to 5% of individuals within the UK who took part in the 2011 Census (Office for National Statistics, 2013). This Census reported Muslims to be the second largest religious group within the UK whereas the least amount of participants populated this category in this study. The source of recruitment therefore needs to be borne in mind when considering this finding.

5.1.3. Comparing SAST-identified ‘sex addicts’ to ‘non-addicts’

We have seen that a diagnosis of sex addiction will begin with a self-diagnosis (Reay et al., 2013). Should the individual subsequently seek professional help, the clinician will confirm this diagnosis with the assistance of clinical tools such as the SASTs. This second method of grouping participants, whereby SAs and NSAs are identified by SAST score, therefore accounts for this process.

Those considered by the SASTs to be addicted to sex reported a greater frequency of masturbation, viewing pornography, and unprotected anal sex, and reported more sexual partners for oral and anal sex (unprotected and protected). Sex addicts were more likely to be homosexual or bisexual and were more likely to be sexually active but not in a relationship or within a non-monogamous relationship. Conversely, NSAs were more likely to be heterosexual, to be in a monogamous relationship, and were more satisfied by their current level of sexual activity.

The journal article suggests that these findings may be explained by a positive bias towards heterosexuality within the SAST measures. The supplementary analyses reported here supports this finding, with bisexuals and homosexuals being more likely to be assessed as SAs by the tool. Furthermore, non-heteronormative

practices such as non-monogamous relationships, which are more commonly engaged in by homosexual people (Hoff & Beougher, 2010), were more common in SAs. This resonates with Levine and Troiden's (1988) argument that sex addiction too readily pathologizes behaviours which do not facilitate procreation and do not occur within committed, monogamous relationships.

Sex addicts identified by the SAST scored higher on the measure of neuroticism. We have seen that an intrapersonal model of personality (Fisher & McNulty, 2008) would suggest that these individuals are more likely to interpret their experiences with concern. Given that the SASTs largely tap into distress, enquiring about behaviours which the respondent is concerned about, it is not surprising to find SAs scoring high on this measure.

The finding of no significant differences between SAs and NSAs on religiosity and sexual attitudes may in part be due to the reasons described above (4.3

Comparing self-identified 'sex addicts' to 'non addicts').

5.2. Implications of the study

5.2.1. Theoretical implications

We have seen within the extended literature review that sex addiction consists of "*many conceptions, minimal data*" (Gold & Heffner, 1998). Whilst a range of theories have been put forward attempting to explain the aetiological and maintenance factors behind sex addiction, a comprehensive account has yet to be offered. However, the results presented here offer a number of theoretical implications which contribute to this literature.

The author acknowledges that some individuals may fall into a cycle in which they use sex to alleviate unwanted feelings, achieve temporary relief, but subsequently experience negative feelings such as guilt or shame as a consequence of the sexual behaviours. These individuals may then turn to sex to alleviate these

aversive emotional states. However, where her stance diverges from the pathological conceptualisations of sex addiction is in the consideration of the role of discourses in perpetuating this cycle.

This study supports the idea that dominant discourses concerning sex addiction and sexuality more broadly lend to one's interpretation of their sexualities as 'good' or 'bad', 'healthy' or 'unhealthy', and 'normal' or 'abnormal'. The results of this study suggest that these discourses may interact with idiographic factors such as the propensity to think inflexibly (categorical thinking) and/or respond with negative emotionality and worry (neuroticism). Such factors will affect the degree of influence these discourses exert upon the individual, making some more likely to negatively appraise their sexual behaviour than others, and thus, self-identify as a SA or NSA. These negative appraisals may then lead to feelings such as shame or guilt, giving rise to the self-perpetuating cycle previously described. Thus, if one was to remove the negative appraisal of the sexual behaviour, the cycle is essentially broken. The clinical implications of this are discussed below.

5.2.2. Clinical implications

The journal article identifies a number of clinical implications of the findings which are worthy of further discussion here. It suggests that the dominant model of treatment based on the 12-step programme may be misguided. Indeed if, as is argued above, appraisal of one's sexual behaviour is a key factor in perpetuating the cycle of sex addiction, then treatment should focus upon challenging these appraisals rather eliminating the behaviour. This is illustrated by the below quote taken from this study:

"I was taught that masturbation was bad. I feel super guilty every time it happens or when I look at porn. Then I feel sick afterward. I want nothing more than to have a normal sexual relationship, but I'm such a shy guy that

it's hard for me to meet anyone. I wouldn't have sex unless it was a very serious relationship, i.e. marriage. But being my age and without a partner, coupled with depression, I just don't have any other outlets. And this makes me more angry and depressed." (25 year old heterosexual SA)

Thus, for this individual resolution of his distress is not likely to lie in abstinence from sexual behaviours. Indeed, sexuality comprises a vital part of human being (Chance, 2002) and, as he already identifies, the blocking of sexual outlets may further contribute to distress. Furthermore, by placing restrictions on an individual's sexuality, sexual interest, and therefore salience, may actually increase via a process of psychological reticence (Sheeran et al., 1993). Instead, a focus on this participant's appraisal of masturbation and pornography as 'bad' as well as challenging the broader discourses supporting these beliefs may help to alleviate distress. This could be achieved by adopting a cognitive approach (Beck, 1979; Beck, 2010).

Those who consider themselves to have a sex addiction may also benefit from therapy which draws upon narrative ideas. First developed by White and Epston (1989), narrative therapy is based on the idea that dominant narratives shape our beliefs and interpretations (Dallos, 1997) and are absorbed into our own ongoing narratives, helping us to make sense of the world (Payne, 2006). Subsequently, psychological distress can emerge due to a mismatch between oppressive social discourses and one's experiences (Carr, 2012). This certainly reflects the experiences of some of the participants within this study, including the participant quoted above. Indeed, a number of those within the SA and DK categories described a mismatch between their sexual wants and needs and their experiences. A narrative approach may therefore facilitate the individuals' critical appraisal of the sex-negative narratives which influence their evaluations of their sexuality, allowing them to re-author their personal narrative.

The journal article also raises issue with the clinical use of the SASTs in that they may too readily pathologize certain sexual behaviours. In examining the development and make-up of the tool, it is clear to see how this bias may have been built in. Indeed, the extended measures section explains that the developers of the SAST appear to have relied upon clinical observation by sex addiction practitioners and the contentious knowledge base (for example, that which relates to sex abuse and sex addiction) to generate its items. Items may therefore be heavily influenced by these practitioners' conceptualisations of sex addiction. Some of these items (such as that relating to sexual abuse) have subsequently been retained within revisions of the tool, despite their poor item-total correlations, lending to a somewhat pseudoscientific practice (Szasz, 1990). Furthermore, the tautological nature of the SAST also presents a problem. Here, the SAST has been used to both assess sex addiction and evidence its existence.

Given the above concerns, one might question the necessity of a sex addiction specific tool to assess SAs presenting for treatment. Indeed, if the markers of a sex addiction do not specify any particular sexual behaviours, and since aetiological factors are poorly understood, the clinician's focus should be on the assessment of distress. There are a range of existing, well-evidenced psychometrics which can be used for this purpose (for example Beck & Steer, 1987, 1990)

5.3. Critical evaluation

The journal article considers the limitations of the study due to variability in participants' sexual activities and the difficulties inherent in collecting self-report sexuality data. The nature of this sample should also be borne in mind when comparing findings to existing sexual research. As previously described, existing research has tended to rely upon treatment-seeking SAs. This study, on the other hand, recruited individuals from the general public (although sites in which SAs were likely to be found were specifically targeted). As such, the samples are likely

to differ, with less than 20% of the participants in this study who self-identified as SAs reporting having sought professional help for their sex addiction.

Finally, the SAST only represents a screening measure and, as such, one cannot be certain that classifications of sex addiction would be the same if supported by clinical judgement. It is for this reason that this study chose to employ the more definitive threshold for sex addiction, excluding those who fell within the 'potential addiction' range. Furthermore, by removing items from this tool, the author cannot claim to have used the measure in its original form, whilst the sensitivity analyses suggest minimal influence due to the change of threshold scores, the author cannot be sure how these participants would have responded to the removed items. This therefore needs to be borne in mind when considering the results.

5.4. Directions for future research

The exploratory nature of this study meant that the breadth of the variables under investigation often limited the depth observations made. In particular, it has been acknowledged that the measure of sexual activity (the SSB) offered a somewhat narrow assessment of sexual behaviours, failing to capture more 'specialist' sexual behaviours as well as their context. Given that both modes of comparison (self and SAST categorisations) found differences between the groups in certain sexual behaviours, future research may wish to broaden the range of behaviours assessed. On the basis of findings presented here, one might expect to find less conventional sexual behaviours more prevalent within SA cohorts.

This discussion has also highlighted the problem in assessing sexual attitudes whereby existing sexual attitude measures may quickly become outdated. An alternative avenue for future research could be the assessment of sexual attitudes using a more dynamic methodology such as vignettes. Whilst such an approach would limit the breadth of attitudes one was able to study, it would arguably be more sensitive to detecting nuanced differences in sexual attitudes. Indeed, West

(1982) describes vignettes as a superior alternative to questionnaires in the study of attitudes. Such an approach may therefore be more likely to detect differences between SAs and NSAs as well as assessing whether the observed differences in categorical thinking would be activated in this medium.

5.5. Conclusions

The concept of sex addiction has captured scientific and lay audiences. With the continued advancement in technologies and increased access to accessible, affordable and anonymous sexual outlets (Ogas & Gaddam, 2012), it looks likely that the concept will persist. Acknowledging this, some sex addiction commentators have warned that the ‘disorder’ will become “*the next tsunami of mental health*” (McCall, 2011).

However, we have seen from the literature review that attempts to build a clear diagnostic model of sex addiction have thus far been inadequate. Despite its longstanding history, sex addiction remains empirically and theoretically unsubstantiated. Not only have sex addiction theorists failed to reach a consensus regarding terminology, definition, and the nosology underpinning the disorder, they have yet to offer a comprehensive account of its aetiology beyond individual factors.

The thesis contributes to the growing critical literature concerning sex addiction by exploring the differences between ‘sex addicts’ and ‘non-addicts’. The findings support the idea that dominant discourses concerning sex addiction and sexuality more broadly offer a gauge of normalcy for one’s sexual behaviours. In turn, this will influence whether an individual considers themselves to have a sex addiction or not. The study highlights that idiographic factors may interact with these discourses, meaning some are more influenced than others by these discourses. In particular, those with a propensity to think inflexibly (categorical thinking) and/or a predisposition to respond with negative emotionality and worry (neuroticism) may

be more likely to appraise their sexuality as problematic and thus identify as a SA. As such, the results of this study concede with Ley's (2012) argument that:

"The reason why clear medical terminology cannot be created in over thirty years of effort is because this is not a medical issue, but a moral and social one" (p. 28)

These findings carry a number of clinical implications concerning the assessment and treatment of those who are considered to be addicted to sex. These have been outlined in this thesis. Given the immersion of the addiction model of sex addiction within dominant assessment measures, treatment interventions, and within lay and professional discourses, the implementation of these implications will prove challenging. However, the growth of critical approaches such as those offered by narrative therapies will undoubtedly help to challenge these.

6. REFLECTIVE SECTION

6.1. A critical reflection on the research process

A number of methodological and ethical challenges were faced during the course of this study. Whilst the study was sensitively designed with these in mind, a number of issues were encountered during the course of the study.

A particular methodological challenge concerned the use of online questionnaires. Whilst this mode of data collection undoubtedly improved access to hard to reach groups, the separateness from participants and complete anonymity heightened some methodological problems. For example, the veracity of individuals' responses was much more difficult to assess with some jovial and, at times explicit, free-text responses raising concern about insincere answers. However, it is hoped that the length of the questionnaire, meaning participants had to commit approximately 15 minutes to complete the study, discouraged participants from offering such responses.

In accessing hard to reach groups, the study also touched on some ethical issues. We have seen that the separateness and anonymity of this method can hinder the researcher's ability to identify and mediate any distress caused to the participant. However, a further ethical issue raised concerns the identification of significant distress in participants, without the ability to follow this up. Indeed, this study identified a significant proportion of participants who were distressed by their sexuality, yet only nine (4.2%) participants reported having sought professional help for sex addiction. The researcher was, however, powerless to facilitate their access to professional help, beyond offering details for appropriate support agencies.

A further ethical issue was raised which concerned access to specialist interest groups. To avoid spamming and in line with ethical guidelines, the researcher first sought permission from site administrators then only posted one advertisement per site. She did not engage in any dialogue with site members leading on from the post. There was, however, one instance in which a member responded to the post, voicing concerns about the researcher's access to the site and the potential hidden agendas behind the research. Whilst this member's concerns were alleviated by the administrator's assurances, this certainly raised concerns over research infringing on such safe spaces. Indeed, this example suggests that many of the individuals who access these sites feel the need to seek out exclusive forums where they can pursue their sexual interest without being judged. As a consequence however, individuals who enter this space who are not engaged in these sexual activities will likely be viewed with suspicion and regarded as unwelcome.

6.2. Scientific and theoretical issues raised by the research

Some may argue that the social constructionism epistemology adopted by this study has given rise to ontological tensions. For example, the adoption of structuralist measures to assess the variables under investigation may be considered at odds with the social constructionist position on sex addiction. However, this thesis does not wish to purport that the structuralist measures offer a direct measurement of reality. Indeed, the epistemology adopted considers the existence of individual 'realities' but explains that we sense of this using discursive constructs such as language. The measures can therefore be seen as an attempt to make sense of realities such as individual differences.

6.3. Reflexivity

My critical stance towards the concept of sex addiction should be fairly evident within the thesis. However, in this final section I seek to further situate my own

biases, considering them within the context of the research. Since these biases will undoubtedly have influenced my choices and interpretations, this comprises an important component of the thesis (Johnson, 2001). As Braun and Clarke (2006) point out “*the data are not coded in an epistemological vacuum*” (p. 12).

I first became aware of my critical views on sexuality when working as a keyworker and sexual health advisor for young people. It was here that I began to realise the importance in delivering socio-sexual education which could serve to normalise rather than problematize young peoples’ sexual experiences. My endeavours were, however, often thwarted by others’ views of sex as taboo or private. I subsequently completed a PhD which concerned the beliefs about sex held by men with intellectual disabilities who had sexually offended. In finding that many of these individuals had been denied sex education, were often scared of their sexuality (which was further heightened following treatment), and had absorbed a range of harmful beliefs about sex, this further cemented my ideas about the social construction of sex.

As such, I have developed an appreciation for a healthy sexuality, that is, one that is free from unnecessary restriction and harmful beliefs. These ideas undoubtedly attracted me to this research idea and have subsequently influenced by research decisions, interpretations, and conclusions.

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APPENDICES

Appendix 1: Guidelines for authors submitting to the Journal of Sexual and Relationship Therapy

Full guidelines for authors can be viewed at:

<http://www.tandfonline.com/action/authorSubmission?journalCode=csmt20&page=instructions#.VFfmUPmsVSK>

The following is a summary of key guidelines on manuscript preparation.

1. General guidelines

- Manuscripts are accepted in English. Any consistent spelling and punctuation styles may be used. Articles written by those whose primary language is not English should be edited carefully for language prior to submission.
- Articles must be formatted double-spaced with ample margins of at least one inch on all sides and pages must be numbered.
- Please use double quotation marks, except where “a quotation is ‘within’ a quotation”. Long quotations of 40 words or more should be indented without quotation marks.
- A typical manuscript will not exceed 6,000 words not including tables, references, figure captions, footnotes or endnotes. Short communications and case reports will be limited to two journal pages (approximately 1200 words including tables and references). Manuscripts that greatly exceed this will be critically reviewed with respect to length. Authors should include a word count with their manuscript.
- Manuscripts should be compiled in the following order: title page; abstract; keywords; main text; acknowledgements; references; appendices (as appropriate); table(s) with caption(s) (on individual pages); figure caption(s) (as a list).
- Abstracts of 200 words are required for all manuscripts submitted.
- Each manuscript should have 4 to 6 keywords

2. Style guidelines

Description of the Journal's article style

Font: Times New Roman, 12 point. Use margins of at least 2.5 cm (1 inch).

Title: Use bold for your article title, with an initial capital letter for any proper nouns.

Authors' names: Give the names of all contributing authors on the title page exactly as you wish them to appear in the published article.

Affiliations: List the affiliation of each author (department, university, city, country).

Correspondence details: Please provide an institutional email address for the corresponding author.

Full postal details are also needed by the publisher, but will not necessarily be published.

Anonymity for peer review: Ensure your identity and that of your co-authors is not revealed in the text of your article or in your manuscript files when submitting the manuscript for review.

Abstract: Indicate the abstract paragraph with a heading or by reducing the font size. Advice on writing abstracts is available [here](#).

Keywords: Please provide five or six keywords to help readers find your article. Advice on selecting suitable keywords is available [here](#).

Headings: Please indicate the level of the section headings in your article:

- First-level headings (e.g. Introduction, Conclusion) should be in bold, with an initial capital letter for any proper nouns.
- Second-level headings should be in bold italics, with an initial capital letter for any proper nouns.
- third-level headings should be in italics, with an initial capital letter for any proper nouns.
- Fourth-level headings should also be in italics, at the beginning of a paragraph. The text follows immediately after a full stop (full point) or other punctuation mark.

Tables and figures: Indicate in the text where the tables and figures should appear, for example by inserting [Table 1 near here]. The actual tables and figures should be supplied either at the end of the text or in a separate file as requested by the Editor. Ensure you have permission to use any figures you are reproducing from another source.

Referencing style: APA

Appendix 2: Recruitment poster (version 1)



**The University of
Nottingham**

UNITED KINGDOM • CHINA • MALAYSIA



UNIVERSITY OF
LINCOLN

Research participants required for sexuality study

We are looking for **males over the age of 18** to take part in this study. The study is interested in the link between people's sexual identity and other factors such as their thinking styles and personality type.

If you choose to take part you will be asked to complete a questionnaire which can be completed either online or via postal questionnaire. The questionnaire asks about your sexuality including your sexual behaviour, preferences and attitudes and questions about your character such as your personality and the way you think.

Those who take part will be offered the opportunity to enter into a prize draw to win **one of five £20 gift vouchers for high street stores**.

Interested?

For further information or to participate in the study either visit the research website where you can find the online questionnaire or email the researcher for a postal copy of the questionnaire:

Website: <http://eSurv.org?u=study>

Email: s.researchstudy@gmail.com



Researcher details: Danielle Mayes, Trainee Clinical Psychologist, under the supervision of Dr Roshan das Nair.

<p>Website: http://eSurv.org?u=study</p> <p>Email: s.researchstudy@gmail.com</p>	<p>Website: http://eSurv.org?u=study</p> <p>Email: s.researchstudy@gmail.com</p>	<p>Website: http://eSurv.org?u=study</p> <p>Email: s.researchstudy@gmail.com</p>	<p>Website: http://eSurv.org?u=study</p> <p>Email: s.researchstudy@gmail.com</p>	<p>Website: http://eSurv.org?u=study</p> <p>Email: s.researchstudy@gmail.com</p>	<p>Website: http://eSurv.org?u=study</p> <p>Email: s.researchstudy@gmail.com</p>	<p>Website: http://eSurv.org?u=study</p> <p>Email: s.researchstudy@gmail.com</p>	<p>Website: http://eSurv.org?u=study</p> <p>Email: s.researchstudy@gmail.com</p>	<p>Website: http://eSurv.org?u=study</p> <p>Email: s.researchstudy@gmail.com</p>	<p>Website: http://eSurv.org?u=study</p> <p>Email: s.researchstudy@gmail.com</p>	<p>Website: http://eSurv.org?u=study</p> <p>Email: s.researchstudy@gmail.com</p>
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Appendix 3: Recruitment advertisement posted online

Are you a **MALE** over the age of **18**? If so, we would like to invite you to take part in a **SEXUALITY STUDY**. If you choose to take part you will be asked to complete an online (or postal, if preferred) questionnaire which asks about your sexuality, including sexual behaviours, preferences and attitudes, as well as questions about your character such as personality and the way you think. All of your answers will be **ANONYMOUS**. Nobody will know you have taken part in the study.

Those who take part will be offered the opportunity to enter into a prize draw to win **one of five £20 high street gift vouchers!**

Interested?

For further information or to take part in the study visit <http://eSurv.org?u=study>

Appendix 4: Revised recruitment advertisements targeting 'sex addicts'

Are you a **MALE** over the age of **18**? Do you think you may have a sexual addiction/compulsion? If so, we would like to invite you to take part in a **SEXUALITY STUDY**. If you choose to take part you will be asked to complete an online (or postal, if preferred) questionnaire which asks about your sexuality, including sexual behaviours, preferences and attitudes, as well as questions about your character such as personality and the way you think. All of your answers will be **ANONYMOUS**. Nobody will know you have taken part in the study.

Those who take part will be offered the opportunity to enter into a prize draw to win **one of five £20 high street gift vouchers!**

Interested?

For further information or to take part in the study visit: <http://eSurv.org?u=study>

Appendix 5: Extract from questionnaire

QUESTIONNAIRE



PART 1: ABOUT YOU

1. How old are you?

2. What is your religion or spirituality?

☐ Atheist

☐ Buddhist

☐ Catholic

☐ Christian

☐ Hindu

☐ Muslim

☐ Sikh

☐ No religion

☐ Other:

3. How important is religion or spirituality in your life?

☐ Very important

☐ Quite Important

☐ Somewhat important

☐ Slightly important

☐ Not important at all

4. How much does your religion or spirituality influence your life?

☐ Very much so

☐ Quite

☐ Somewhat

☐ Slightly

☐ Not at all

5. What is your sexual orientation?

☐ Asexual

☐ Bisexual

☐ Heterosexual/Straight

☐ Homosexual/Gay

☐ Pansexual

☐ Other

6. What is your relationship status?

☐ Not in a relationship

☐ In a relationship, living separately

☐ Living with partner but not married

☐ Married

☐ Separated/ Divorced

☐ Widowed

☐ Other:

7. How long have you been with your current partner? Of if you do not have a partner, how long were you with your last partner?yearsmonths

8. Are you currently:

☐ In a monogamous sexual relationship (you only have sex with each other)

☐ In a non-exclusive/non-monogamous sexual relationship (one or both of you have sex with other people and both of you are OK with this)

☐ Sexually active, but don't consider yourself to be in a relationship

☐ Not currently sexually active with anyone else

☐ Only sexually active with yourself (e.g. masturbation)

9. How satisfied are you with your current sexual relationship?

☐ Very satisfied

☐ Somewhat satisfied

☐ Neither satisfied nor dissatisfied

☐ Somewhat dissatisfied

☐ Very dissatisfied

10. The following questions ask about your sexual behaviour over the last 3 months. Please answer each item to the best of your ability. If you cannot remember an

exact number, please estimate. Your answers will be kept private and anonymous

In the past 3 months:

- How many times each week, on average, did you masturbate?
- How many hours each week, on average, did you spend viewing and/or reading pornography?

Activity	In the past 3 months:	
	Number of times engaged in	Number of different partners performed with
Oral intercourse (given or received)		
Unprotected (without a condom) vaginal intercourse		
Protected (with a condom) vaginal intercourse		
Unprotected (without a condom) anal intercourse		
Protected (with a condom) anal intercourse		

11. Have you ever sought help for a sexual addiction?

☐ Yes ☐ No

12. Do you think you have a sexual addiction?

☐ Yes ☐ No ☐ I don't know

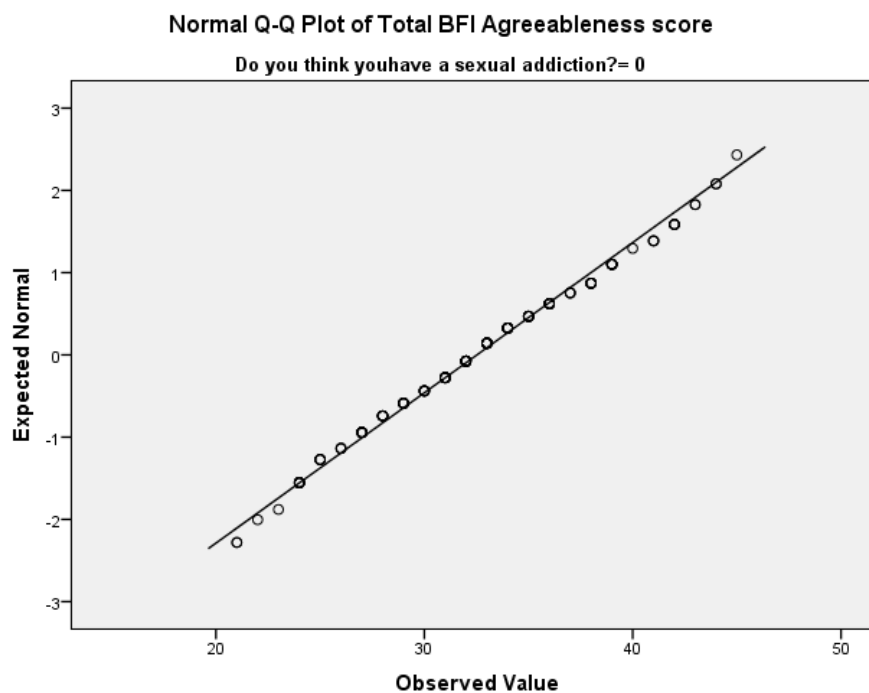
Appendix 6: Step-by-step illustration of the process of testing parametric assumptions for the variable of agreeableness for the purpose of a MANOVA

Step one: Skew and kurtosis statistics suggest normal distribution (zscores are <1.96 for SAs and <3.29 for SAs)

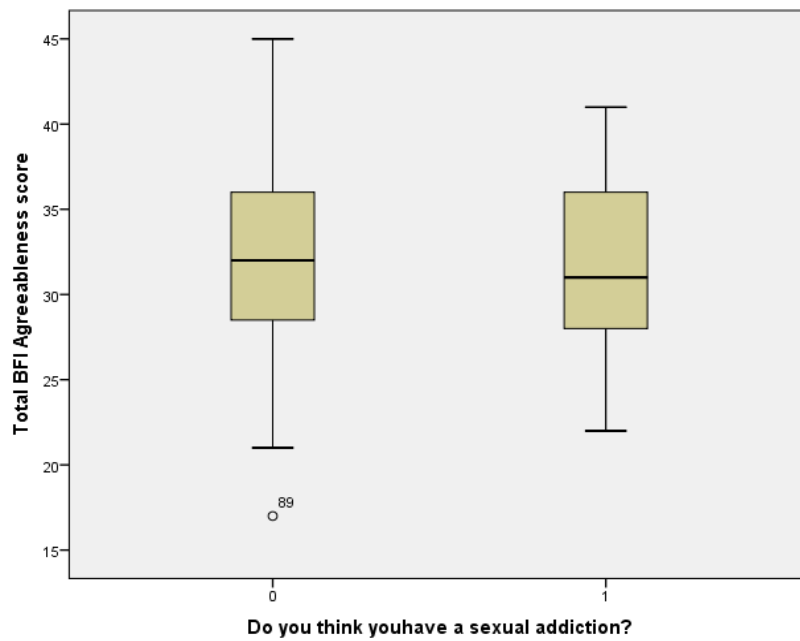
Step two: Kolmogorov-Smirnov statistics suggests normal distribution ($p > 0.05$)

Measure	Normal Distribution					
	Skew (zscore)		Kurtosis (zscore)		K-S (p value)	
	NSA (n=132)	SA (n=49)	NSA (n=132)	SA (n=49)	NSA (n=132)	SA (n=49)
BFI Agreeableness	0.58	-0.18	-1.35	-1.26	.200	.200

Step three: Q-Q plots are closely aligned, suggesting normal distribution



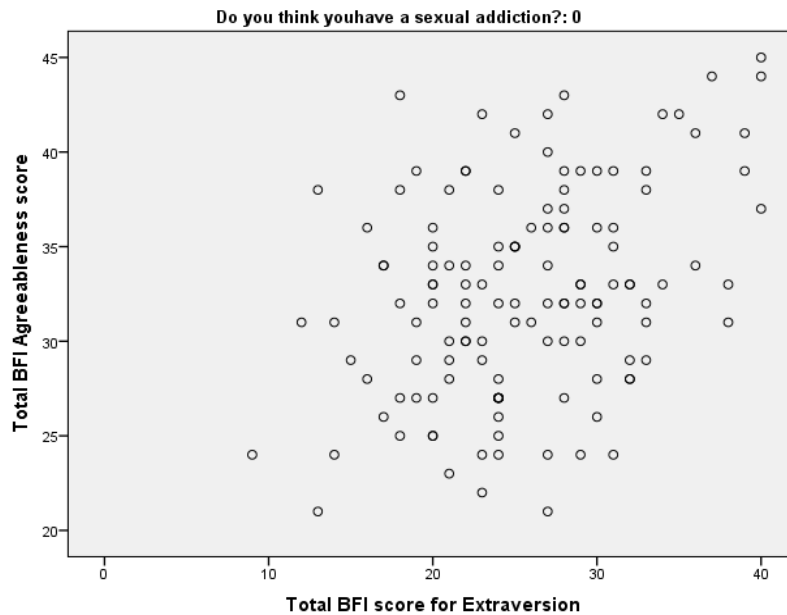
Step four: Outliers identified within box plots



Step five: Data point for outlier identified and score truncated to next most extreme score (score for number 89 changed from 17 to 22).



Step six: Scatter plot suggests a linear relationship between the agreeableness and the other four dependent variables



Step seven: Correlations between agreeableness and the other four dependent variables do not exceed .8 and therefore indicate absence of multicollinearity. Correlations are sufficiently high to warrant multivariate analysis.

Correlations

		Total BFI score for Extraversion	Total BFI Agreeableness score	Total BFI score for Conscientiousness	Total BFI for Neuroticism	Total BFI for Openness
Total BFI Agreeableness score	Pearson Correlation	.321**	1	.259**	-.396**	.283**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	180	180	180	180	180

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

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

Step eight: Calculate Mahalanobis distance

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	67.4781	117.6926	91.1667	9.47764	180
Std. Predicted Value	-2.499	2.799	.000	1.000	180
Standard Error of Predicted Value	4.427	18.108	9.197	2.620	180
Adjusted Predicted Value	63.4489	121.7607	91.2326	9.75344	180
Residual	-93.44023	93.47531	.00000	51.62965	180
Std. Residual	-1.784	1.785	.000	.986	180
Stud. Residual	-1.812	1.858	-.001	1.003	180
Deleted Residual	-98.26100	101.21922	-.06596	53.40169	180
Stud. Deleted Residual	-1.824	1.871	-.001	1.005	180
Mahal. Distance	.285	20.409	4.972	3.411	180

Cook's Distance	.000	.048	.006	.008	180
Centered Leverage Value	.002	.114	.028	.019	180

Step nine: Levene's test indicates equality of variance ($p > .05$)

Levene's Test of Equality of Error Variances ^a				
	F	df1	df2	Sig.
Total BFI score for Extraversion	.002	1	178	.962
Total BFI Agreeableness score	.124	1	178	.725
Total BFI score for Conscientiousness	1.894	1	178	.171
Total BFI for Neuroticism	1.001	1	178	.318
Total BFI for Openness	.889	1	178	.347

Step ten: Box's M suggests variances in each dependent variable are roughly equal ($p > .001$)

Box's Test of Equality of Covariance Matrices ^a	
Box's M	17.716
F	1.132
df1	15
df2	34287.657
Sig.	.320

Appendix 7: Ethical approval letter



Our reference:
RGS 13139

0115 8467906
sponsor@nottingham.ac.uk

Research and Graduate Services
University of Nottingham
King's Meadow Campus
Lenton Lane Nottingham
NG7 2NR

Lead R&D Office
Nottingham Health Science Partners,
C-Floor
Nottingham University Hospitals NHS Trust
Queens Medical Centre, Nottingham
University Hospital NHS Trust
Derby Road
Nottingham
NG7 2UH

Thomas Schröder
Trent Doctorate in Clinical Psychology
Room B12 YANG Fujia Building
Jubilee Campus
Wollaton Road
Nottingham
NG8 1BB

8th April 2014

Dear Sir or Madam,

Sponsorship Statement

Re: Comparison of Sex Addicts versus 'Non-Sex Addicts' on Measures of Personality, Thinking Dispositions and Sexual Attitudes.

I can confirm that this research proposal has been discussed with the Chief Investigator and agreement to sponsor the research is in place.

An appropriate process of scientific critique has demonstrated that this research proposal is worthwhile and of high scientific quality.*

Any necessary indemnity or insurance arrangements will be in place before this research starts. Arrangements will be in place before the study starts for the research team to access resources and support to deliver the research as proposed.

Arrangements to allocate responsibilities for the management, monitoring and reporting of the research will be in place before the research starts.

The duties of sponsors set out in the NHS Research Governance Framework for Health and Social Care will be undertaken in relation to this research.**

* Not applicable to student research (except doctoral research).

** Not applicable to research outside the scope of the Research Governance Framework.

Yours faithfully

Angela Shone
Head of Research Governance
University of Nottingham



Appendix 8: Academic poster

Please turn over.

SSRI



Summary of Service-Related Research and associated Impact (SSRI)

Trainee(s)	Supervisor(s)	Placement	Cohort	Date Completed
Danielle Mayes	Louise Braham	TYS	2012	15.07.15

Research background and context

Research background

Large service user- staff meetings, or ‘community meetings’, are a long established part of the ward routine within secure hospitals (Lipgar, 1999). Whilst the structure of meetings can vary across settings, they broadly involve the coming together of staff and service users to address day-to-day issues affecting life on the ward (Novakovic, Francis, Clark, & Craig, 2010). The meetings are considered to be part of service users’ therapeutic activity (Harms & Benson, 2003) and, as such, contribute to the therapeutic milieu (Lipgar, 1999).

Despite their long history, the purpose and methods of community meetings remain ill-defined (Novakovic et al., 2010). This is at least in part contributed to by a paucity of research literature concerning community meetings (Harms and Benson, 2003; Novakovic et al., 2010). That literature which does exist, which is largely anecdotal, reports a lack of definition including confusion about the aims and participant roles, a view of the meetings as not worthwhile (Novakovic, et al., 2010) and a lack of training for staff on how to contribute. As such, Harms and Benson (2003) suggest the community meeting may have ‘lost its way’.

Given this, one might question the value in retaining community meetings. However, evidence from the existing literature supports the idea that community meetings can benefit service users and staff in a range of ways including:

- a safe space to be seen and heard by peers and staff

- not just a space for raising complaints, but also for praise and positive developments
- space to '*be together*'
- to provide '*connection and intimacy*' as a group
- to receive information about the ward therapy programme
- belief that the staff really care about patients' needs
- patients feeling listened to

(Novakovic et al., 2010 p. 49)

Context

The state of community meetings within the current context, a forensic high secure hospital, mirrored that described within the literature. Indeed, the meetings were poorly attended by both staff and patients and those who attended the meetings often felt they were unproductive. As such, management had requested an evaluation be carried out in attempt to identify any current problems with the meetings.

Research aims

The overall aim of this evaluation was to explore service users' experience of community meetings within a high secure setting. The evaluation specifically sought to examine what service users value and dislike in ward community groups and to explore whether service users feel community groups contribute to a healthy ward community. It was anticipated that the results of the evaluation could be used to inform recommendations for the improvement of community meetings at the hospital.

What the research discovered

Results are discussed in detail within the executive summary (Appendix 2). However, in sum, service users valued several aspects of the community meetings including:

- It is a safe space
- Service users are involved
- The things that are discussed
- It helps service users develop skills
- It improves the ward atmosphere

Conversely, there were several aspects of the meetings which service users did not like. This included:

- A 'fake democracy'
- It is not person-centred
- People do not engage
- Feels pointless
- When the meeting is not managed well

In considering what they would like to see in community meetings, service users suggested a number changes including:

- Better attendance
- Staff getting to know patients through the meeting
- The meeting helping to solve problems
- Service users being helped to engage in the meeting
- Discussing things about the hospital

How the findings will be disseminated

The findings from this service evaluation will be disseminated in the following ways:

- An accessible summary (Appendix 1): to be sent to every ward within the hospital for service users and staff to read
- An executive summary (Appendix 2): to be sent to management within the hospital which will inform service planning
- A research article: to be sent for publication in the Mental Health Review Journal

Service impact achieved by the research and future plans

Borne out of the findings of this evaluation were the following recommendations:

Short term recommendations:

- To develop guidelines for the running of community meetings across the hospital.
These guidelines may wish to include the following:
 - Attendance by all should be encouraged and non-attendance explored.
 - Involving service users in the running of the community meetings by, for example, encouraging service users to add to the agenda items and having service users chair the meetings.
 - Having a predictable structure or routine, whilst facilitating an informal, relaxed atmosphere.
 - Discussion topics should include problems and concerns of service users and staff but also positive aspects on the ward including praise and encouragement.
 - Important issues should not be dismissed or avoided.
 - Community meetings to be seen as a therapeutic activity, offering the opportunity for service users and staff to develop skills.
- Disseminate guidelines to all relevant staff and service users.
- Support staff to develop an awareness of the principles of the community meetings through:
 - The development of the above guidelines.
 - Dissemination of current research findings

Long term recommendations:

- In order to review the impact of this service evaluation, we recommend a follow up of staff and patient experiences of the community meetings be carried 12 months after the implementation of the new guidelines

- Given the importance of involving service users in their care, the service may benefit from regular measurement and evaluation of the level of service user involvement in community meetings. Service users could help develop a meaningful measure that captures dimensions of involvement that they perceive as most meaningful within the hospital
 - Further service evaluations will be carried out in line with the long term recommendations, as and when appropriate.
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Trainee's Signature: _____ **Date:** _____

Supervisor's Signature: _____ **Date:** _____