

**Pornography and Sexual Aggression
in Adult Males**

ACADEMIC THESIS

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Thesis Abstract

Overall, this thesis explored the impact of viewing pornography on adult males, particularly on attitudes towards sexual aggression including rape myth acceptance. The systematic review served to provide a starting point and reviewed the impact of exposure to pornography on attitudes towards sexual aggression; typically, acceptance of rape myths and attitudes towards sexual coercion. A narrative synthesis generally suggested that exposure to pornography, particularly pornography inclusive of violent themes, has detrimental effects on males attitudes towards sexual aggression.

The systematic review demonstrated that rape myth acceptance is a common outcome measure focused upon in the literature examining pornography consumption and thus the psychometric measures used to investigate rape myth acceptance were evaluated. A critique of the psychometric properties of the Illinois Rape Myth Acceptance Scale is presented, referring to the development of the Acceptance of Modern Myths about Sexual Aggression Scale throughout. In addition, the development of rape myth acceptance as a construct is discussed.

The third chapter of the thesis reports a research project that focused on the impact of adult males' exposure to 'soft-core' pornography, which is commonly found in mainstream media via sexualised media content. This

area is of interest given the comparable lack of research exploring exposure to pornographic content via engagement with mainstream media. Generally, the impact of an ever-increasingly sexualised media environment is considered.

Finally, a case study is presented which evaluated the effectiveness of a compassion focused therapy informed intervention that was completed with a 33-year-old male (patient A) in a medium secure therapeutic community. Patient A had a well-established history of sexually inappropriate behaviour towards females. Formulation suggested that his excessive pornography use appeared to play an important role in his behaviour and thus an aim of the intervention was to qualitatively explore the role of pornography use in his sexually aggressive behaviour.

In summary, the thesis explored the seemingly detrimental impact of pornography consumption on individuals. Recommendations are made for further exploration of our sexualised media environment and the thesis considered the role of pornography in the commission of sexual aggression.

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Chapter 1 – Thesis Introduction

This thesis explored the role exposure to pornography has in the development of attitudes supportive of sexual aggression in adult males. Whilst there are recognised conceptual difficulties in defining pornography, for the purposes of this thesis, pornography is defined as sexually explicit material that is intended to be sexually arousing to the consumer (Hald, Malamuth, & Yuen, 2010). Perhaps as a reflection of difficulties defining pornography, it appears that the terms 'pornography' and 'hard-core pornography' are often used synonymously within the literature, referring to the same material. For the purposes of this thesis and for ease, the term pornography will be used henceforth. It is worth making a distinction between pornography and 'soft-core pornography'. Similar to the difficulties in defining pornography, there appears to be a lack of clear agreement on the definition of soft-core pornography. Generally, the term appears to describe material that has a pornographic component in that it is sexually suggestive, intended to be sexually arousing to the consumer, although it is less explicit in depiction than pornography. It is important to note that most sexualised media content appears to also meet the definition of soft-core pornography.

In addition, the focus of this thesis is on attitudes supportive of sexual aggression. An attitude is defined as "a relatively enduring organisation of beliefs, feelings, and behavioural tendencies towards socially significant

objects, groups, events or symbols" (Hogg & Vaughan, 2005, p.150). An attitude is typically considered to comprise of an affective, behavioural, and cognitive component (McLeod, 2018).

The focus on pornography as a topic of concern, not only within academia but also in the media (e.g. Rymell, 2016), seems justified; pornography appears more widely accessible than at any other point in history (Seto, Maric, & Batbaree, 2001; Stern & Handel, 2001) and there is increasing evidence that the typical content or themes of pornography include sexual violence. For example, Bridges et al. (2010) conducted a content analysis of 304 scenes from popular pornographic videos and found that over 88% of scenes included some display of physical aggression in a sexual context, and over 48% of scenes also contained verbal aggression. Males were typically the perpetrators of such aggression. Females were typically the targets, most often showing pleasure in response to aggression or responding neutrally (Bridges et al., 2010). Moreover, sexual violence is recognised as a worldwide public health concern (World Health Organisation, 2018) and thus researchers have an interest in understanding any potential relationship between exposure to pornography and sexually aggressive behaviour.

Theoretical Basis

A range of theoretical models have been proposed to explain the suggested relationship between the consumption of pornography and sexual

aggression (see Seto et al., 2001 for a summary). Key theoretical approaches will be discussed here.

Initial theoretical explanations of the impact of pornography on sexual aggression appeared to focus on excitation transfer theory (see Allen, D'Alessio, & Brezgel, 1995). This theory suggests that emotional experiences are determined by physiological arousal, or an excitation potential, which is then interpreted cognitively and thus somewhat context dependant (see Schachter & Singer, 1962). Proponents of this approach argue that "the observed effects of aggressive communication are not so much the consequences of exposure to aggressive stimuli per se as they are the result of the excitatory potential associated with this communications" (Zilmmann, Hoyt, & Day, 1974, p. 286). When applied to aggression, excitation transfer theorists suggest that anger is experienced following provocation, predicting that when an individual is angered again, the subsequent experience of anger will depend on the level of previously experienced physiological arousal (Seto et al., 2001). Thus, as exposure to pornography typically leads to physiological arousal, excitation transfer theory suggests that if provoked, physiological arousal could be interpreted as anger and manifest in behavioural aggression. Following this theoretical approach, a range of early studies in this area appeared to focus on behavioural outcomes of aggression. This approach, and methodology specifically, is critiqued below (see Outcome Measures).

Feminist theories relevant to pornography consumption are also noted, which generally argue that sexual violence and aggression occurs within a patriarchal society. Proponents argue that pornography readily sexualises depictions of women being harmed leading to women having less power in a patriarchal society. Further, it is argued that pornography therefore encourages the rape and sexual abuse of women (see Bryden, 1985 for an in depth analysis of radical feminist approaches to pornography). Prominent authors in this area have suggested: "pornography represents hatred of women, that pornography's intent is to humiliate, degrade and dehumanize the female body for the purpose of erotic stimulation and pleasure" (Brownmiller, 1980, p.186), and "pornography is the theory; rape is the practice" (Morgan, 2014, p. 2). In summary, feminist theories relevant to this area suggest that pornography causes harm in three distinct ways, including directly harming women (e.g. women are victims of the sex industry; see Cole, 1989), promoting general and sexual violence against women through the impact exposure to pornography has on consumers attitudes and beliefs about women and sex (see Dworkin & MacKinnon, 1988), and finally, creating social harm as pornography serves to limit the gender stereotypes of men and women (see Lacombe, 1994).

Feminist perspectives on this issue have been extensively critiqued, even from a feminist perspective, as significantly oversimplified, extremist, and divisive (see Strossen 1993). It is suggested that such theories are somewhat dated and lack application as they often fail to reflect the

complexity of the relationship between exposure to pornography and sexual aggression.

Remaining a pervasive approach, a sexual scripting perspective has also been proposed to explain the relationship between exposure to pornography and sexual behaviour. Sexual scripts can be defined as cognitive schemas or representations of typical or 'normal' actions, features, and characteristics of sexual interactions (Metts & Spitzberg, 1996). Gagnon and Simon (2005), and later Wright (2011), proposed that sex and sexuality is a socially constructed concept that is influenced by a range of sources, including societal norms, media, and personal factors such as values and attitudes. Thus, sexual scripts are acquired through socialisation, informed by cultural norms and socially shared understanding, such as of typical gender roles. Huesmann (1998) proposed a theoretical link between aggressive scripts and aggressive behaviour, suggesting the same can be applied to sexual behaviour and aggression.

Theorists suggest that pornography influences an individual's sexual scripts via social learning, in that an individual will incorporate the attitudes, norms, and behaviour that they view in pornography into their own sexual scripts, thereby influencing their own attitudes and behaviour (e.g. Tomaszewska & Krahe, 2016). It is suggested that as pornography typically portrays aggressive or negative behaviours towards women (see Bridges et al., 2010), which appear to be normalised, the impact of exposure to

pornography is largely detrimental on those who view it. It is noted that sexual script theory appears to be considered most relevant to children, adolescents, and young adults whose sexual experience may be limited and where cultural norms regarding sex may be particularly potent and risky. For example, norms such as having sex for the first time at a young age, encouraged promiscuity, 'lad' culture, and the inclusion of substances during sex all appear particularly relevant to young people navigating this area of their lives (Tomaszewska & Krahe, 2016).

In critique of this perspective, scholars have suggested that sexual scripting cannot be considered a scientific theory as it does not offer testable hypotheses or explain casual relationships among variables (Weiderman, 2015; Weis 1998). It is suggested that key questions are outstanding regarding the functioning of sexual scripts, such as how do they actually influence behaviour and when are they more or less influential. Moreover, how do sexual scripts interact with each other? (Weiderman, 2015). Methodological weaknesses in the literature are also identified, such as the liberal conceptualisation of sexual scripts (Weiderman, 2015). In summary, it is suggested that the sexual scripting perspective serves as a useful metaphor for understanding a complex topic however further advances are required to establish this approach as more scientific (Bancroft, 2009; Weiderman, 2015; Weis, 1998).

To date, the most prominent theory in this area appears to be the Hierarchical Confluence Model (HCM) of sexual aggression first proposed by Malamuth (1986; see also Malamuth, 2003), which appears to have been widely researched (see Malamuth & Hald, 2017 for a recent review). This model suggests that sexual aggression may be understood through the convergence or confluence of a range of risk and protective factors, including motivation factors (motive to commit the sexually aggressive act), disinhibition factors (reduction in inhibitions that may prevent the sexually aggressive act from occurring), and opportunity predictor variables (the opportunity for the sexually aggressive act to occur). Individual differences, and the interaction between such differences and risk and protective factors for sexual aggression, are central to this model.

The role that pornography may play in increasing attitudes supportive of sexual aggression is suggested as relevant to all aspects of the model, and a factor that converges with other risk factors to increase the likelihood of sexual aggression. For example pornography may influence motivation factors by leading to sexual arousal. Opportunity variables may be influenced as women are typically portrayed as sexual objects in pornographic material (Bridges et al., 2010) and therefore women may be perceived as more sexually available. Although, pornography use appears to mostly have been researched in reference to disinhibition factors; pornography may influence attitudes (e.g. increase rape myth acceptance) that reduce inhibitors of sexual aggression. It is noted that the HCM

proposes that the mechanisms mediating the impact of pornography are largely based on activation and priming principles, suggesting that exposure to pornography and subsequent arousal, for some individuals, activates attitudes supportive of sexual aggression which consequently impacts behaviour (Hald & Malamuth, 2015).

There is extensive support for the HCM of sexual aggression (Malamuth & Hald, 2017). In comparison to other theoretical approaches in this area, the HCM appears to have specific value in that it highlights the importance of considering a range of factors and their interaction with each other to produce sexually aggressive behaviour (Vega & Malamuth, 2007), rather than focusing on the variance or predictability of one factor alone, such as sexual scripts. Thus, the HCM seems to reflect the complexity of this area and offer the most comprehensive theoretical framework for understanding and researching this issue. It is for this main reason that the HCM was considered the most appropriate framework for this thesis.

Concept of Thesis

Despite extensive research in this area, there remains significant criticism and debate as to the impact of pornography on sexual aggression (see Ferguson & Hartley, 2009). This thesis explored the evidence further, adding an updated systematic review of the literature which integrated both experimental and non-experimental research (studies which exposure

participants to some form of pornographic material as part of the design and those that do not).

The third chapter presents a critique of the Illinois Rape Myth Acceptance Scale (Payne et al., 1999). Although the focus of this thesis is on attitudes supportive of sexual aggression, and one could therefore argue that the Acceptance of Modern Myths about Sexual Aggression Scale (AMMSA; Gerger et al., 2007) would have been an appropriate psychometric measure to critique, this chapter focuses on the construct of rape myth acceptance specifically for a number of reasons. Firstly, it is noted that the construct of rape myth acceptance is commonly explored as an outcome measure within the literature. Moreover, rape myth acceptance comprises only one aspect of the AMMSA, meaning that a critique of this measure would not have been entirely focused on rape myth acceptance. Finally, there appears to be topical interest in the concept of rape myth acceptance (e.g. The Guardian, 2019).

Following, the research project focused on a related area of the literature that appears to have received little attention comparatively – soft-core pornography within the media. Previous research within this area has typically focused on sexualised advertisements. The research project presented in this thesis focused on the impact of exposure to general sexualised media content that meets the definition of soft-core

pornography (not limited to advertisements) on males' attitudes towards sexual aggression.

Finally, the case study explores the contributions of a patient's pornography use to his sexually aggressive behaviour towards females in a secure forensic mental health service.

Outcome Measures

There is a vast evidence base exploring the potentially deleterious effects of exposure to pornography on a range of populations, with a focus on a variety of outcomes, including attitudes, behavioural measures of aggression and sexual aggression, and sexual risk taking behaviour (Hald et al., 2010; Malamuth, Addison, & Koss, 2000; Sinković, Štulhofer, & Božić, 2013). Whilst a range of outcomes have been explored within the literature, the effect of exposure to pornography on attitudes supportive of sexual aggression has been a consistent focus of previous research and this is the emphasis of this thesis, for a number of reasons.

Firstly, focusing on an attitudinal outcome rather than a behavioural one is argued as easier and less resource intensive for researchers. Using self-report attitudinal measures allows researchers interested in this area to study larger populations in less time, allowing for more data to be analysed and somewhat more generalisable results to be generated.

Secondly, there are also obvious ethical implications relevant to attempting to manipulate and study sexually aggressive behaviour (noted in Allen et al., 1995). Thus, outcomes of generally aggressive behaviour often appear to be have been studied instead, following excitation transfer theory (see Theoretical Basis above). Examples of aggressive behaviour observed in studies with this focus include, administering electric shocks, punching, and pumping up a blood pressure cuff too tightly. Inferring sexual aggression from acts of general aggression/hostility committed within highly specific contexts has clear limitations and seems inappropriate due to the qualitatively different nature of sexual violence to general aggression or hostility (see Allen et al., 1995).

Thirdly, it is noted that typically studies which have focused on behavioural aggression following exposure to pornography appear to have done so by provoking participants to feel angry and observing their response. Whilst higher levels of anger appear to distinguish sexual offenders from non-sexual offenders (Lyn & Burton, 2005), anger may not necessarily be a motivation for sexual violence and/or aggression. In addition, not all sexual violence or aggression appears to be a response to provocation of some kind. Fourthly, the specific context and environment of studies which focus on the effect of pornography on aggression is noted. Allen et al. (1995) report that all data from studies included in their systematic review came from laboratory settings, typically using student populations. The design of included research was typically such that acts of aggression were

committed within the context of experiments covertly designed to assess 'learning'.

It is argued that results from such studies lack generalisability and may tell us little about an individual's propensity to behave in a sexually aggressive manner. Research of this design is also likely to be limited by correspondence bias. Subsequently, one benefit of a shift of focus to attitudinal outcomes may be the less context specific nature of the attitude measured. Valid and reliable attitudinal measures are developed to assess multiple constructs within an attitude, meaning that a more general measure of an attitude can be gained in comparison to the data collected from behavioural outcome measures. Finally, one notes the link between attitudes and behaviour. The evidence suggests that attitudes supportive of sexual aggression are risk factors for behavioural sexual aggression (Malamuth, Addisson, & Koss, 2000; Seto et al., 2001). Moreover, the link between attitudes and behaviour is well established (Beck, 2011). One also notes that attitudes are generally defined as comprising of a behavioural component (i.e. the influence the attitude has on behaviour; McLeod, 2018). In summary, there are numerous reasons why the focus of this thesis was on attitudes supportive of sexual aggression rather than behavioural measures of sexual aggression.

Although focusing on different topics, the chapters of this thesis are broadly linked by the Hierarchical Confluence Model of sexual aggression (HCM; see

Malamuth & Hald, 2017). This is highlighted throughout the thesis and the chapters each provide further support for this model of understanding sexual aggression and the role that pornography may play in the commission of it. The context of exposure to pornography (e.g. the setting) is highlighted in the research project as a potentially important factor that influences the effect of exposure on individuals. This may be an avenue of further exploration that adds to our understanding of the HCM.

Implications

There are a range of potential implications of this thesis. Firstly, the conclusions drawn from the systematic review provide cautious support for the argument that exposure to pornography can be harmful, at least for some individuals, although ongoing debate in this area is needed moving forward. There are questions raised from the research project regarding our sexualised media environment and potential implications for the restriction of sexualised media content. There are also possible implications for the risk assessment, case formulation, and treatment of sexual violence; evidence supports pornography use being considered a risk factor for this behaviour in some individuals.

**Chapter 2 - The effect of exposure to pornography on attitudes
towards sexual aggression in adult males: A systematic review
and narrative synthesis**

Abstract

The role that pornography may play in the commission of sexual violence and aggression has been extensively researched. To date, there are a range of meta-analyses available in this area. Most recently, Hald, Malamuth, and Yuen (2010) concluded that exposure to pornography has a significant negative impact on attitudes supporting violence against women in non-experimental studies. However, there remains a significant debate among academics and equivocal findings are drawn from the evidence base. There has not been a recent systematic review of the literature, or one that includes both experimental and non-experimental research. Thus, the aim of this review was to provide an up to date systematic review and qualitative synthesis of the literature, which explores the effect of exposure to pornography on attitudes towards sexual aggression in adult males. Systematic searches were conducted of 4 databases, grey literature, the reference lists of relevant papers, and prominent authors in the field were contacted for unpublished research. In total, the search yielded 1,864 results after duplicates were removed. All papers were subject to an initial screening process to determine relevance with pre-defined inclusion and exclusion criteria. Subsequently, relevant papers were subject to a quality assessment process and excluded if they did not meet the minimum

criteria. Following this process, 9 studies were included in the review 3 of which utilised an experimental methodology and exposed participants to pornography. Three studies investigated the impact of viewing violent pornography. Narrative synthesis of the results suggested that exposure to pornography increased attitudes supportive of sexual aggression. This effect was stronger for studies that utilised experimental methodology and for studies that investigated exposure to violent pornography. The results are interpreted in support of the hierarchical confluence model of sexual aggression and common methodological limitations of the literature are discussed. Recommendations for the exploration of soft-core pornography within mainstream media are made.

Keywords: pornography, attitudes, sexual aggression, systematic review, narrative synthesis

Introduction

The World Health Organisation (WHO) recognises sexual violence and aggression as a worldwide public health concern with significant short and long-term consequences for victims (WHO, 2018). Broadly, sexual violence and aggression refers to any sexual or potentially sexual behaviour, or attempt to commit sexual or potentially sexual behaviour, perpetrated against a person without their freely given consent, typically by the use of coercion (WHO, 2018). A recent UK government publication (The Home Office and the Office for National Statistics, 2013) reported that approximately 2.5% of females and 0.4% of males in England and Wales reported that they had been the victim of a sexual offence, the perpetration of sexual violence and aggression, within the last 12 months. This publication estimates that approximately 10% of sexual offences are reported per year, of which 10% result in a successful conviction (The Home Office and the Office for National Statistics, 2013). Unsurprisingly, a vast amount of scientific research has been conducted to understand the commission of sexual violence and aggression further.

One area of significant interest is what role, if any, consuming pornography has in the commission of sexual violence and aggression, particularly on attitudes supportive of sexual aggression. This proposed relationship will be explored before considering the theoretical basis and criticism of the evidence. A rationale for this review will then be presented.

Pornography and Sexual Aggression

A proposed link between the consumption of pornography and increased sexual aggression in males is highly topical (e.g. Fight the New Drug, 2018; Rymell, 2016) and has garnered significant academic interest, particularly as pornography has become increasingly accessible (Ferguson & Hartley, 2009). For the purposes of this review, pornography is defined as sexually explicit material that is intended to be sexually arousing to the consumer (Hald, Malamuth, & Yuen, 2010). Whilst there has been a focus within the literature on the impact of consuming pornography on behavioural measures of sexual aggression, the arguably greater focus on attitudes supportive of sexual aggression is justified due to seemingly inherent methodological and ethical difficulties with behavioural outcome measures of sexual aggression (Ferguson & Hartley, 2009; see Chapter 1 for detailed discussion about this issue).

Briefly, the evidence suggests that attitudes supportive of sexual aggression are risk factors for behavioural sexual aggression (Malamuth, Addison, & Koss, 2000; Seto, Maric, & Barbaree, 2001). Moreover, the link between attitudes and behaviour is well established (Beck, 2011). This review focused exclusively on attitudes towards sexual aggression, which are defined as the affective responses, evaluative cognitions, and behavioural predispositions to sexually aggressive behaviour (Hald et al., 2010; Hald & Malamuth, 2015). Moreover, it is noted that attitudes are often a focus of interventions aimed at reducing sexual offending and thus

a review exploring attitudes towards sexual aggression (rather than behavioural measures) may have more practical use to clinicians.

Although most are now dated, there have been a range of quantitative reviews of this area (see Malamuth et al., 2000) which have largely separated the evidence into experimental and non-experimental research methodology, experimental studies being those that expose participants to some form of pornography as part of their design. Conclusions from such reviews are somewhat mixed. Firstly, Allen et al. (1995a) conducted a meta-analysis on the relationship between exposure to violent and non-violent pornography and attitudes supportive of sexual aggression (rape myth acceptance). They analysed 24 studies with a combined total of 4,268 participants, 8 of which used a non-experimental methodology. Briefly, non-experimental studies are those that measure participants' consumption of pornography without experimentally manipulating this variable. The results suggest that exposure to pornography in non-experimental studies resulted in a small increase in rape myth acceptance; although the authors conclude that this effect is so minimal it has no meaningful implications for the general population. However, exposure to pornography in experimental studies demonstrated a much larger statistically significant increase in rape myth acceptance (Allen et al., 1995a).

Similarly, Allen et al. (1995a) reported that violent pornography significantly increases rape myth acceptance to a much larger extent than non-violent pornography. They concluded that little clarity can be drawn from the literature at this stage and further work is required to understand this relationship.

Allen et al. (1995b) conducted a second meta-analysis on experimental studies in this area (those that exposed participants to some form of pornography). Differently to above, the results suggested that exposure to both non-violent and violent pornography resulted in an increase in attitudes supportive of sexual aggression and in actual aggression (behavioural measure) at follow up (Allen et al., 1995b).

Further to Allen and colleagues earlier work, a number of additional meta-analyses are identified (see Allen, D'Alessio, & Emmers-Sommer, 2000). While they appear to meet less rigorous methodological standards (Malamuth et al., 2000), they generally support the conclusion that exposure to pornographic material has deleterious effects on the individuals who watch it (e.g. Oddone-Paolucci et al., 2000). In summary, there appears to be somewhat conflicting conclusions drawn from reviews that focus on experimental and non-experimental studies, particularly regarding the impact of non-violent pornography on individuals. There are a number of suggestions for why there may be different results found from these types of research. For example, the difference in methodologies is likely to

be significant (Allen et al., 1995a), as is the environment in which the individual is exposed.

A number of theoretical explanations for the link between exposure to pornography and sexual aggression are explored in detail in Chapter 1. Briefly, the most prominent theory in this area is the Hierarchical Confluence Model (HCM, Malamuth, 2003; Malamuth & Hald, 2017), which suggests that sexual aggression is the result of the convergence of a range of factors (see Chapter 1 for more detail). Due to the comprehensive theoretical framework provided by this theory, it was considered most appropriate as the framework for this review.

Criticism

Despite the above evidence supporting a negative effect of exposure to pornography, particularly with regard to sexual aggression in males, there has been significant ongoing debate within the literature as to the validity of such findings (see Diamond, 2009 and Seto et al., 2001). In a review, Ferguson and Hartley (2009) discuss a range of limitations to the research base and suggest that the rhetoric of the deleterious effects of pornographic material of those who watch it is outdated and may have been overstated in response to public agenda. Briefly, it is worth noting that scientific interest in the area of pornography appeared to drastically increase in response to two national commissions in the USA in the 1970s and 1980s, which followed the growing availability of pornographic material. The first

commission concluded that there were no adverse effects of exposure to pornographic material (Commission on Obscenity and Pornography, 1970). The second commission, The Meese Commission, concluded the opposite stating that there was a causal link between exposure to pornography (particularly violent pornography) and sexual violence towards women (Attorney General's Commission on Pornography, 1986). Ferguson and Hartley (2009, p.324) suggest that these commissions were in part driven by the societal response to the availability of pornography from "religious conservatives and feminists". Recognition of public interest in this area is important as the social climate surrounding particular issues undoubtedly has an impact of how such issues are conceptualised and researched (Ferguson & Hartley, 2009, see also Linz, Donnerstein, & Penrod, 1987).

Importantly, Ferguson and Hartley (2009) also highlight the issue of conceptualisation and the shifting definition of pornography. This concern is also discussed by other researchers in the field (Attword, 2002; Malamuth et al., 2000; Seto et al., 2001) and it is noted that difficulty defining pornography has led to a range of definitions being used within the literature. This has clear negative implications when drawing conclusions from the evidence base and appears to have contributed to the ongoing debate in this area.

The type of methodology used in this area of research is also varied and appears to have an impact on the conclusions of studies (Ferguson &

Hartley, 2009). Cross-sectional research, which explores relationships, typically via correlational analyses, appears most commonly used; there are limitations to drawing conclusions from such research and findings appear mixed. Additionally, the vast majority of research in this area uses student populations, which further limits the generalisability of findings.

Finally, Ferguson and Hartley (2009) highlight the negative relationship between rate rapes in the USA and the availability of pornography (number of pornographic films released) from 1999-2005. Although it is clear that rape is a vastly underreported crime (for a review see Allen, 2007), it is suggested that this data does not support the argument that the consumption of pornography leads to an increase in sexual aggression (also see Diamond, 2009).

Recent Work

Hald et al. (2010) conducted the most recent meta-analysis in this area. They explored the association between males' consumption of pornography and attitudes supporting violence against women in non-experimental studies. They reported an overall significant positive relationship, which was strongest for violent pornography. In addition to providing an up to date review of the literature, Hald et al. (2010) sought to correct methodological weaknesses in the meta-analysis conducted by Allen et al. (1995a). Moreover, Hald et al. (2010) conclude that the inferences that can be drawn from the literature are not credibly debated.

However, there has not been a recent systematic review of the literature or a recent review that combines both experimental and non-experimental studies. Despite the vast evidence base, this topic is still debated (see Malamuth, 2018) and equivocal interpretations of the literature remain. Finally, it is suggested that 'porn culture' has changed since the publication of Hald et al. (2010), for example the concerning advent of 'revenge pornography' (Kitchen, 2015).

Aims and Objectives

The aim of this investigation was to provide an up to date systematic review of the literature that explores the effect of exposure to pornography on attitudes towards sexual aggression in adult males, building upon work by Hald et al. (2010). This systematic review aimed to include all relevant literature rather than focus on one study type (e.g. experimental) and to explore any attitude related to sexual aggression.

Review Question

How does exposure to pornography affect attitudes towards sexual aggression in adult males?

Method

This systematic review was conducted according to Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA; Moher et al., 2009) guidelines. This is a 27-item checklist designed to ensure transparent reporting of systematic reviews and meta-analyses. In accordance with PRISMA guidelines, a protocol was devised prior to the review that specified the intended methodology, including inclusion/exclusion criteria of studies, the search strategy, and the method of quality assessment. The protocol, and any amendments made, was reviewed by the supervisor of this review.

Scoping Search

Initial scoping exercises were completed prior to starting this systematic review to refine the review question and review the existing literature. A range of resources were searched, including the Cochrane Library, PsycINFO, Google Scholar, and Doctoral theses. In addition, the international database for prospectively registered systematic reviews in health and social care, PROSPERO, was searched (Boland, Cherry, & Dickson, 2014).

Eligibility Criteria

Table 1 summaries the characteristics required of studies to be included in the review, which were defined in the protocol.

Table 1

PICO Characteristics

Characteristic	Description
Population	Adult (18 years and over) males.
Intervention/Exposure	Exposure to legal pornography (visual media).
Comparator	Exposure to a different type of pornography than the intervention group, less, or no pornography OR no comparator group.
Outcome	Attitudinal measures of sexual aggression.

Population

The population was limited to adult males as the majority of research in this area appears to have focused on this group, sexual aggression is mainly perpetrated by males, and pornography generally appears largely focused on the male viewer's gratification (Bridges et al., 2010). If studies included both males and females, it must have been possible to extract the data for males for the study to remain in the review. Offender samples were excluded to ensure there was a degree of homogeneity among population samples included in the review. It is noted that Hald et al. (2010) excluded offender samples from their review due to concerns raised by researchers about the validity of self-report data from offender samples in comparison to non-offender samples (see Hald et al., 2010; Hanson & Bussière, 1998; Hare, 1985).

Intervention/Exposure

Studies which investigated exposure to any type of legal pornography were included in the review. In this context, type refers to the focus or nature of the pornography. For example, studies which explored exposure to violent and/or degrading pornography, which may depict scenes of rape or a lack of consent, were not excluded from this review. As noted in Chapter 1 of this thesis, pornography is defined as sexually explicit material that is intended to be sexually arousing to the consumer (Hald et al., 2010). Following on from this, there appears to be agreement in defining violent pornography; that which includes actual or simulated aggression and/or violence in any form (including sexual, physical, or verbal aggression/violence), even if framed in the context of consent (e.g. sadomasochism, Demaré, Briere, & Lips, 1988; Davis et al., 2006; Linz et al., 1987). In addition, Golde et al. (2000) define degrading pornography as that which depicts women being subjugated and existing only for the purpose of pleasuring men. Moreover, the explicitness of the pornography is defined by the degree of nudity and sexual interaction depicted (Golde et al., 2000).

Consideration will be given to the nature of the pornography included in studies examined in this review, and any differences in results following exposure to different types. Studies which investigate exposure to types of pornography that would be considered illegal in the UK, such as pornography containing indecent images of children or bestiality, were

excluded. This exclusion criterion ensured that criminality was not a confounding variable and studies included in the final review would be more homogeneous and thus more appropriate to draw conclusions from. Studies that focus on exposure to pornographic content within mainstream media (e.g. specific TV programmes or sexualised adverts) were excluded as the specific focus of this review was on exposure to pornography rather than exposure to soft-core pornography via engagement with mainstream media.

Outcome

Any studies that focused on an outcome measure specifically of attitudes towards sexual aggression (or sexual violence) were included in the review. This definition did not include more general measures of attitudes supportive of violence against women, such as hostility towards women. Studies that focused on behavioural outcome measures of sexual aggression (e.g. Malamuth & Centi, 1986) were excluded due to their limitations (see Chapter 1 for a more thorough discussion about the limitations of such research and the decision to focus on attitudinal outcome measures of sexual aggression).

Study Design

Research of the following study designs were considered: randomised control trials (RCTs), cohort (prospective or retrospective), case control, cross-sectional, and case series. Reviews and opinion papers were

excluded. Due to the nature of the research question, it was considered highly unlikely that any RCTs would be available and it was most likely that research would employ a cross-sectional design.

Language

Studies included must have been available in English due to the resources available to primary researcher.

Search Strategy

The following databases were searched in September 2018; MEDLINE, EMBASE, PsycINFO and Applied Social Science Index and Abstracts (ASSIA). These databases were considered to adequately cover both the health and social sciences disciplines, which appear most relevant to the purpose of this review (Boland et al., 2014). The following search terms were entered into all of the databases:

porn* OR erotic* OR x-rate* OR adult material* OR sexually explicit material* OR adult media OR cyberporn* OR obscene m*

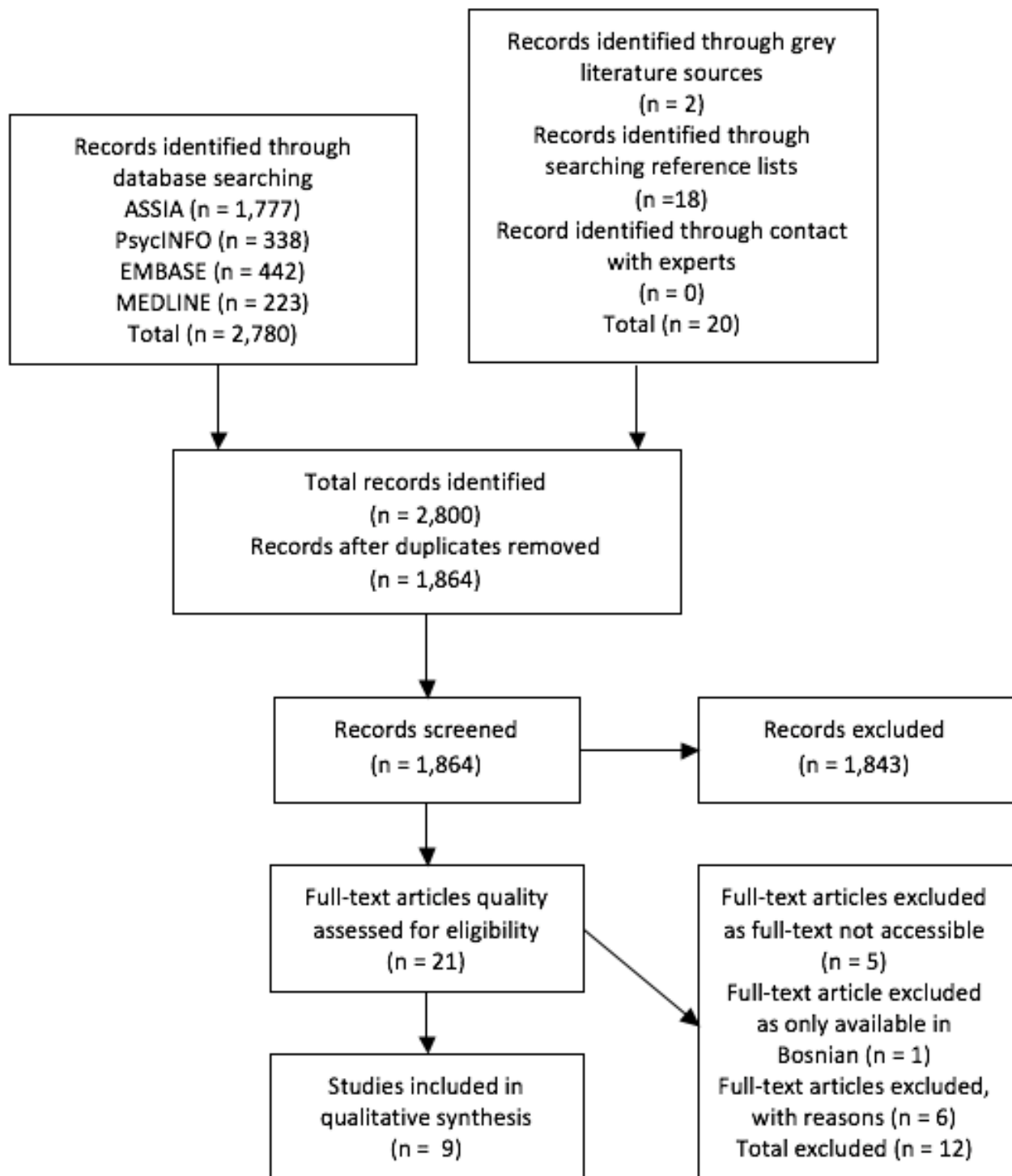
AND

aggress* OR sexual aggress* OR rape myth* OR sexual offen* OR violent behav*

Where appropriate, specific search terms were also 'exploded' to capture all relevant research in the searches. Search results were limited to

adulthood, males, and available in the English language (see eligibility criteria above). Note that it was not possible to apply the same limits to the search results provided from the ASSIA database. See appendix A for the full search syntax. A grey literature search was subsequently conducted, making use of resources such as Open Grey, PAIS International, and Mednar, as well as websites specifically dedicated to exploring the impact of exposure to pornography on individuals, such as www.fightthenewdrug.org. Prominent authors in the field were also contacted for unpublished studies, including Professor Neil Malamuth, Dr Gert Hald, and Dr Miranda Horvath. Finally, the reference lists of key papers were hand searched to ensure comprehensiveness (e.g. Hald et al., 2010).

Figure 1 – Search Strategy for Systematic Review



Study Selection/Screening

Following the removal of duplicates, the identified studies (N=1,864) were subject to an initial screening process. Obviously irrelevant papers were excluded after reviewing the titles. The abstracts of the remaining papers were reviewed to exclude based on irrelevance to the review question and not meeting the eligibility criteria (e.g. a review paper).

Accessing Full Texts

Full-texts were not available for 6 papers that were deemed relevant and met the inclusion criteria, despite extensive efforts to locate them. In 3 cases the first authors were contacted requesting access to the full-text, of which one replied providing access. In 3 cases, appropriate correspondence details for the first author could not be found. In summary, the full-texts of 5 studies could not be obtained and therefore these papers were excluded.

Quality Assessment

All studies that were deemed relevant and met the eligibility criteria (N=15) were quality assessed using a tool designed for this review (appendix B). Due to the range of study designs utilised by researchers in this field, the quality assessment tool was not developed to assess the quality of studies of a specific design (e.g. cohort studies). Therefore, the quality assessment tool was adapted from the Critical Appraisal Skills Programme (CASP, 2013) for cohort and case control designs. To account for studies utilising a cross

sectional design, the 22-item checklist by Zaza et al. (2000) was consulted and adapted. This checklist was developed to assess the quality of any study design and is referenced as an appropriate tool by Boland et al., (2014). Finally, the pilot tool by The Cochrane Group for assessing the risk of bias in non-randomised studies was consulted and adapted (Higgins & Green, 2011).

The quality assessment tool evaluated a range of relevant biases, such as sampling and selection bias, performance bias, outcome reporting bias, detection bias, attrition bias, and bias related to statistical analysis. A number of screening questions were presented, where an outcome of Yes was required for the study to remain included and be fully assessed using the remainder of the quality assessment tool. For each further question, an outcome of Yes, Partial, No, or Unclear were available with a corresponding score of 2, 1, and 0 respectively, adapted from the Cochrane Handbook guidelines. Any studies which did not meet the screening criteria or fell below the minimum quality criterion of 65% were excluded from the review due to poor quality. See Table 2 for a summary of the excluded studies (N= 6) and reasons for their exclusion following the application of the quality assessment tool. Note that appropriate contact details for the corresponding authors for studies B, C, D, and E were not able to be found to clarify the age of the sample and thus these studies were excluded due to not meeting the screening criteria of the quality assessment tool.

An independent reviewer assessed 4 studies (>20%) using the quality assessment tool. The independent reviewer was a trainee forensic psychologist with a detailed knowledge of systematic review methodology and understanding of quality assessment. The independent reviewer also had an understanding of the literature related to the effects of media consumption on individuals. Inter-rater agreement was calculated between reviewers; kappa = .818, $p < .001$. Results indicated substantial to almost perfect agreement (Landis & Koch, 1977).

Table 2

Excluded Studies and Reasons for Exclusion

Study Letter	Author/s and Date	Title	Reason for Exclusion
A	Barak, Fisher, Belfry, and Lashambe (1999)	Sex, guys, cyberspace: Effects of internet pornography and individuals differences on men's attitudes toward women.	Poor quality: There are only 24 participants included in this sample which the author of this review did not consider large enough (see screening criteria, appendix B), particularly given that each experimental condition in the study comprised of only 6 participants and a MANOVA was used to analyse the data. Moreover, there is no report of power analyses to justify sample size.

B	Linz, Donnerstein, and Penrod (1988)	Effects of long-term exposure to violence and sexually degrading depictions of women.	Poor quality (criteria of screening question not met): Age of sample is not reported.
C	Barak and Fisher (1997)	Effects of interactive computer erotica on men's attitudes and behaviour toward women: An experimental study.	Poor quality (criteria of screening question not met): Age of sample is not reported.
D	Demare, Briere, and Lips (1988)	Violent pornography and self-reported likelihood of sexual aggression.	Poor quality (criteria of screening question not met): Age of sample is not reported.
E	Davies (1997)	Voluntary exposure to pornography and men's attitudes toward feminism and rape.	Poor quality (criteria of screening question not met): Age of sample is not reported.
F	Milburn, Mather, and Conrad (2000)	The effects of viewing R-rated movie scenes that objectify women on perceptions of date rape.	Poor quality: The outcome measure was developed by the authors and includes questions which focus on the concepts of 'Rape Perceptions' and 'Rape Tolerance'. The validity and reliability of this measure developed by the authors is unclear. For example, it is not clear if the authors are measuring the same construct, or in the same way, as other papers which are included in the review. Moreover, the reason for the authors to develop their own measures

is not explicit given the availability of validated psychometric measures in this field such as the Illinois rape myth acceptance scale (IRMA; Payne, Lonsway, & Fitzgerald, 1999) and the Acceptance of Modern Myths about Sexual Aggression scale (AMMSA; Gerger et al., 2007).

Data Extraction

Data extraction was completed by the primary researcher on all studies that passed quality assessment and were deemed suitable to include in the systematic review (N=9). This was completed via a form that was designed for this purpose (appendix C), adapted from the data extraction template from the Cochrane handbook (Higgins & Green, 2011). The data extraction form was piloted on 2 studies to allow for appropriate revision before use on all studies included in the final pool. Although recognised as ideal (Boland et al., 2014), due to resources it was not possible for an independent reviewer to complete data extraction on the final pool of studies to check for inter-rater reliability with the primary researcher.

Risk of Bias

Risk of bias was assessed in included studies (N=9) through use of the quality assessment tool. The risk of bias in included studies is summarised in Table 3 and considered during synthesis of the results. Finally, one notes the impact of publication bias; studies that report positive or significant results having a higher likelihood of publication (Dwan et al., 2008). Efforts were made to mitigate this bias by contacting prominent authors in the field for access to unpublished research (see above).

Table 3

Summary of risk of bias in included studies

Study	Sampling/Selection Bias		Attrition Bias	
	Poor Represent- ativeness of Sample	Small Sample	Drop-Out Rates not Reported	Missing Data not Reported
1. Tomaszewska and Krahé (2016)	X		X	
2. Hald and Malamuth (2015)				
3. Gonsalves (2010)	X		X	
4. Garcia (1986)	X			X
5. Foubert, Brosi, and Bannon (2011)	X		X	X
6. Golde et al., (2000)	X	X	X	X
7. Romero-Sánchez et al. (2015)	X		X	X
8. Tomaszewska and Krahé (2018)	X		X	X
9. Taylor (2006) Study 1	X	X	X	X

Table 3

Continued

Study	Performance Bias	Detection Bias		
	Exposure to Pornography not Measured Appropriately/ Accurately	Confounding Variables not Accounted For	Lack of Validity of Outcome Measures	Limitations to Study Design (e.g. lack of comparator, or follow up)
1. Tomaszewska and Krahé (2016)	X		X	X
2. Hald and Malamuth (2015)	X		X	
3. Gonsalves (2010)	X	X	X	X
4. Garcia (1986)	X		X	X
5. Foubert, Brosi, and Bannon (2011)	X			X
6. Golde et al., (2000)			X	
7. Romero-Sánchez et al. (2015)				
8. Tomaszewska and Krahé (2018)	X			
9. Taylor (2006) Study 1	X	X	X	X

Results

Table 4 reports the characteristics of all included studies in the review (N=9). For a summary of the extracted data from included studies, see Table 5. A narrative synthesis of the results was conducted due to the heterogeneity in included studies, such as use of experimental and non-experimental methodology. Additionally, there are a range of quantitative syntheses already available on this topic and a qualitative synthesis was deemed more meaningful. Briefly, guidelines provided by Popay et al. (2006) were used to structure this narrative synthesis.

Table 4

Characteristics of Included Studies

Study Number	Author/s and Date	Location	Study Design	Participant Recruitment	N and Demographics	Main Context/Measure of Exposure to Pornography	Outcome Measure (Relevant to PICO)
1	Tomaszewska and Krahé (2016)	Poland	Cross sectional	Community – high school	≈260 Age: $M=19.4$, $SD=0.87$	Self-report measure of exposure to pornographic content on TV, in magazines and on the Internet. Measure adapted from Krahé (2011)	Attitudes towards sexual coercion scale (Krahé, Bieneck, & Scheinberger-Olwig, 2007)
2	Hald and Malamuth (2015)	Denmark	Cross sectional - experimental	Community	100 Age: $M=24.64$, $SD=3.76$	Random assignment to control (emotionally neutral video) or experimental condition (pornographic video) in which exposed to a 30 minute video	Rape myth acceptance scale (Burt, 1980)

Study Number	Author/s and Date	Location	Study Design	Participant Recruitment	N and Demographics	Main Context/Measure of Exposure to Pornography	Outcome Measure (Relevant to PICO)
3	Gonsalves (2010)	USA	Cross sectional	Community - university	256 Age: $M=20.02$, $SD=3.17$	Self-report measure of exposure to online sexually explicit material developed by author	Rape scale (Bumby, 1996)
4	Garcia (1986)	USA	Cross sectional	Community - university	115 Age: $M=20.72$, SD =not reported	Self-report measure developed by author of exposure to sexual material across different media	Attitudes towards rape scale (Field, 1978)
5	Foubert, Brosi, and Bannon (2011)	USA	Cross sectional	Community - university	489 Age: $M=20.3$, $SD=1.3$	Self-report measure designed by authors of exposure to different types of pornography within previous year	Illinois rape myth acceptance scale (IRMA; Payne, Lonsway, &

							Fitzgerald, 1999)
6	Golde et al. (2000)	USA	Cross sectional - experimental	Community - university	83 Reported that all subjects were at least 18 years old, no further information given	Random assignment to one of four conditions in which exposed to either a control video, a non-explicit video with degrading scenes, a sexually explicit video without degrading scenes, and a sexually explicit video with degrading scenes. Videos all in conditions were 15 minutes in length	Rape supportive attitude scale (Lottes, 1988)
Study Number	Author/s and Date	Location	Study Design	Participant Recruitment	N and Demographics	Main Context/Measure of Exposure to Pornography	Outcome Measure (Relevant to PICO)
7	Romero-Sánchez et al. (2015)	Spain	Cross sectional - experimental	Community - university	118 Age: $M=22.54$, $SD=2.63$	Randomly assigned to a control condition in which exposed to four neutral magazine covers or an	Acceptance of modern myths about sexual aggression scale

						experimental condition in which exposed to four pornographic magazine covers	(AMMSA; Gerger et al., 2007)
8	Tomaszewska and Krahé (2018)	Poland	Prospective longitudinal	Community - university	104 Age at time 1 inclusive of female sample: $M=19.7$, $SD=1.03$	Self-report measure of exposure to pornographic content on TV, in magazines and on the Internet. Measure adapted from Krahé (2011)	Attitudes towards sexual coercion scale (Krahé et al., 2007)
9	Taylor (2006) Study 1	USA	Cross sectional	Community - university	68 Age: $M=19.4$, $SD=1.16$	Self-report measure designed by the author of exposure to 'lad' and pornographic magazines within the last year	Rape myth acceptance scale, 'Blame the Victim' subscale only (Burt, 1980)

Table 5

Table of Extracted Data from Included Studies

Author/s Date	Brief Description of Method (including outcome measures)	Statistical Analyses Used	Summary of Findings	Conclusions/ Implications of Findings
1. Tomaszewska and Krahé (2016)	Examined the link between cognitive scripts for consensual sexual experiences and attitudes towards sexual coercion using a cross-sectional design. Exposure to pornographic content on various forms of media was measured as a predictor of risky sexual scripts. Measure of religiosity and previous sexual experience were also taken.	Path analysis.	Risky sexual scripts were positively linked to attitudes supporting the use of sexual coercion ($\beta=.32$, $p<.001$). Pornography use was not directly linked to attitudes towards sexual coercion ($\beta=.01$). More frequent pornography use was linked to risker sexual scripts ($\beta=.20$, $p<.01$). There was a positive indirect association between pornography use and attitudes towards sexual	No direct link was found between pornography use and attitudes towards sexual coercion, although this may have been due to participants only being asked about general pornography use rather than violent pornography use. Pornography use appears to play a significant role in the development of risky sexual scripts that condone the use of sexual violence in young people, possibly through the

			coercion, through risky sexual scripts ($\beta=.06$, 95% CI [.04, .10]).	mechanism of observing the negative images, norms, and behavioural patterns present in pornography.
2. Hald and Malamuth (2015)	Examined the effects of agreeableness (personality trait), past pornography consumption, and experimental exposure to non-violent pornography on attitudes supporting violence against women (ASV; acceptance of interpersonal violence and rape myths) using a cross sectional design. Participants were exposed to either a neutral video or a pornography video depicting scenes from widely circulated pornography films at the time of the study.	Multiple regression analyses. Mediation analyses.	For men high in agreeableness (one SD above mean) and average in agreeableness, experimental exposure to pornography had no impact on ASV (both $ps>.05$). For men low in agreeableness (one SD below mean), experimental exposure to pornography was significant, $t(94)=2.68$, $p<.001$, and moderately increased ASV (Cohen's $d=.55$). The primary mediator of this relationship	Individual differences (i.e. agreeableness) play a mediating role in the impact of non-violent pornography consumption of attitudes supportive of violence against women. Non-violent pornography is most frequently consumed and thus the effect may be stronger when considering violent pornography.

			appeared to be sexual arousal.	
3. Gonsalves (2010)	Examined the relationship between exposure to different types of pornography ('typical' pornography, violent pornography, degrading pornography, and both violent and degrading pornography) and attitudes condoning sexual aggression (rape myth acceptance) using a cross-sectional design. A range of other variables were also considered.	Multivariate analysis of variance.	A significant difference was not found in rape myth acceptance between males who viewed different types of pornography ($p=.121$).	These results are somewhat surprising and are in contrast to general findings in the literature. It is suggested that this may due to the unique nature of viewing sexually explicit material online, however a range of limitations to this study are noted.
4. Garcia (1986)	Examined the relationship between exposure to sexual materials (magazines, books, and films), including exposure to specific sexual themes, and attitudes towards women (ATW) and attitudes towards rape (ATR) using a cross sectional design.	Correlations.	Exposure to coercive or violent themes within pornography was significantly negatively correlated with ATW on 5 out of 6 subscales. On one subscale, the sexual behaviour of women, pornography use was significantly associated with more liberal attitudes ($p<.05$).	Violent or coercive themes depicted in pornography appear to have the biggest negative impact on attitudes towards sexual aggression, although limitations to this study should be considered.

			Exposure to coercive or violent themes within pornography was significantly correlated with 4 out of 8 subscales of the ATR scale; women are responsible for preventing their own rape, rapists should not be punished, women should resist rape (all $p < .05$), and rapist are normal ($p < .01$).	
5. Foubert, Brosi, and Bannon (2011)	Examined the relationship between exposure to different types of pornography (including 'typical' pornography, sadomasochistic pornography, and pornography explicitly depicting rape) and bystander helping behaviours, rape proclivity, and rape myth acceptance using a cross sectional design.	Independent samples t-tests.	Viewers of sadomasochistic pornography within the past 12 months (27% of sample) were significantly more accepting of rape myths ($p < .01$). Viewers of rape pornography within the past 12 months (19% of sample) were significantly more	Whilst increased rape myth acceptance was not supported for viewers of typical pornography in comparison to those who had not viewed typical pornography, a significant change on behavioural outcome measures was noted which is supported by the

			accepting of rape myths ($p < .01$). Viewers of typical pornography within the last year (83% of sample) scored significantly higher on rape proclivity ($p < .01$) and likelihood of committing sexual assault ($p < .01$) but not rape myth acceptance.	literature. Generally, findings from this research demonstrate a range of negative consequences for males who view pornography. This study highlights the importance of type of pornography viewed; viewers of increasingly violent types of pornography demonstrated increased acceptance of rape myths. This has implications for sexual violence within our society, such as individual's willingness to intervene in a rape related situation.
6. Golde et al. (2000)	Examined the relationship between exposure to video vignettes depicting either	Analysis of variance.	There was a significant main effect of degradation (whether	Exposure to degrading material, regardless of

	sexually explicit/degrading, sexually explicit/non-degrading, non-explicit/degrading, or non-explicit/non-degrading content and attitudes supportive of rape using a cross sectional design.		or not the video was sexually explicit) on attitudes supportive of rape ($p < .01$). No significant effect was found for explicitness.	whether or not that material is also sexually explicit, can have a short term negative impact on males' attitudes supportive of sexual violence. The lack of support found for the impact of explicitness appears to contrast findings from the literature however this study highlights the importance of the theme of degradation which appears commonplace in pornography.
7. Romero-Sánchez et al. (2015)	Examined the impact of exposure to pornographic 'lads' mags' on acceptance of myths about sexual aggression and rape proclivity using a cross-sectional design.	Correlations. Regression analysis.	A greater acceptance of myths about sexual aggression was associated with higher frequency of 'lad mag' reading ($p = .05$).	Exposure to sexualised media content which is prevalent in our society appears to negatively impact attitudes towards sexual aggression.

			Exposure to 'lads' mags' was associated with higher self-reported rape proclivity when participants also scored highly on rape myth acceptance and perceived legitimacy of the 'lads' mag'.	Rape myth acceptance appears to play an important mediating role in the relationship between exposure to pornography and rape proclivity, as does the perceived legitimacy or acceptance of the sexualised media.
8. Tomaszewska and Krahé (2018)	Using a longitudinal design, the authors examined the relationship between exposure to pornography (on TV, the Internet, and in magazines), risky sexual scripts, attitudes towards sexual coercion, and sexual aggression perpetration.	Path analysis.	More frequent pornography use was significantly linked to more condoning attitudes towards sexual coercion ($p < .05$) and to risky sexual scripts ($p < .05$). Pornography use was significantly linked to perpetration of sexual aggression at time 1 ($p < .05$), but not at time 2 ($p > .05$). However, pornography use was an indirect	Repeated exposure to pornographic material that presents the use of coercion as an integral aspect of sexual activity appears to influence user's sexual scripts, in that it leads users' to endorse sexually aggressive behaviour as being justified and normal. This has implications for sexual education programmes focused

			predictor of sexual aggression perpetration at time 2 via its significant link to sexual aggression perpetration at time 1 ($p < .05$).	on the messages typically portrayed in pornography.
9. Taylor (2006) Study 1	Explored the relationship between exposure to pornographic magazines and 'lads mags' and attitudes attributing blame to the victims of rape using a cross-sectional design.	Correlations.	Readership of pornographic and 'lads' magazines was not significantly correlated (both $ps > .05$) with acceptance of rape myths ('Blame the Victim' subscale).	These results stand in contrast to previous research findings. It is suggested that the effect of pornographic material on attitudes towards sexual aggression demonstrated in experimental studies may be due to short term processes (such as arousal or priming) rather than learning.

Characteristics of Included Studies

Half of the included studies were conducted in the USA. Other countries in which studies were conducted included Canada (n=1), Poland (n=2), Denmark (n=1) and Spain (n=1). Every study except one utilised a cross-sectional research design, with three studies being experimental in methodology and exposing participants to pornographic material. Moreover, all samples were drawn from a university student population except in one study (Hald & Malamuth, 2015).

Narrative Synthesis

In order to understand the results, broad themes of included studies were identified. Themes were identified for experimental and non-experimental designs separately before synthesising the results as a whole.

Experimental Studies

Three studies exposed participants to pornography (studies 2, 6, and 8). Two of those studies exposed participants to videos whilst one study exposed participants to pornographic magazine covers (study 8).

Video

Golde et al. (2000) and Hald and Malamuth (2015) had different aims of their research (e.g. Golde et al's., 2000 focus on explicitness and degradation) which led to a range of different experimental conditions being explored. Both of these studies included a control condition, although they

differed in their definition of control condition and use of control stimuli. Most often, studies used the term “emotionally neutral” to describe the stimuli used in the control condition, although often it was unclear exactly what the content of neutral stimuli was (e.g. Golde et al., 2000). The pornographic content participants were exposed to in studies 2 and 6 also appeared variable as did the length of their exposure conditions; 30 minutes (2) and 15 minutes (6).

Hald and Malamuth (2015) and Golde et al. (2000) provide detailed descriptions of the content of their pornographic exposure conditions. Golde et al. (2000) exposed participants to a sexually explicit non-degrading video in condition C, which appears somewhat comparable to the pornographic content participants were exposed to in Hald and Malamuth (2015), although clearly much less sexually explicit. Pornographic content in Hald and Malamuth’s (2015, p. 103) study included “anal sex, double penetration, and facial cumshots” in addition to vaginal sex. The main outcome measures used relevant to this systematic review were the Rape Supportive Attitude Scale (Lottes, 1988) and the Rape Myth Acceptance Scale (Burt, 1980). Hald and Malamuth (2015) conducted multiple regression and mediation analyses and reported the following results. For men high in agreeableness (one standard deviation above the mean) and average in agreeableness, experimental exposure to pornography had no impact on rape myth acceptance (both $ps > .05$). For men low in agreeableness (one standard deviation below the mean), experimental

exposure to pornography moderately (Cohen's $d=.55$) increased rape myth acceptance; $t(94)=2.68, p<.001$. The primary mediator of this relationship appeared to be sexual arousal. Golde et al. (2000) conducted analyses of variance and reported the following results. There was a significant main effect of degradation (whether or not the video was sexually explicit) on attitudes supportive of rape ($p<.01$). No significant effect was found for explicitness.

Magazines

Romero-Sanchez et al. (2015) exposed participants to the covers of 'lads mags', a term used to describe magazines typically aimed at 18-30 year old males which have a highly hetero-sexualised content that serves traditional sex roles of male dominance (Coy & Horvath, 2011). Participants were exposed to 4 'lads mags' covers in the experimental condition, and 4 covers of a popular science magazine in the neutral conditions. The exposure to pornographic content in this study appears to have been significantly shorter than in the studies considered above, although this seems realistic of exposure to pornographic content via this medium. The main outcome measure utilised in this study was the Acceptance of Modern Myths about Sexual Aggression Scale (Gerger et al., 2011). Using correlational analyses, Romero-Sanchez et al. (2015) found a greater acceptance of myths about sexual aggression was associated with higher frequency of 'lad mag' reading ($p=.05$), although this only just reached significance. Exposure to 'lads' mags' was also associated with higher self-

reported rape proclivity when participants also scored highly on rape myth acceptance and perceived legitimacy of the 'lads' mag', which supports the importance of exploring attitudes when considering behaviour.

Despite variability and a range of limitations, results from experimental studies support a negative impact of exposure to pornography on attitudes towards sexual aggression.

Non-Experimental Studies

Six studies in the review used a non-experimental methodology, five of those also using a cross-sectional study design (studies 1, 3, 4, 5 and 9). Study 8 (Tomaszewska & Krahé, 2018) will be discussed separately due to the use of a longitudinal design rather than cross-sectional.

There was variability across studies 1, 3, 4, 5, and 9. For example, authors typically designed their own measures to assess exposure to pornography resulting in inconsistency. A range of outcome measures were also used across studies, including the attitudes towards sexual coercion scale (Krahé et al., 2007; 1), the rape scale (Bumby, 1996; 3), the attitudes towards rape scale (Field, 1978; 4), the Illinois rape myth acceptance scale (Payne, Lonsway, & Fitzgerald, 1999; 5), and the rape myth acceptance scale, 'Blame the Victim' subscale only (Burt, 1980; 9). In summary, all 5 of these studies explored the relationship between self-reported exposure to

pornography and attitudes towards sexual aggression via a range of methods.

Tomaszweska and Krahé (2016) conducted path analysis and found that pornography use was not directly linked to attitudes towards sexual coercion ($\beta=.01$) but more frequent pornography use was linked to riskier sexual scripts which are defined as cognitive schemas which appear to influence related attitudes towards sexual aggression ($\beta=.20, p<.01$). Risky sexual scripts were positively linked to attitudes supporting the use of sexual coercion ($\beta=.32, p<.001$). There was a positive indirect association between pornography use and attitudes towards sexual coercion, through risky sexual scripts ($\beta=.06, 95\% \text{ CI } [.04, .10]$).

Gonsalves (2010) conducted multivariate analysis of variance and reported that there was no significant difference in rape myth acceptance between males who viewed different types of pornography ($p=.121$).

Garcia (1986) conducted correlational analysis and reported that exposure to coercive or violent themes within pornography was significantly correlated with 4 out of 8 subscales of the attitudes towards rape scale; women are responsible for preventing their own rape, rapists should not be punished, women should resist rape (all $p<.05$), and rapists are normal ($p<.01$).

Foubert et al. (2011) conducted independent samples t-tests and found that viewers of sadomasochistic pornography within the past 12 months (27% of sample) were significantly more accepting of rape myths ($p < .01$). Viewers of rape pornography within the past 12 months (19% of sample) were significantly more accepting of rape myths ($p < .01$). Viewers of typical pornography within the last year (83% of sample) scored significantly higher on rape proclivity ($p < .01$) and likelihood of committing sexual assault ($p < .01$) but not on rape myth acceptance.

Taylor (2006) conducted correlational analyses and found that readership of pornographic and 'lads' magazines was not significantly correlated (both $ps > .05$) with acceptance of rape myths ('Blame the Victim' subscale).

Only two of these studies (Gonsalves, 2010; Taylor, 2006) reported insignificant results, which are incongruent with results from the rest of the review. All other studies reported significant results and in summary suggest that increased exposure to pornography appears to increase attitudes condoning sexual aggression. These results will be interpreted in the discussion.

Finally, Tomaszewska and Krahé (2018) utilised a longitudinal study design. At time one, they measured participant's risky sexual scripts, risky sexual behaviour, pornography use, religiosity, sexual self-esteem, and attitudes toward sexual coercion. At time two, these variables were used

to predict sexual aggression perpetration and victimisation. Relevant to this review, the authors conducted path analysis and reported that more frequent pornography use was significantly linked to more condoning attitudes towards sexual coercion ($p < .05$) and to riskier sexual scripts ($p < .05$).

Subgroup Analysis

To further synthesise the results, included studies were analysed across the subgroups of violent and non-violent pornography, as considered when determining the PICO criteria for the review.

Violent Pornography

Three included studies investigated the impact of violent pornography on attitudes towards sexual aggression; Gonsalves (2010), Foubert et al. (2011), and Golde et al. (2000).

Gonsalves (2010) conducted a non-experimental study and investigated this relationship by classifying participants into one of four groups, based on whether participants endorsed viewing specific types of sexually explicit material or not; neither violent nor degrading sexually explicit material, violent sexually explicit material, degrading sexually explicit material, or violent and degrading sexually explicit material. Participants' results on a scale of rape myth acceptance (Rape Scale; Bumby, 1996) were then analysed across groups. Analyses revealed no significant difference across

groups on rape myth acceptance. The results of this analysis remained non-significant even when the subgroups were condensed into 'not sexually aggressive or coercive' and 'sexually aggressive or coercive' and re-analysed. The method of classification used in this study is worth considering. It is noted that participants were classified into a condition based on what they endorsed watching themselves. There are obvious disadvantages to this method. For example, this method relies on self-report which has limitations when exploring a topic of a sensitive nature or that is socially undesirable in some way (such as reporting endorsement of violent pornography). Seemingly as a consequence of this, it is unsurprising that the majority of the sample were classified into the neither violent nor degrading pornography condition based on their self-reported endorsement ($n = 188$).

Golsalves (2010) also report that what was defined as degrading pornography was based on subjective judgment by the participants. It is suggested that this reduces the validity of this condition. As previously discussed, there have been extensive discussions regarding the definition of pornography and debate in this area has been suggested as key limitation in drawing clear conclusions for this field (see Rea, 2001). Thus, it seems necessary that clear definitions are provided for specific types of pornography, such as degrading, to ensure validity of any subgroups identified amongst participants. Following on from this, it is worth noting that due to the non-experimental nature of the study there were an uneven

number of participants in each condition. For example, there were only 4 participants in the violent pornography condition, in comparison to 188 participants in the neither violent nor degrading pornography condition. This type of comparison is problematic and may have affected the statistical validity of the analyses used. Moreover, it seems unlikely that robust conclusions can be drawn from such a small sample size in that condition. The results from this study are in contrast to research in this area which generally suggests that viewing violent pornography is more strongly associated with deleterious consequences for the individual (Malamuth et al., 2000), as well as the two other studies included in this review which investigate violent pornography. It is suggested that the limitations discussed above may have affected the results of this study.

Foubert et al. (2011) also conducted a non-experimental study and investigated the effect of exposure to different types of pornography on rape myth acceptance. Participants reported their exposure to 'mainstream pornography' (non-violent pornography), sadomasochistic pornography, and violent pornography, which depicted scenes of rape over the last 12 months. Analysing the data with t-tests, they found increasingly deleterious effects of exposure to pornography on rape myth acceptance (along with other variables) as the violence depicted in the pornography increased. Similarly to the research conducted by Gonsalves (2010), there are limitations to the self-report data used in this study. It is possible that the results were confounded by social desirability bias. In addition, participants

were asked to report their exposure to different types of pornography over the last 12 months. Self-report data of this kind may have been limited by memory. That being said, Foubert et al. (2011) report results that support previous research findings (e.g. Flood & Hamilton, 2003; Hald et al., 2010, Malamuth et al., 2000), in that violent pornography has more of a deleterious effect on the individual that views it than non-violent pornography.

Golde et al. (2000) conducted an experimental study and explored the impact of degrading and explicit pornographic videos on individuals' acceptance of rape myths (see Experimental Studies, Video, page 52 for a detailed description of this study). Golde et al. (2000) described the explicit degrading pornographic condition as a scene that "depicted a naked woman sitting in a chair as a man insults her before and while having intercourse with her. He then demands that she say that she would give up everything for him" (p. 226). It is noted that the description of the material shown to participants in this condition meets the definition of violent pornography (see page 26 of this review). The results of ANOVA analyses revealed that there was a significant main effect of degradation, regardless of explicitness, on attitudes supportive of rape. The results suggest that the violent/degrading nature of the material was more important than the explicitness of it, with regard to the negative impact of the material on participants. This is interesting and provides further support for previous research findings that suggest exposure to violent pornography is more

harmful to those that view it than exposure to pornography which does not contain violence, at least in the short term (e.g. Malamuth et al., 2000).

It is noted that two of three studies included which investigated violent pornography did so using a non-experimental methodology. It is suggested that more robust conclusions can be drawn from studies which used experimental methodology, meaning that more weight is given to the conclusions drawn by Golde et al. (2000).

Summary

In considering data from the risk of bias assessment, it is noted that those studies identified as having a small sample size (Golde et al., 2000, and Taylor, 2006) also reported no significant effect of exposure to pornography on the outcome measures used. For example, whilst Golde et al. (2000) reported a significant main effect of exposure to degrading videos (regardless of whether the video was sexually explicit or not) on attitudes supportive of rape, they reported no significant effect of exposure to videos of differing levels of sexual explicitness on attitudes supportive of rape. Taylor (2006) reported that readership of pornographic and 'lads' magazines was not significantly correlated with acceptance of rape myths. Both of these studies had sample sizes below 100, and their results contrasted those of the other included studies (except one). This is interesting to note and suggests that this risk of bias may have impacted the results drawn from the research.

The validity of outcomes measures used in the included studies was also considered in the risk of bias assessment. Three of the included studies were considered to have used valid outcomes measures; Foubert et al. (2011), Romero-Sanchez et al. (2015); Tomaszewska and Krahé (2018). These studies are noted to have all reported significant findings, similar to all other included studies (except three). Therefore, there does not appear to be any notable difference in findings reported from studies that used more valid outcome measures in their research.

In summary, experimental studies generally indicated a deleterious effect of exposure to pornography on attitudes towards sexual aggression, although non-experimental studies also generally supported this conclusion. Violent pornography appeared to have the most significant negative impact.

Discussion

This systematic review focused on the effect of exposure to pornography on attitudes towards sexual aggression in adult males. Studies which focused on behavioural outcome measures of sexual aggression were excluded from this review because this was not the focus of the thesis (see Chapter 1 for an in depth rationale of the focus on the thesis). Briefly, exploring the effect of exposure to pornography on attitudinal outcome measures in the systematic review is argued as more valuable; the majority of research in this area appears to explore attitudinal, rather than

behavioural, outcomes. This focus also appears easier and less resource intensive for researchers. Moreover, a focus on attitudes appears more ethical and the results more generalisable. It is noted that studies in this area that have explored behavioural outcome measures of aggression have done so in highly specific contexts and environments. Given the difficulties with accurately and reliably exploring behavioural aggression as an outcome measure in this area of research, a focus on attitudes appears justified. Moreover, there is an evidenced link within the literature between attitudes towards sexual aggression and behavioural sexual aggression (Malamuth et al., 2000; Seto et al., 2001; further supported by the results from this review) which has implications when considering sexual violence and offending.

A narrative synthesis methodology (Popay et al., 2006) was utilised to explore the results due to the heterogeneity in included studies; this review included studies of an experimental and non-experimental methodology. The results of experimental studies suggested that exposure to pornography increased attitudes supportive of sexual aggression. Results from non-experimental studies were generally congruent with their experimental counterparts, although it is noted that the results from Gonsalves (2010) and Taylor (2006) did not provide support for this narrative. These studies however appeared to have a greater risk of bias than other non-experimental studies included in the synthesis and therefore less weight was given to these results (see below). This review

provides theoretical support for the HCM (Malamuth, 2003) of sexual aggression. The results will be discussed separately for experimental and non-experimental studies.

Experimental Studies

The results from Hald and Malamuth (2015) provide support for the HCM, in that variability in personality traits (such as agreeableness) appears to mediate the relationship exposure to pornography has on rape myth acceptance. This is a central concept in the literature that suggests individual differences mediate the deleterious effects of pornography (e.g. Vega & Malamuth, 2007), in that men who are predisposed to behave in a sexually aggressive way are those who are most negatively impacted by exposure to pornography (Malamuth & Hald, 2017). The results from this study also support priming and affective activation theories (Hald et al., 2014; Jo & Berkowitz, 1994); pornography leads to sexual arousal which primes/activates cognitive networks associated with attitudes supportive of violence against women. The findings from Golde et al. (2000) appear less clear; they generally do not support the literature or the results found by Malamuth and Hald (2015). It may be that no effect of explicitness alone was found due to the shorter length of exposure to pornographic material. Moreover, it is noted that more risk of bias was found when evaluating Golde et al. (2000; see Table 3) and thus the results of this study appear to have less credibility. Briefly, it is suggested that the results regarding the significance of degradation of pornographic material in Golde et al.

(2000) may also provide support for priming theories, particularly given that violent pornography (which often includes themes of degradation) is suggested to have more deleterious effects of those who consume it (Malamuth et al., 2000). The results of Romero-Sanchez et al. (2015) provide further support for priming theories (Jo & Berkowitz, 1994), suggesting that even relatively short-term exposure to pornographic images may prime or activate concepts or attitudes supportive of violence against women.

Non-experimental Studies

Both Gonsalves (2010) and Taylor (2006) reported insignificant results. It is worth noting that Taylor (2006) did not use the full rape myth acceptance scale (Burt, 1980) as an outcome measure, but only one subscale from it. The scale was not specifically designed to be used in this way (Burt, 1980) and consequently the study may have neglected other aspects of the rape myth acceptance construct impacted by exposure to pornographic magazines. Moreover, Taylor (2006) appears to have the greatest risk of bias of studies included in the review (Table 3) and thus less weight should be given to the findings. Whilst Gonsalves (2010) found no statistically significant difference in rape myth acceptance between males who viewed different types of pornography (none, violent, degrading, and violent and degrading), the average rape myth acceptance scores of males who viewed violent pornography appears higher than other groups. Moreover, the self-report measure of exposure to pornography used in this study appears

particularly susceptible to socially desirable responding due to an extensive range of personal and sensitive questions asked, which may have limited the results somewhat. Furthermore, the risk of bias in this study was also high.

All other non-experimental studies reported significant results; increased exposure to pornography appears to increase attitudes supporting sexual aggression. Tomaszewska and Krahé (2016) highlight the important theoretical role of risky sexual scripts. This study provides theoretical support for the HCM (Malamuth, 2003). Repeated exposure to pornography (that typically depicts themes of sexual coercion; Bridges et al., 2010) appears to impact cognitive scripts about sex and coercion which reduces inhibiting factors for sexual aggression. Whilst no theoretical explanation is discussed by Garcia (1986), their results further support priming processes in that exposure to pornography primes or activates attitudes towards sexual aggression. Priming processes are discussed as a mechanism for the impact of pornography on disinhibiting factors (such as attitudes supportive of sexual aggression) in the HCM (Hald & Malamuth, 2015). Results from Foubert et al. (2011) also appear to support the HCM; violent pornography increased rape myth acceptance (a disinhibitor to sexual aggression). It is noted that the focus of this study was on pro-social helping behaviour and whilst not the focus of this review, it is worth noting the link between exposure to pornography and a decrease in pro-social behaviour (Foubert et al., 2011). Results from Tomaszewska and Krahé (2018) further support

the HCM via discussion of risky sexual scripts (Malamuth, 2003; see discussion above). This hypothesis is further supported by the significant link found between the acceptance of sexual coercion and sexual aggression perpetration (Tomaszweska & Krahé, 2018). This synthesis appears robust; each of these studies has a similar risk of bias (Table 3) and a lower risk of bias than the non-experimental studies that did not report significant results.

In summary, both experimental and non-experimental studies generally reported results that suggest there are deleterious effects of exposure to pornography on attitudes towards sexual aggression, providing support for the HCM particularly via the mechanism of priming.

A range of methodological issues are evident within the literature (see Table 3). Namely, the typical cross-sectional design of studies limits the conclusions that can be drawn. Only one study included in the review utilised a longitudinal design and explored change over time (although the focus of this study was not on attitudinal change at follow up, Tomaszweska & Krahé, 2018). Thus, whilst this review supports that exposure to pornography has at least a short-term negative impact on attitudes towards sexual aggression, it is not clear if this change is sustained. The inclusion of follow up conditions is also a recommendation for future research.

When considering this issue, research that investigates the impact of media violence on aggression in children demonstrates a similar pattern to that found in this review. For example, it is noted that studies which investigate this issue using an experimental methodology generally find more of an effect of exposure to media violence than studies which use observational designs (Browne & Hamilton-Giachritsis, 2005; Mitrofan, Paul, & Spencer, 2008). The results from the media violence literature, and from this review, support the suggestion that the effects of exposure to pornographic material are most salient immediately after exposure. This has implications when considering the most appropriate settings/environments in which to view pornography and is worthy of further research.

It is noted that in experimental studies there was discrepancy in what is defined as a neutral stimulus. This is problematic and limits conclusions that can be drawn from the research, much like the difficulties conceptualising pornography that are evident in the literature. For example, Hald and Malamuth (2015) utilised nature documentaries as their control stimuli, which could be argued as emotionally arousing. Similarly, Romero-Sanchez et al. (2015) utilised scientific magazine covers as their neutral stimuli. Studies also differed in the length of their exposure conditions; 30 minutes (Hald & Malamuth, 2015) and 15 minutes (Golde et al., 2000), and the content of the pornography that participants were exposed to. It is noted that the definition of explicitness is likely to have evolved over time in that sexual material has become more explicit (Bridges et al., 2010).

These limitations are relevant when evaluating the methodology typical of experimental studies in this area.

Of the studies that focused on rape myth acceptance as outcome measures, all studies but two (Foubert et al., 2011 and Romero-Sánchez et al., 2015) utilised dated measures of rape myth acceptance including Burt's (1980) original rape myth acceptance scale, the rape scale (Bumby, 1996), the rape supportive attitude scale (Lottes, 1988), and the attitudes towards rape scale (Field, 1978). This is somewhat surprising; the AMMSA (Gerger et al., 2007) appears to be the most recently developed measure of this construct that addresses a range of limitations to previous measures. It is noted that the IRMA is also available (Payne et al., 1999; see Chapter 3 of this portfolio for a critique). It is recommended that future research consider the use of the AMMSA or the IRMA over more dated measures of rape myth acceptance.

Briefly, there are limitations to this review which should be considered. Firstly, whilst every effort was made to ensure that the search was as comprehensive and systematic as possible, there are limitations to any systematic search, particularly given the resources available to the researcher (e.g. the inclusion of studies in English only). Although efforts were made to avoid publication bias (Dwan et al., 2008), there is a risk that unpublished papers were not identified in the grey literature search. Moreover, the full texts of 5 papers were not able to be accessed within the

time frame of the review, despite extensive efforts. Finally, the definition of attitudes towards sexual aggression used in this review appears more specific than previously used (e.g. Hald et al., 2010; Malamuth et al., 2000), which may have contributed to the smaller number of studies included in this review. For example, Hald et al. (2010) included studies which investigated outcome measures not entirely related to or focused on sexual violence/aggression against women (e.g. the acceptance of interpersonal violence scale; Burt, 1980). The definition of attitudes towards sexual aggression used in this review was narrower to ensure that the conclusions drawn from the research were as robust as possible.

Briefly, it is also noted that four of the studies included in the review appear to have less applicability to British males; Hald and Malamuth (2015), Romero-Sánchez et al. (2015), and Tomaszewska and Krahé (2016 and 2018). These studies were conducted in Denmark, Spain, and Poland respectively. All other studies included in the review were conducted in the USA. There are possibly differences between such populations which is worth considering when evaluating the generalisability of these findings.

This paper, and previous reviews, have appeared to focus exclusively on pornography, explicit sexual material that is intended to be sexually arousing to the consumer. There has been relatively little focus on soft-core pornography, a type of pornographic material that is still intended to be sexually arousing but is much less sexually explicit in content. This

distinction is significant; it is suggested that pornographic material of a soft-core nature appears commonplace in mainstream media. Research has begun to explore the impact of exposure to pornographic content in mainstream media (e.g. Wright & Tokunaga, 2016), although there is a considerably smaller evidence base to draw upon, perhaps because of debate among academics as to any deleterious effect of viewing pornographic material. With relatively consistent conclusions evidenced about the negative impact of exposure to pornography on attitudes, which is relevant when considering behaviour and sexual offending, it is suggested that the field begin to focus attention on soft-core pornographic material in mainstream media. Exposure to this kind of material often appears somewhat less intentional (e.g. through engaging with news outlets, watching TV, advertisements etc.) and thus presents as an interesting psychological phenomenon.

Finally, there are a range of implications considering the results of this and previous reviews (e.g. Hald et al., 2010). It is suggested that there is increased awareness as to the potentially harmful effects of pornography consumption, as well as greater safeguarding measures put in place to restrict access to pornography for more vulnerable populations (e.g. children and adolescents). Moreover, given that the negative effect of pornography on attitudes supportive of sexual aggression appears most significant when considering exposure to violent pornography, it is suggested that the content of pornography (e.g. Bridges et al., 2010) be

challenged or rejected more explicitly by the general public. Briefly, there are also potential implications regarding risk assessment of sexual violence and policy surrounding pornography use in secure psychiatric settings.

Chapter 3 - Critique of the Illinois Rape Myth Acceptance Scale **(Payne, Lonsway, & Fitzgerald, 1999)**

Abstract

The term rape myths can be defined as widely held beliefs that serve to justify male sexual violence against women. The extent to which an individual endorses rape myths (rape myth acceptance) has been extensively researched. Rape myth acceptance is strongly associated with an individual's propensity to rape and appears linked to the commission of sexual offences. This paper critiques the psychometric properties of the Illinois Rape Myth Acceptance scale (IRMA; Payne, Lonsway, & Fitzgerald, 1999) which is a psychometric measure developed to assess adults' level of endorsement of common rape myths. This scale remains widely applied within academic research. In reference to the desired psychometric property of reliability, the IRMA demonstrates good internal reliability although poor test-retest reliability. In terms of validity, the scale demonstrates adequate construct validity, although poor face validity and concurrent validity has not yet been tested. Recommendations for further research are made to increase the validity and reliability of the scale, drawing on the Acceptance of Modern Myths About Sexual Aggression scale (Gerger, Kley, Bohner, & Siebler, 2007) as an updated measure. Despite the limitations identified and updated measures available, this critique highlights the value of the Illinois Rape Myth Acceptance Scale in

investigating the construct of rape myth acceptance, which appears relevant to understanding sexual offending.

Keywords: *rape myth acceptance, Illinois Rape Myth Acceptance Scale, validity, reliability*

Introduction

The construct of “rape myths” was first discussed in the 1970’s by Schwendinger and Schwendinger (1974) and Brownmiller (1975), and was later defined by Burt (1980) as “prejudicial, stereotyped, or false beliefs about rape, rape victims, and rapists” that “[create] a climate hostile to rape victims” (p.217). Researchers theorised that rape myths perpetuate male sexual violence against women by absolving the perpetrator, blaming the victim, and minimising or justifying sexual violence, therefore “deliberately [obscuring] the true nature of rape” (Brownmiller, 1975; p.312). Since initial conceptualisations, the definition of rape myths has evolved to clearly reflect the definition of a myth. For example, the following definition was used by Payne, Lonsway, and Fitzgerald (1999) in their development of the Illinois Rape Myth Acceptance Scale (IRMA): “rape myths are attitudes and beliefs that are generally false but are widely and persistently held, and that serve to deny and justify male sexual aggression against women” (Lonsway & Fitzgerald, 1994, p.134).

Despite being widely used, this definition has been critiqued. Gerger, Kley, Bohner, and Siebler (2007) suggest that, when defining rape myths, the use of the word ‘false’ is problematic as it makes it difficult to establish if something meets this criterion (e.g. Item 8 of the IRMA: “Many women secretly desire to be raped”). In addition, it is difficult to establish if a belief is “widely and persistently held” by society, and how widely and persistently held it has to be before it can be considered a rape myth. Moreover, stating

that a rape myth is required to be widely and persistently held suggests that, if less people endorse the myth over time, then it can no longer be defined this way (Gerger et al., 2007). A less specific definition of rape myths reflects such criticism; “rape myths are descriptive or prescriptive beliefs about rape (i.e. its causes, context, consequences, perpetrators, victims, and their interaction) that serve to deny, downplay or justify sexual violence that men commit against women” (Bohner, 1998, p. 14). As it is beyond the scope of this report, see Gerger et al. (2007) and Bohner et al. (2009) for a comprehensive discussion regarding the function of rape myths.

The role that rape myth acceptance may play in the commission of sexual offending is highly debated within the literature. A wide range of research suggests that increased rape myth endorsement is strongly and significantly associated with an individual’s proclivity to rape in non-offender samples (e.g. Champleau & Oswald, 2010; Chiroro et al., 2004), and evidence suggests that institutional or societal endorsement of rape myths can have a directly negative impact on the public and the victims of sexual assault (e.g. Edwards et al., 2011; Gray, 2006). The relationship between rape myth acceptance and rape proclivity appears to be mediated by the individual’s anticipated enjoyment of sexual dominance over the victim, supporting the feminist argument that the exertion of male power over females is a central component of rape myth acceptance (Chiroro et al., 2004).

Despite the wealth of evidence in this area, there appears to be few available systematic reviews or meta-analyses that allow more concrete conclusions. One recent systematic review however, investigated rape myth acceptance within individuals who have been convicted of a sexual offence (Johnson & Beech, 2017). The authors found that whilst rape myth acceptance can distinguish between rapists, non-offenders, and non-sexual offenders, it was not a significant predictor of sexual recidivism, thus suggesting that rape myth acceptance is a somewhat less useful construct when applied to offender rehabilitation (Johnson & Beech, 2017). Although, it is suggested that rape myth acceptance may form part of a wider construct of attitudes supportive of sexual offending, which has been found to be a factor predictive of sexual recidivism (Helmus et al., 2013). Thus, whilst the relationship between rape myth acceptance itself and the commission and desistance of sexual offending appears to be less clear, rape myth acceptance is clearly a relevant and important construct.

The focus of this critique concerned rape myth acceptance specifically, for a number of reasons. Firstly, and perhaps most significantly, rape myth acceptance remains a commonly explored outcome measure in the literature investigating the impact of exposure to pornography. For example, it is noted that of the 9 studies included in the systematic review presented in Chapter 2 of this thesis, 6 explored outcome measures specifically related to rape myth acceptance. Whilst the Acceptance of Modern Myths about Sexual Aggression scale (AMMSA; Gerger et al. 2007;

discussed below), which includes the construct of rape myth acceptance, was developed following criticism of existing rape myth acceptance scales and therefore may have been considered a more appropriate focus of this critique, rape myth acceptance still appears explored as a standalone construct in this area (rather than in the wider context of attitudes supportive of sexual aggression). In addition, there appear to be numerous comprehensive critiques of the AMMSA already available (see Watson, 2016; Armosti, 2016), and less critiques that specifically focus on the concept of rape myth acceptance in comparison. The researcher was also interested in the conceptualisation of rape myth acceptance over time, and how this concept is now understood in the wider context of attitudes generally supportive of sexual violence against women (e.g. into the AMMSA). There appears to be topical media interest in the construct of rape myth acceptance (The Guardian, 2019), as well as relatively recent contentious academic debate (see Conaghan & Russell, 2014; Krahé, 2013; Reece, 2014). The above reasons justify a focus on the construct of rape myth acceptance throughout this critique.

Alternative Measures

Since initial discussions about the construct of rape myths, a range of measures have been developed attempting to measure their acceptance. In a review of the rape myth literature, Lonsway and Fitzgerald (1994) identified 24 measures designed to assess rape myth acceptance. The most significant attempts to assess this construct are briefly discussed below.

Burt (1980) reported the development of the first Rape Myth Acceptance scale (RMAS). The scale consists of fourteen items, of which eleven are measured on a 7-point Likert-type scale and three are measured on a 5-point Likert-type scale (Burt, 1980). Participants are required to indicate their agreement with each item, which are proposed to represent common myths about rape. This scale has been used extensively and despite its dated nature (e.g. Item 7: If a girl engages in necking or petting and she lets things get out of hand, it is her own fault if her partner forces sex on her), this scale remains used in relatively recent research (e.g. Uji et al., 2007). In fact, a recent systematic review investigating rape myth acceptance in convicted rapists argues that Burt's RMAS is the most widely used measure in this field (Johnson & Beech, 2017). Despite its widespread application, this scale has been extensively critiqued by a range of authors.

Firstly, Burt's definition of rape myths is suggested as conceptually inadequate (Lonsway & Fitzgerald, 1994; Payne et al., 1999). Bumby (1996) argued that the scale is highly susceptible to socially desirable responding and many of the items included in the RMAS are not actually rape myths, and Lonsway and Fitzgerald (1994) suggested that some items included in the scale are impossible to verify (e.g. Item 10: Many women have an unconscious wish to be raped, and may then unconsciously set up a situation in which they are likely to be attacked.) Questions regarding the process of the scale development are also posed (e.g. Larsen & Long, 1988). Finally, Payne et al. (1999) highlight a number of weaknesses of

this initial measure, the most significant being the lack of structural investigation of the underlying factors of the construct.

More recently, and following Payne et al's. (1999) work, Gerger et al. (2007) developed the AMMSA; a 30 item scale self-report scale. Briefly, following criticism of established rape myth acceptance psychometric measures, in particular the often highly negatively skewed distributions and low means they yield, the AMMSA was developed to assess subtler rape myths and less severe forms of sexual aggression more generally. It was hoped that use of a scale of this kind would lead to less skewed data whilst still providing a measure of rape myth acceptance (Gerger et al., 2007). The AMMSA appears to be widely used and has been translated and validated on an increasing range of populations (see Watson, 2016), including its use with Spanish-speaking college students (Megias et al., 2011). The AMMSA is a unique scale in this area, in that it does not exclusively focus on rape myth acceptance (see above for a rationale of the critique of the IRMA presented). Note that throughout this critique of the IRMA, the development of the AMMSA will be referred to further (Gerger et al., 2007).

The Illinois Rape Myth Acceptance Scale

The Illinois Rape Myth Acceptance Scale (IRMA; Payne, Lonsway, & Fitzgerald, 1999, appendix D) is a psychometric measure that was developed to investigate adults' endorsement of common rape myths. The

full scale is a self-report measure including forty items, which comprise of seven subscales (Payne et al., 1999): She asked for it, It was not really rape, He did not mean to, She wanted it, She lied, Rape is a trivial event, and Rape is deviant event. The scale also includes five negatively worded filler items which are not scored but included in attempt to control response sets, although the usefulness of negatively worded or reverse scored items for this purpose is debated (e.g. Van Sonderen, Sanderman, & Coyne, 2013). Thus, the full scale includes forty-five items. In addition, Payne et al. (1999) developed a short version of the scale to allow for its wider applicability in research where there may be time constraints. The IRMA – Short Form (IRMA-SF, appendix D) includes twenty items comprising of the above seven subscales and also filler items. Individual's complete the scale by indicating their agreement with the items via a seven-point Likert-type scale ranging from *1 = not at all agree* to *7 = very much agree*.

Applications

The IRMA has been, and continues to be, extensively applied in academic research (e.g. Lynch et al., 2017), despite the development of the AMMSA (Gerger et al., 2007). It has been described by some researchers in the field as “arguably the most reliable and psychometrically demonstrated rape myth scale to date” (McMahon & Farmer, 2011, p. 72), and has been widely cited. The IRMA does not appear to have been applied clinically, which may be due to the IRMA being an attitudinal measure that does not provide normative data. However, it is also argued that clinical use of the

IRMA would be problematic due to the negatively skewed or 'floored' data it typically produces, meaning that any differences in rape myth acceptance across a population would be difficult to detect (see Gerger et al., 2007 for a discussion). In fact, this significant criticism of the IRMA prompted the development of the AMMSA (Gerger et al., 2007).

Development of the IRMA

Following the evident flaws described in the literature, Payne et al. (1999) developed the IRMA with the aim of overcoming shortcomings of previous scales, particularly the RMAS (Burt, 1980). The development of the IRMA is well detailed by the authors, but of particular interest is the development of the initial item pool and the final items included in the scale. One questions if the items included in the scale are really rape myths, and how we know if they are. The authors state that they initially created a pool of 120 rape myth items through a review of the literature and discussion with experts in the field (Payne et al., 1999). Although the authors provide a more thorough definition of rape myths than provided by Burt (1980), some aspects of the definition appear problematic and have been critiqued (see above; Gerger et al., 2007). Given that the definition of rape myths used by Payne et al. (1999) is debated, the validity of their development of an initial pool of 120 rape myths for the purpose of scale development is questioned.

Evaluation

The following sections of this paper will critically analyse the psychometric properties of the IRMA. As summarised by Kline (2000a, p. 24) "A good psychological test has high reliability, high validity and high discriminatory power. In addition, it possesses extensive norms." Briefly, the IRMA is a self-report measure, of which limitations are well documented (see Jupp, 2006). It is suggested that the limitations of self-report measures are compounded for IRMA given the socially undesirable connotations of high rape myth acceptance (see Face Validity for a further discussion).

Reliability

The reliability of psychometric measures consists of internal and test-retest reliability.

Internal Reliability

Internal reliability can be defined as the extent to which a measure is internally consistent, or the extent to which items included within the scale all measure the same construct. This aspect of reliability is typically considered essential and a prerequisite of high validity (e.g. Guildford, 1956; Nunnally, 1978). Despite criticism of internal consistency (e.g. 'bloated specifics' Catell, 1973; Catell & Kline, 1977) researchers strive to demonstrate high internal reliability, which is typically measured using Cronbach's alpha coefficients (α). A widely accepted classification of such

coefficients state that above 0.9 is excellent, 0.9-0.8 is good, 0.8-0.7 is acceptable, and under 0.7 is poor (George & Mallery, 2003).

Payne et al. (1999) reported that the overall α of the IRMA is .93, and the IRMA-SF is .87, indicating excellent and good internal reliability of the measures (according to George & Mallery, 2003). The 7 subscales of the IRMA yielded α coefficients ranging between .74 - .84, similarly indicating appropriate levels of internal reliability. Interestingly, Payne et al. (1999) suggest that a hierarchical structural model (a general myth component and 7 subscales) best describes the structure of the IRMA. However, the data reported in relation to this in their paper is suggested to actually support a unidimensional structural understanding of rape myth acceptance (see Gerger et al., 2007). It is noted that Gerger et al. (2007) report a unidimensional structural understanding of rape myth acceptance, reflected in their scale not being split into distinct subscales, which contrasts most previous measures of rape myth acceptance (e.g. Burt, 1980; Field, 1978; see Watson, 2016). Thus, interpretation of the factor analysis presented by Payne et al. (1999) is somewhat unclear. It is suggested that an avenue for future research could be the further exploration of the differential validity of the subscales included in the IRMA (Bohner et al., 2009).

External Reliability

Test-Retest Reliability

Test-retest reliability refers to the stability of a measure over time (Kline, 2000b). Simply, test-retest reliability is the degree of similarity between an individual's scores on a test across two occasions of testing. Clearly, test-retest reliability is essential; if there is little correlation between an individual's scores on a test over two occasions (when the individual has completed no intervention) then the measure is meaningless (Kline, 2000b). A correlation coefficient of .7 as a minimum is considered an acceptable level of test-retest reliability, which indicates an agreement of 49% between test scores (Kline, 2000b).

During the item pool data collection stage of scale development, Payne et al. (1999) administered 95 rape myth items to a sample of 780 participants. The purpose of this stage was to determine which rape myth items best represented rape myths as a construct. Participants were required to indicate their level of agreement with each item via a Likert-type scale via a computer programme. Following their completion of this research, it is reported that 20% of the rape myth items were re-administered to a subset of participants to obtain an immediate measure of test-retest reliability (Payne et al., 1999). The authors report that the correlation between the first and second presentation of the rape myth items was high (.90) at a significance level of $p < .001$, thus indicating "good test-retest stability" (Payne et al., 1999, p. 36). It is argued that this does not constitute

sufficient exploration of the test-retest reliability of the IRMA. This testing was completed during scale development and whilst it is useful in justifying the final pool of items, similar testing does not appear to have been completed with the final IRMA. Moreover, Kline (2000b) suggests that a period of at least 3 months between testing occasions is required to gain an estimate of test-retest reliability for a measure, which would suggest that the testing completed during scale development is questionable. In development of the AMMSA, Gerger et al. (2007) present the results of 3 studies exploring the test-retest reliability of their measure, over 3 weeks, 6-10 weeks, and 4-13 weeks respectively. In comparison, the IRMA appears to lack adequately explored test-retest reliability, even post publication, which is a significant limitation of this measure.

Validity

Face Validity

Although a weaker measure of validity, face validity is relevant to scale development and viewed as an initial marker of robust psychometric properties. It is defined as whether a measure is subjectively considered to assess the construct that it claims to. A measure that is considered to have high face validity would be considered to measure its intended construct clearly and unambiguously. High face validity is typically viewed as advantageous as it can increase participant's motivation which is important for valid psychometric testing (Kline, 2000b), although, high face validity is usually not desirable when attempting to accurately measure socially

undesirable constructs. The IRMA appears to be a highly face valid measure of rape myth acceptance. The purpose of the scale is transparent and on evaluation of the items, one can clearly begin to identify subscales that focus on different aspects of rape myth acceptance. This is problematic; self-report measures with high face validity are more susceptible to response biases, particularly socially desirable responding, due to respondents being aware of the purpose of the scale (Blascovich & Tomaka, 1991; Paulhus, 1991; Paulhus & Reid, 1991). Given the high face validity of the IRMA and the nature of the construct it attempts to assess, it is suggested that this measure is highly susceptible to socially desirable responding, which reduces its overall validity. In fact, Gerger et al. (2007) highlighted concerns about the high face validity, and therefore the quality of data yielded, of previous rape myth acceptance measures. This limitation of the IRMA and previous measures, in part, prompted the development of measures focused on using subtler language in an attempt to explore the same construct but with less face validity (e.g. Gerger et al., 2007, and McMahon & Farmer, 2011).

Focusing on student populations, McMahon and Farmer (2011) highlighted this as a particularly pertinent issue, arguing that traditional measures of rape myth acceptance fail to accurately assess how rape myths have evolved over time, especially in populations where there is likely to be increased knowledge/awareness about rape and sexual assault, such as student/college populations. This is an important consideration; the IRMA

reads as dated when considering some items (e.g. item 25: When a woman is a sexual tease, eventually she is going to get into trouble). Developments in this area, and the recognition of rape myths evolving and becoming more subtle, reflect the developments of sexism research. For example, covert sexism is now more widely recognised and researched, with overt sexism seeming to be less common (Swim & Cohen, 1997; Swim, Mallett, & Stangor, 2004).

Concurrent validity

Concurrent validity is defined as whether a measure correlates with other measures that purport to measure the same construct. There are significant difficulties related to establishing the concurrent validity of a measure. In fact, the overall utility of measuring this type of validity is questioned (Kline, 2000b). Difficulties include the assumption of the measures reliability (which is not adequately demonstrated in the case of the IRMA), and the lack of criterion tests of acceptable validity for most psychological variables, including the construct of rape myth acceptance (Kline, 2000b). Thus, it is suggested that correlation coefficients of between .4 and .5 are acceptable indicators of concurrent validity, alongside additional indicators of validity (Kline, 2000b).

Payne et al. (1999) did not investigate the concurrent validity of the IRMA. It is suggested that it would have been difficult for the authors to demonstrate such validity. Firstly, at the time the scale was developed the

only widely used measure assessing rape myth acceptance was the RMAS (Burt, 1980). The literature has identified a number of significant limitations of this scale (see above) which initiated the development of IRMA (Payne et al., 1999). Given the concerns raised over the validity of the RMAS, it could be suggested that it would not have been a suitable proxy for the demonstration of concurrent validity of the IRMA. That being said, the RMAS does still clearly measure a construct that is similar to rape myth acceptance. It seems likely that political conflict with the RMAS contributed to Payne's et al. (1999) decision not to test the concurrent validity of the IRMA, which would have been valuable. Later developed measures of rape myth acceptance, such as the AMMSA (Gerger et al., 2007) explored the concurrent validity of their measure with the IRMA. Gerger et al. (2007) reported that the AMMSA demonstrated good concurrent validity with the IRMA; $r = .79 - .88$, suggesting that the IRMA has a degree of concurrent validity with other measures in this areas.

Construct Validity

Construct validity can be defined as the "extent to which test results support a network of research hypotheses based on the assumed characteristics of a theoretical psychological variable" (Coolican, 2004, p.198). Typically, demonstrating the properties of a psychometric assessment involves exploring two aspects of construct validity, convergent and discriminant validity (Westen & Rosenthal, 2003). Convergent validity is demonstrated when a measure correlates with other constructs that it

theoretically should relate to. Discriminant validity refers to demonstrating the opposite; when the constructs of a measure are shown not to relate to other constructs that they theoretically should not relate to.

Convergent Validity

Payne et al. (1999) conducted a number of studies to explore the convergent validity of the IRMA. The constructs they examined included gender, sex-role stereotyping, sexism, adversarial sexual beliefs, hostility towards women, and acceptance of violence. They hypothesised that men would score higher on the IRMA (indicative of greater rape myth endorsement) and that IRMA scores would be positively correlated with the other constructs (Payne et al., 1999). Burt (1980) originally posited that rape myth acceptance was related to the above constructs, which appears to be a 'common sense' assumption. It is well documented that men appear to endorse rape myths to a greater extent than women (Suarez & Gadalla, 2010), as is the relationship between the constructs of sexism and rape myth acceptance. A wealth of research has demonstrated that negative stereotypical attitudes towards women are associated with greater acceptance of rape myths (Lonsway & Fitzgerald, 1994; Suarez & Gadalla, 2010). Payne et al. (1999) demonstrated convergent validity to the significance level of $p < .001$ with such constructs, finding that those with higher scores on the IRMA and the IRMA-SF were more likely to hold more traditional sex role stereotypes, more adversarial sexual beliefs, higher hostility toward women, and be more accepting of violence and

interpersonal violence. Recent research suggests that rape myth acceptance is related to other belief systems that are intolerant or discriminatory in nature (in addition to sexism), such as racism, heterosexism, classism, ageism, and religious intolerance (Aosved & Long, 2006; Saurez & Gadalla, 2010).

Payne et al. (1999) did not explore the relationship between the IRMA and such constructs. This would be a useful direction for future research to further validate the IRMA. It is noted that convergent validity appears to have been explored in more detail in updated measures such as the AMMSA (Gerger et al., 2007). In line with research outlined above, the AMMSA demonstrated positive correlations with right-wing authoritarianism and social dominance, in addition to 'just world' beliefs and benevolent sexism (Gerger et al., 2007).

Despite the convergent validity demonstrated of the IRMA, it is also briefly worth noting that Payne et al. (1999) report that the testing of convergent validity was conducted on a sample of 176 participants who had a mean age of 18.4 years ($SD = 1.2$). One suggests that this sample's experience of sexual and intimate relationships, and the opposite sex in general, is likely to be minimal which is relevant to their completion of questionnaires concerned with adversarial sexual beliefs (Burt, 1980; Lonsway & Fitzgerald, 1995) and hostility towards women (Lonsway & Fitzgerald, 1995).

Finally, one notes that Lonsway and Fitzgerald (1995) adapted many of the scales that Payne et al. (1999) used when testing the convergent validity of the IRMA. Given their authorship of the IRMA, one suggests that this process is open to bias and it would seem more appropriate for authors to conduct convergent validity testing with measures of differing constructs that they are not necessarily invested in (i.e. authors of).

Discriminant Validity

The discriminant validity of the IRMA was not explored, which is a limitation of the scale and suggested as an area of future research. Whilst there are clearly time and resource constraints relevant to scale development, convergent and discriminant validity should be viewed as equally valuable aspects of construct validity. Exploring discriminant validity allows researchers to quantify the extent to which a measure matches their theoretical understanding of it (Westen & Rosenthal, 2003). For example, the convergent validity of the IRMA was demonstrated for the construct of hostile sexism (Payne et al., 1999). Thus, one would expect the IRMA to be independent of constructs such as feminism or egalitarianism. This research would have been useful, and does not appear to have been conducted post publication of the scale. In response to such criticism, Gerger et al. (2007) demonstrated that scores on the AMMSA were negatively correlated to scores on a general measure of empathy. Strengthening the psychometric properties of the IRMA through such post publication research would be of benefit.

Appropriate Norms

Given the suggested relationship between rape myth acceptance and sexual offending discussed above, it is pertinent to note that Payne et al. (1999) do not provide any normative data for the IRMA. This appears problematic; normative data provides users of psychometric measures with reference points from which to interpret data. As no normative data is available, interpretation of the IRMA scores appears abstract and somewhat meaningless. Although, there are multiple reasons why providing normative data for the IRMA would be particularly difficult. Firstly, following concerns raised by Gerger et al. (2007) regarding 'floored' data typically collected from traditional rape myth acceptance measures, either as a result of socially desirable responding or the items no longer reflecting rape myths, there does not appear to be established 'classification' of what constitutes 'high' rape myth acceptance. Moreover, Payne et al. (1999) would have had to provide a wide range of norms given it is reasonable to assume that so many variables affect rape myth acceptance, such as gender, age, occupation, socioeconomic status, education level etc.

Discussion

Rape myth acceptance is an important construct that appears relevant to the commission of sexual offending (Johnson & Beech, 2017). With ongoing revisions of the definition (see Gerger et al., 2007), rape myth acceptance appears relatively well-defined (see above). This paper has evaluated the psychometric properties of the IRMA (Payne et al., 1999), which remains a

widely used measure within the literature, despite the development of the AMMSA (Gerger et al., 2007).

With reference to reliability, the internal reliability of the IRMA appears high which is advantageous, although the multidimensional nature of the construct is questioned (e.g. Gerger et al., 2007). However, the authors do not appear to have adequately tested the test-retest reliability of the measure. Whilst this aspect of reliability was briefly explored during the process of scale development, the testing reported does not appear supportive of the authors' claims that the IRMA possesses adequate test-retest reliability. This limitation is significant and limits the accuracy of data gathered using the scale. This is suggested as an area of further research that would dramatically increase the reliability of the IRMA and thus is potential applications.

Multiple aspects of validity were considered throughout this critique. Firstly, the face validity of the IRMA appears high, which is problematic given the socially undesirable nature of rape myth acceptance. Difficulties with socially desirable responding on scales such as the IRMA, and the data this yields, is highlighted by Gerger et al. (2007). In fact, concerns about this issue have prompted the development of scales such as the AMMSA (Gerger et al., 2007) and the Updated Illinois Rape Myth Acceptance Scale (Updated IRMA; McMahon & Farmer, 2011). These scales focus on using subtler language in an effort to capture rape myth acceptance whilst reducing bias

and the likelihood of collecting skewed data. Briefly, the Updated IRMA was developed for use on a student population (McMahon & Farmer, 2011). This measure appears particularly valuable given the prevalence of sexual offending within student populations. Research suggests that in the USA between a quarter and a fifth of women who go to college become victims of sexual offending throughout their studies (Krebs et al., 2009; Koss, Gidycz, & Wisniewski, 1987). Such concerns are also relevant to the female student population at universities within the UK (NUS, 2013).

This critique also explored the concurrent validity of the IRMA, which the authors did not investigate. Finally, the construct validity of the IRMA was explored, which comprises convergent and discriminant validity. Payne et al. (1999) demonstrated good convergent validity. The IRMA was shown to be strongly associated with a range of related constructs from the literature, such as negative sex role stereotypes (Payne et al., 1999). However, the sample Payne et al. (1999) used to test the convergent validity of the IRMA is questionable and further testing using a bigger sample with a higher average age could be argued as more appropriate. The discriminant validity of the IRMA was not tested, which would add value to understanding the psychometric properties of the IRMA.

As noted by Payne et al. (1999), rape myth acceptance measures are inherently bound and limited to the time and culture in which they were developed. Thus, they require regular updating in order to reflect the

current climate of a particular society. It is suggested that the AMMSA (Gerger et al., 2007) provides a valuable update to this measure, although it is noted that this measure does not focus exclusively on the construct of rape myth acceptance.

Kline (2000b) suggests that the validity of a psychometric measure is best inferred when many aspects of validity are demonstrated simultaneously. The IRMA demonstrates some aspects of validity to a greater degree than other aspects, as it does with reliability, meaning that it can be considered a somewhat valid and reliable measure of rape myth acceptance. It is pertinent to note that whilst there are clear limitations of the IRMA, it appears to be the most up to date measure of rape myth acceptance exclusively. The IRMA is grounded within an extensive evidence base and provides researchers interested in this construct with a viable way to measure it, which is both useful and exceedingly valuable, given research indicates rape myth acceptance may play a role in the commission of sexual offending (Johnson & Beech, 2017). This critique and the construct of rape myth acceptance as a whole is relevant to this thesis. Rape myth acceptance is considered in the systematic review (see Chapter 2 of this portfolio) which explored the effect of exposure to pornography on attitudes towards sexual aggression, and the IRMA is used within the research project as a measure of attitudes towards sexual aggression following exposure to soft-core pornography. Ongoing limitations within the literature are discussed in the systematic review, such as the validity of

some measures of rape myth acceptance still used within research (e.g. Burt, 1980). It is suggested that the quality of research exploring the impact of the consumption of pornography may be improved by the use of the IRMA, or a more updated measure such as the AMMSA (Gerger et al., 2007).

Chapter 4 - The effects of short-term exposure to soft-core pornography on males' attitudes towards sexual aggression

Abstract

Research suggests that exposure to pornography has negative consequences on a variety of populations. However, soft-core pornography (SCP) appears a neglected area of research. This is concerning given the quantity of SCP within mainstream media and the average individual's media consumption. This research investigated the short-term effects of exposure to examples of SCP from the media on males' attitudes towards sexual aggression. A quasi-experimental design was applied, comparing two general population samples. Male participants (N = 208; mean age = 25.04) were recruited online and completed; the Ambivalent Sexism Inventory, the Illinois Rape Myth Acceptance Scale, the Rape Proclivity Scale and a measure of exposure to SCP. Participants completed the first half of the Acceptance of Modern Myths about Sexual Aggression (AMMSA) scale and were exposed to either non-sexualised or sexualised images of women from the media that met the definition of SCP, following which they completed the second half of the AMMSA. Analysis suggested post-measure scores on the AMMSA scale were significantly different between groups, after controlling for pre-measure AMMSA scores. Participants held significantly less supportive attitudes towards sexual aggression following exposure to the images in both conditions, although less so after exposure to the sexualised images. The results are discussed in relation to socially

desirable responding, and the context of exposure to pornography is discussed.

Keywords: *soft-core pornography, sexualised media content, sexual aggression, males, media*

Introduction

Pornography

Given the advent of the Internet, pornography appears more widely accessible than at any other point in history (Covenant Eyes, 2015; Stern & Handel, 2001). Pornography is therefore an area of significant interest; academically, politically, and within the media. Despite such attention there remains inconsistency in how pornography is defined, which appears related to methodological limitations and mixed findings in this area (Ferguson & Hartley, 2009; Malamuth, Addison, & Koss, 2000, see Rea, 2001 for an extensive discussion of the problems of an inconsistent definition of pornography). For the purposes of this research, pornography is defined as sexually explicit material that is intended to be sexually arousing to the consumer (Hald, Malamuth, & Yuen, 2010).

Research concerning pornography that depicts adults emerged in the 50s and 60s (Haines, 1955; Gordon & Bell, 1969) and to date, there is a vast evidence base investigating the effects of exposure to pornography on a range of populations. A wide range of research suggests that exposure to pornography has negative consequences on those that consume it, including children and adolescents (see Flood, 2009; Hald et al., 2010; Peter & Valkenburg, 2009; Sinković, Štulhofer, & Božić, 2013). For example, exposure to sexually explicit material on the Internet appears to reduce adolescents' sexual satisfaction, in both males and females (Peter & Valkenburg, 2009). In addition, a recent systematic review highlights the

link between early exposure to pornography and a range of sexual risk taking behaviours, such as an increased number of sexual partners, which is relevant when considering sexual health issues (Sinković, Štulhofer, & Božić, 2013). Research investigating the impact of exposure to pornography in adults from other nationalities also reports negative consequences (e.g. Cranney, 2015). However, there is extensive criticism of such findings and wider narrative that exposure to pornography has deleterious effects on individuals (see Ferguson & Hartley, 2009). There appears an equally vast evidence base suggesting that exposure to pornography has no effect, or positive consequences on those that consume it. For example, Kohut, Baer, and Watts (2016) found that pornography users held more egalitarian attitudes towards women than non-users, and there was no difference between users and non-users in attitudes toward traditional families and self-identification as a feminist.

Despite criticism and opposing findings, there appears to be some support for the claim that exposure to pornography has deleterious effects for individuals. The second chapter of this portfolio reports a systematic review of the evidence investigating the effect of exposure to pornography on attitudes towards sexual aggression in adult males. The conclusions from this review support findings from previous systematic reviews (e.g. Hald et al., 2010; Malamuth et al., 2000) and suggest that exposure to pornography generally increases attitudes supportive of sexual aggression, in studies which use both an experimental and non-experimental research

methodology. Briefly, experimental designs in this area are those that expose participants to some kind of pornographic material as part of the research. See Chapter 2 of this portfolio for a further review of research in this area.

Theoretical Basis

Whilst a range of negative outcomes have been explored as a result of exposure to pornography, sexual aggression (in particular attitudes supportive of sexual aggression) appears to have been most widely investigated. There are a range of proposed theoretical explanations for the relationship between pornography and sexual aggression, the most widely supported being the Hierarchical Confluence Model (HCM) of sexual aggression (see Hald & Malamuth, 2017). This model is discussed in depth in the first chapter of this portfolio and is the theoretical framework for this thesis.

Soft-Core Pornography

It is noted that generally, the term pornography is used to refer to hard-core pornography (see Chapter 1), which contains explicit depictions of sexual acts often including penetration. Despite substantial research in this area it appears that relatively little distinction has been made between pornography and soft-core pornography within the literature, and there appears to be significantly less research exploring the consequences of exposure to soft-core pornography (SCP). The working definition of SCP

used throughout this paper is material that has a pornographic component, in that it is sexually suggestive, but less sexually explicit than pornography. SCP is intended to be sexually arousing to the consumer and typically contains either nude or semi-nude performers. Whilst SCP may include images or films of simulated sexual intercourse, penetration is not explicit. It is important to note that most sexualised media content appears to also meet the definition of soft-core pornography.

Sexualised Media

The increasing sexualisation of our culture is an area of significant academic and political discussion (American Psychological Association, 2007; Attwood, 2009; Coy, 2009; Olfman, 2009). SCP is interesting as it appears widespread within Western media. Examples of SCP can be found in virtually all forms of visual media, to varying degrees of explicitness. Content analyses suggests that the majority of SCP within the media appears to feature women, who are also sexualised to a greater degree than men (Hatton & Traunter, 2011; Reichert & Carpenter, 2004). Research suggests that the media regularly depicts women as sex objects or victims, and includes sexist content (Kosimar, 1971; Krassas, Blauwkamp, & Wesselink, 2003; Sullivan & O'Connor, 1988; Stankiewicz & Rosselli, 2008). Whilst it is noted that research supports the increased sexualisation of men within mainstream media (Pope et al., 2000; Rohlinger, 2002), men and women are not sexualised to an equal degree (Hatton & Traunter, 2011). Moreover, the consequences of sexualisation do not appear equal across

genders. Bordo (1999) argues that the sexualisation of women typically leads to them being portrayed as victims, whereas the equal sexualisation of men leads to a portrayal of confidence. Given that females are significantly more sexualised than males within the media environment, such research has important implications. This area of the literature is further informed by self-objectification theory. Frederickson and Roberts (1997) proposed that women's life experiences regularly include those of sexual objectification, which lead women to internalise this perspective of their self and body (self-objectification). Research supports self-objectification theory, and a range of negative consequences are apparent for women who self-objectify (e.g. Wright, Arroyo, & Bae, 2015; for a review see Moradi & Huang, 2008).

Media Consumption

The prevalence and themes of SCP and sexualised media content is concerning given our collective consumption. The hypothesis that media use equates to at least some exposure to sexualised media content appears founded. A growing body of literature demonstrates the increase in sexualised content within Western media (Kunkel et al., 2005; Paul, 2005; Ward, 2003). Although there are recognised difficulties in accurately assessing the media use of a given population (Palmgreen, Wenner & Rayburn, 1980; Prior, 2013; Roberts & Foehr, 2008), the available research suggests that adults' media use is significant. For example, a recent survey of 1,841 British adults (aged 16 or over) found that 87% regularly used the

Internet, over 90% regularly used televisions, and the average self-reported weekly Internet use was 21.6 hours (Ofcom, 2016; also see Lenhart et al., 2010). It is noted that this data does not include adults' use of additional forms of media, such as newspapers or magazines. Availability of such data would likely suggest adults' media use is higher than reported above. Given that adults' media use appears to be substantial, it is reasonable to assume at least a certain level of exposure to SCP within the media. This appears especially true for adolescents. There is growing recognition that adolescents' increased media use equates to significantly more exposure to sexualised media content than ever before (Brown et al., 2006; L'Engle, Brown, & Kenneavy, 2006; Papadopoulos, 2010).

Consequences of Exposure to Sexual Media Content

A growing body of research suggests that exposure to sexualised or objectifying media content has negative consequences on those that consume it, including implications for attitudes toward women, sexual aggression, rape myth acceptance, and feminism (Kalof, 1999; Lanis & Covell, 1995; Machia & Lamb, 2009; MacKay & Covell, 1997; Milburn, Mather, & Conrad, 2000; Ward, 2002; Wright & Tokunaga, 2016). The detrimental effect on such attitudes also appears consistent for adolescents exposed to sexualised media content (Brown & L'Engle, 2009; Peter & Velkenburg, 2007; Ward, Hansbrough, & Walker, 2005; Wright & Tokunaga, 2015; for a review see Escobar-Chaves et al., 2005). Furthermore, research suggests a range of additional negative

consequences of exposure to sexualised media content for adults, including increased body dissatisfaction (Aubrey et al., 2009; Groesz, Levine, & Murnen, 2002), decreased sexual satisfaction (American Psychological Association, 2007), and implications for safe sex practices (Gunasekera, Chapman, & Campbell, 2005). Negative consequences, such as increased early sexual activity (Brown et al., 2006; Brown & L'Engle, 2009; see also Rush & LaNauze, 2006) have also been found for children and adolescents. Much of the research conducted with adults appears to have focused on the negative influence of sexualised advertisements (see Kilbourne, 1999). Whilst this focus is relevant and highly significant, sexualised media content (and therefore soft-core pornography) within the media is not limited to advertisements, as Döring's (2009) review demonstrates, but also includes pictures purely for erotic display. The present research focused on exposure to general sexualised media content, rather than sexualised advertisements specifically.

The present research is also distinguishable from the literature exploring the consumption of 'lads' mags' or other purposefully or intentionally sexual media (e.g. Aubrey & Taylor, 2009; Horvath et al., 2012; Romero-Sánchez et al., 2015). It is reasonable to suggest that an individual who purchases such a magazine does so wilfully and their exposure to sexualised imagery is therefore intentional. In contrast, exposure to SCP in other media appears to be a by-product of the average individuals' engagement. Exposure is not necessarily intentional – examples of SCP are found in an

ever-increasing range of mediums, such as widely read national newspapers, where sexualised imagery is clearly not the focus. For example, Daniels and Duff (unpublished) found that the more men were exposed to the 'Page 3' feature in The Sun, the less positive their attitudes towards women were. This distinction between intentional and non-intentional exposure to this kind of media is significant and does not appear to have been robustly explored in the literature.

Considering the suggested negative effects of exposure to pornography on those who consume it (Hald et al., 2010; Malamuth et al., 2000), and the proposed negative consequences of exposure to sexualised advertising (e.g. Machia & Lamb, 2009), the main aim of this research was to explore the short-term impact of exposure to examples of SCP from the media on sexual aggression in a sample of adult males. This research focused on short-term exposure to SCP within the media as this area has received relatively little focus in comparison to research exploring pornography, and thus our understanding of this topic is still emerging. Understanding the short-term effects of exposure to a type of stimuli appears crucial before understanding the longer-term effects of exposure. Moreover, this research focuses on examples of SCP from the media generally rather than sexualised advertisements specifically, which appears relatively novel. The examples of SCP utilised within this research only featured women based on the evidence discussed above (e.g. Hatton & Traunter, 2011; Reichert & Carpenter, 2004). The study also aimed to explore how rape proclivity is

affected by exposure to SCP due to focus on this outcome measure within previous research (e.g. Hald et al., 2010).

The hypotheses were two-tailed:

1. There will be a significant difference in attitudes toward sexual aggression between individuals who are exposed to examples of SCP from the media and individuals who are not, after controlling for pre measure scores of attitudes toward sexual aggression.
2. Attitudes toward sexual aggression will differ significantly in individuals who are exposed to examples of SCP from the media, before and after the exposure.
3. There will be a significant difference in rape proclivity between individuals who are exposed to examples of SCP from the media and individuals who are not.

Method

Design

The study was conducted online, hosted by Bristol Online Surveys. A quasi-experimental design was utilised. The independent variable was the exposure condition of the study, with two levels; sexualised (experimental group) and non-sexualised (control group) images of women from the media. There were multiple dependent variables: acceptance of modern myths about sexual aggression (AMMSA; Gerger et al., 2007), and rape proclivity (Bohner et al., 1998 & 2010). Further co-variables were also measured: attitudes toward sexism (Glick & Fiske, 1996), rape myth acceptance (Payne, Lonsway, & Fitzgerald, 1999), and exposure to SCP in the media.

Recruitment

Given a moderate effect size of ($f = 0.25$) and a $p = 0.05$ significance level, power analysis revealed that a minimum of 128 participants were required to achieve a power of 0.8 (Cohen, 1988) for an analysis of covariance (ANCOVA) test (G*Power, 2009). Participants were recruited via social media. Adverts for the study were posted to various social media outlets and encouraged individuals to complete the study and share the link. Data collection was completed within 7 months.

Participants

Participants (N=208) were recruited opportunistically (see above). All participants were males aged between 18-35 years (see inclusion criteria, appendix E). This age group was specified to reflect the growing age of social media users. Moreover, young adults appear to be an age group with increasingly high media use (Lenhart et al., 2010). The mean age of participants was 25.04 years ($SD = 4.44$). For further demographic characteristics of the sample, see below.

Table 6

Demographic Characteristics

Categories		Control Condition (n=104)	Experimental Condition (n=104)	Overall (N=208)
Mean Age		24.73	25.35	25.04
<i>SD</i>		4.56	4.31	4.44
Highest Level of Education	A-Levels of Equivalent	29%	17%	-
	Undergraduate Degree	39%	42%	
	Postgraduate Master's Degree	19%	21%	
Employment Status (Frequency)	Employed	68	68	-
	Unemployed	2	4	
	Full/Part Time Student	30	28	
	Other	1	2	
	Prefer Not to Say	3	2	
Percentage Regular Use of Pornography		86%	80%	-
Exposure to SCP (Number of images seen)	0	4%	1%	-
	1-10	46%	41%	
	11-20	23%	30%	
	21-30	9%	10%	

per day on	31-40	8%	7%
average)	41-50	6%	2%
	51-100	1%	6%
	101-200	2%	1%

Measures

Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996; appendix F)

The ASI is a 22-item questionnaire that measures an individual's views towards prejudice against women in comparison to men. The authors argue that sexism is typically portrayed to encompass only hostility or negative views towards women, while not reflecting another aspect of sexism where seemingly positive thoughts and feelings about women also lead to prejudice and discrimination (benevolent sexism). Thus, the scale measures both hostile (e.g. "Most women fail to appreciate fully all that men do for them") and benevolent (e.g. "A good woman should be set on a pedestal by her man") sexism, with 11 items measuring each factor. Participants were required to indicate to what extent they agree with each statement using a 5-point Likert-type scale, where 1 = strongly disagree, and 6 = strongly agree. Scores can range from 22-132 with higher scores indicating greater endorsement of sexist attitudes. Support for the convergent, discriminant, and predictive validity of the ASI are demonstrated through numerous studies (see Glick & Fiske, 1996). The

high reliability of the ASI is also demonstrated; the average alpha reliability coefficient across 6 studies was .87 (Glick & Fiske, 1996).

Illinois Rape Myth Acceptance Scale Short-Form (IRMA-SF, Payne et al., 1999; appendix D)

The IRMA-SF is a 20-item questionnaire that measures an individual's acceptance of rape myths. The term rape myths can be defined as a set of beliefs about rape that serve to blame the victim, absolve the perpetrator, minimise or justify sexual aggression, and ultimately perpetuate male sexual violence against women (Schwendinger & Schwendinger, 1974; Brownmiller, 1975). The scale items are split into subscales: She asked for it (e.g. "A woman who "teases" men deserves anything that might happen"), It was not really rape (e.g. "If the rapist doesn't have a weapon, you really can't call it a rape"), He did not mean to (e.g. "Rape happens when a man's sex drive gets out of control"), She wanted it (e.g. "Although most women wouldn't admit it, they generally find being physically forced into sex a real "turn on""), She lied (e.g. "Rape accusations are often a way of getting back at men"), Rape is a trivial event ("If a woman is willing to "make-out" with a guy, then it's no big deal if he goes a little further and has sex"), and Rape is a deviant event (e.g. "Men from middle-class homes almost never rape"; Payne et al., 1999). The short version of the original Illinois Rape Myth Acceptance Scale (IRMA) 45-item scale was considered most appropriate for the research purposes. The IRMA appears the most valid and reliable rape myth acceptance measure available (see Chapter 3

of this portfolio for a critique). In summary, the IRMA possess high content and construct validity (Payne et al., 1999) and also possesses extremely high overall reliability ($\alpha = .93$), as does each of the subscales with an average alpha reliability coefficient of .79. The IRMA-SF correlates significantly ($p < .001$) with the IRMA (.97), indicating that the short form is a suitably adapted measure. The reliability of the IRMA-SF is high ($\alpha = .87$; Payne et al., 1999). Participants were required to indicate their agreement with each statement using a 7-point Likert-type scale, where 1 = not at all agree, and 7 = very much agree. The short form includes 20 items, although 3 items are considered filler items and are not scored (Payne et al., 1999). Scores on the short form can range from 17-119, with higher scores indicating greater acceptance of rape myths.

Acceptance of Modern Myths about Sexual Aggression Scale (AMMSA; Gerger et al., 2007; appendix G)

The AMMSA is a 30-item questionnaire that measures an individual's endorsement of myths about sexual aggression. Myths about sexual aggression are defined as "descriptive or prescriptive beliefs about sexual aggression (i.e., about its scope, causes, context, and consequences) that serve to deny, downplay or justify sexually aggressive behaviour that men commit against women." (Gerger et al., 2007, p. 8). This scale aimed to measure the extent to which myths about sexual aggression are endorsed in a subtler way than previously measured (Gerger et al., 2007). The psychometric properties of the scale are robust. High construct,

discriminant, and predictive validity of the scale is presented across 4 studies (see Gerger et al., 2007). The average reliability coefficient of the AMMSA across the 4 studies was high ($\alpha = .92$). Sufficient average test-retest reliability is also demonstrated ($r_{tt} = .79$). The scale also possesses high split-half reliability $\geq .90$ (G. Bohner, personal communication, October 30, 2015). Participants were required to rate their agreement with each item via a 7-point Likert-type scale, where 1 = totally disagree and 7 = totally agree. Scores can range from 30-210. Higher scores indicate greater endorsement of myths about sexual aggression.

The AMMSA was split to provide a direct measure (e.g. pre and post) of the impact of exposure to either non-sexualised or sexualised images from the media on participants' attitudes towards sexual aggression, following confirmation from the author that the scale possessed split half-reliability (G. Bohner, personal communication, October 30, 2015; see Procedure for more details). The scale was split by odd and evenly numbered items. Gerger et al. (2007) report that "the 30-item AMMSA scale may be viewed as measuring a unidimensional construct" (p. 17), although noted that items may be broadly categorised into the following content: Denial of the scope of the problem (e.g. "Many women tend to misinterpret a well-meant gesture as a "sexual assault""), Antagonism toward victims' demands (e.g. "Although the victims of armed robbery have to fear for their lives, they receive far less support than do rape victims"), Lack of support for policies designed to help alleviate the effects of sexual violence (e.g. "Nowadays,

the victims of sexual violence receive sufficient help in the form of women's shelters, therapy offers, and support groups"), Beliefs that male coercion forms a natural part of sexual relationships (e.g. "When a woman starts a relationship with a man, she must be aware that the man will assert his right to have sex"), and Beliefs that exonerate male perpetrators by blaming the victim or the circumstances (e.g. "Alcohol is often the culprit when a man rapes a woman", Gerger et al., 2007). The chosen method for splitting the AMMSA aimed to ensure that content categories of rape myths were roughly equal across each half of the scale. The items included in each half of the scale presented to participants is detailed in appendix G.

Rape Proclivity Scale (RP scale; Bohner et al., 1998 & 2010; appendix H)

The rape proclivity scale is a measure that consists of 5 scenarios detailing descriptions of rape that involve varying degrees of violence (Bohner et al., 1998). The scale is designed to assess an individual's propensity to act in a sexually violent manner. Participants are asked to imagine themselves as the male in each scenario and answer three questions; how sexually aroused they would be (filler item), whether they would have behaved in the same way, and how much they would have enjoyed 'getting their way' in each situation. Following a modification made by Bohner et al. (2010), a 7-point response scale was provided for each question with only the end points labelled (e.g. 1= not at all sexually aroused and 7 = very strongly sexually aroused). The latter two questions for each of the scenarios were used to

create an average rape proclivity score for each participant. In addition, participants were asked how much they thought the woman was to blame in each scenario and provided their response on a similar 7-point scale. The good internal reliability of each index of the scale is demonstrated: arousal index ($\alpha = .76$), behavioural inclination index ($\alpha = .78$), and the enjoyment index ($\alpha = .74$), as well as the internal reliability of the overall scale ($\alpha = .85$; Bohner et al., 2010). Scores can range from 1-7. Higher scores indicate higher rape proclivity.

Exposure Measure

In order to measure participants' exposure to SCP in the media, an exposure measure was created by the researchers (appendix I). To gain an overall measure of exposure, participants were asked how many hours on average per day they spend engaging with the media, and how many images they would define as SCP they see on average per day. In addition, participants were asked if they use the media in order to view SCP and questions regarding the perceived impact and appropriateness of such material in mainstream media (e.g. "Do you think that exposure to soft-core pornography has any impact on you?").

Image Selection

A range of media sources were explored when selecting the sexualised images for the research. Sources considered included print papers, print magazines, online papers, online magazines, billboards, and popular online

company advertisements such as ASOS. Note that images from overtly sexual sources, such as sex toy advertisers, were excluded in an effort to research the more subtle sexual imagery present in mainstream media.

Images were selected using the following criteria:

- Images were freely available from mainstream media sources.
- Images were not limited to advertisements.
- Images included only one subject (female).
- Images could include celebrities and non-celebrities.
- Images could include paparazzi pictures if they were included in mainstream media sources.

Ensuring that the initial pool of images were representative of diversity was also considered (e.g. race of individual's in the images). Thirty images were selected in total, which were deemed to meet the definition of SCP and be representative of SCP within the media. In order to make the image selection process as unbiased as possible, an inter-rater examined the pool of images and filtered out those which were not deemed to meet the definition of SCP or be representative of images found within the media. The inter-rater was a female trainee forensic psychologist with a general understanding of the literature on the impact of media on those who consume it. The inter-rater also understood the concept of SCP within the media and had experience of viewing the types of images used within this research. In total, the inter-rater excluded 4 images, 2 on the basis that they were not sexually suggestive enough, and 2 on the grounds that the sources of the images were not appropriate. Following this process 26

images remained. These images were then examined by the supervisor (a male), who was asked to judge each image by the same standards as the inter-rater. No further images were excluded.

Given that 26 sexualised images remained, 26 non-sexualised images of women from the media were selected. These images were selected to match the content of the sexualised images as closely as possible. For example, sexualised images of celebrities were matched with non-sexual images of celebrities. In addition, images were matched as much as possible in form of media (such as matching a sexualised magazine cover with a non-sexualised magazine cover). The selected images were then inter-rated as described above. No images were excluded.

Pilot study

A pilot study was conducted to select the final pool of 30 images (15 images for each condition). Six male participants who met the inclusion criteria for the research (appendix E, mean age = 20.3, $SD = 2.34$) were opportunistically recruited. The participants were given the 26 sexual images and asked to judge if each image met the definition of SCP, and secondly, pick 15 images from the remaining pool that best represent SCP in the media. In relation to the 26 non-sexual images, participants were asked to exclude images that were judged to meet the definition of SCP, and secondly, pick 15 images from the remaining pool that best represent

non-sexual images of women from the media. The pilot study took approximately 15 minutes.

Sexual Images

Each of the 26 sexual images was given a rating out of 6; depending on how many times the 6 participants had included it in the 15 images deemed most representative. Images with a rating of 4 out of 6 or above were automatically included in the final pool of images. For the sexual images, 10 images ranked at 4 or above and 10 ranked equally at the next highest rating of 3 out of 6. From those images ranked 3 out of 6, the inter-rater selected 5 images at random after all images were covered. This completed the final pool of 15 sexual images (appendix J).

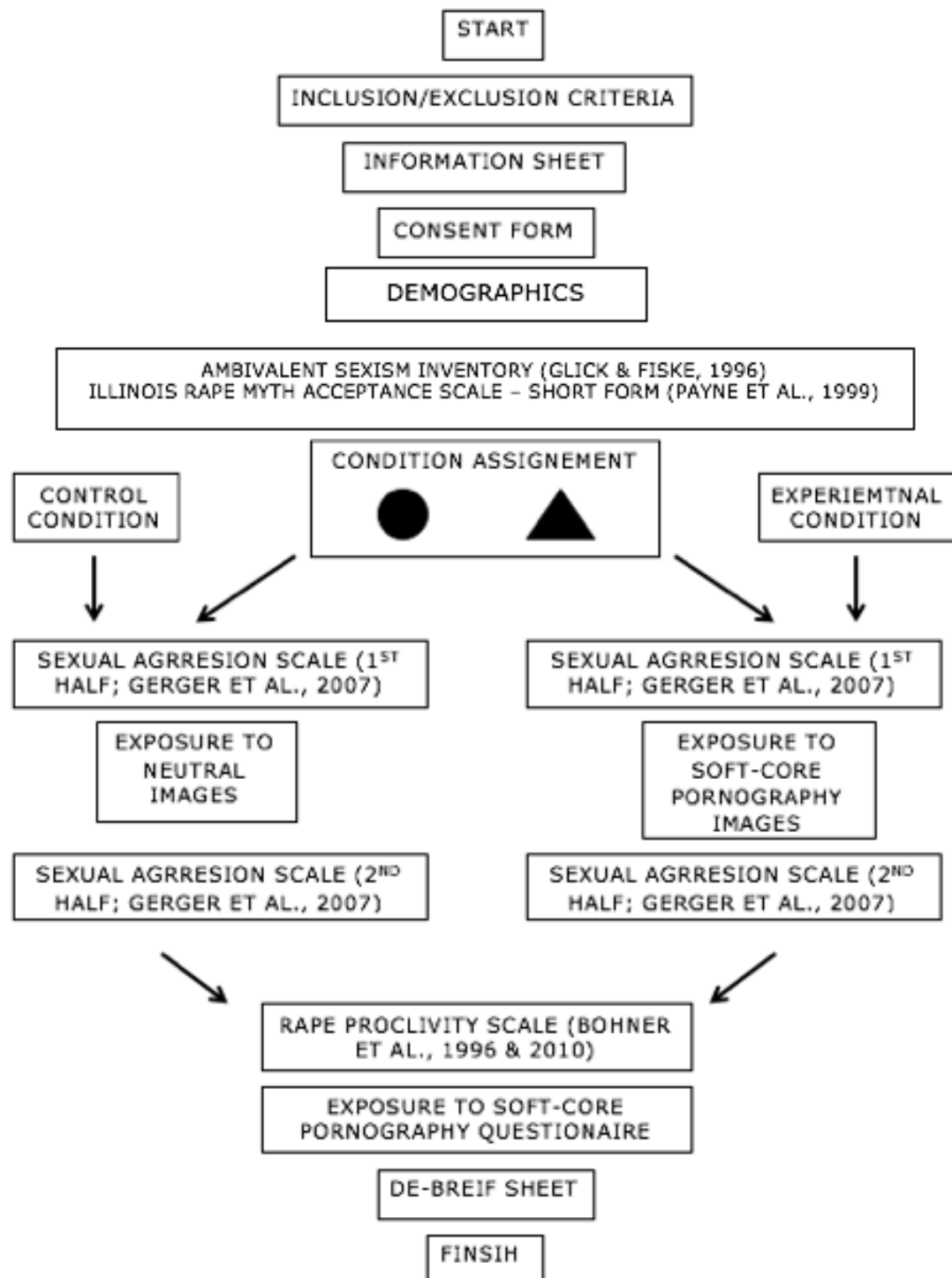
Non-Sexual Images

The same method was applied to selecting the non-sexual images. Of the 26 images, 13 were found to rank at 4 out of 6 or above. Six images ranked at the next highest rating of 3 out of 6 or above. Of these 6 images, 1 was excluded because it had been deemed to meet the definition of SCP by one of the participants. From the remaining 5 images, the inter-rater selected 2 images at random after all images were covered. This completed the final pool of 15 non-sexual images (appendix K).

Procedure

The research was conducted via an online survey, which was estimated to take no longer than 20 minutes to complete. Individuals indicated if they met the inclusion criteria (appendix E) and were then required to read the information sheet (appendix L) and consent to participate (appendix M). Participants completed a demographic form (appendix N), the ASI (Glick & Fiske, 1996; appendix F), and the IRMA-SF scale (Payne et al., 1999; appendix D). Participants then blindly self-selected a condition by choosing a shape. Following assignment, participants completed half of the AMMSA (Gerger et al., 2007; appendix G). Participants were then exposed to 15 sexual or non-sexual images of women from the media (depending upon which condition they allocated themselves to; appendices K and L). Following exposure, participants completed the second half of the AMMSA (Gerger et al., 2007; appendix G). Finally, participants completed a rape proclivity scale (Bohner et al., 1998 & 2010; appendix H) and a measure of exposure to SCP in the media (appendix I). De-brief information was then provided (appendix O). Ethical approval was granted from the University Research Ethics Committee (appendix P). See figure 2 for a flow chart of the study design.

Figure 2 – Flow Chart of Study Design



Data Cleaning

Before analysing the results, outliers were identified and removed (see Osborne & Overbay, 2004). All data met the assumptions for parametric testing, except for the IRMA-SF and rape proclivity scale variables, which are discussed in more detail in the results section.

Results

Table 7 presents the descriptive statistics of the sample.

Table 7

Descriptive Statistics

	Control Condition (n=104)	Experimental Condition (n=104)
Mean Total ASI Score*	57.4	57.8
<i>SD</i>	17.0	16.5
Range	22-95	22-111
Mean Total IRMA-SF Score**	30.2	30.0
<i>SD</i>	12.9	13.5
Range	17-81	17-100
Mean Total AMMSA Pre Measure^	45.5	43.5
<i>SD</i>	14.0	13.7
Range	16-87	15-75
Mean Total AMMSA Post Measure^	39.3	41.4
<i>SD</i>	14.4	16.2
Range	15-81	15-98
Mean RP Score^^	1.60	1.56
<i>SD</i>	.63	.63
Range	1-3.20	1-3.47

* Total scores on the ASI can range from 22-132 with higher scores indicating greater endorsement of sexist attitudes.

** Total scores on the IRMA-SF can range from 17-119, with higher scores indicating greater acceptance of rape myths.

^ Total scores on the AMMSA can range from 30-210. Given that the scale is use in two halves, scores can range from 15-105, with higher scores indicating greater endorsement of myths about sexual aggression

^^Total score of the RP scale can range from 1-7. Higher scores indicate higher rape proclivity.

Preliminary testing of the data was conducted. An independent samples t-test was used to compare mean scores on the pre measure of the AMMSA (Gerger et al., 2007). There was not a significant difference in attitudes toward sexual aggression pre exposure to the images between the control ($M = 2.99, SD = .89$) and the experimental condition ($M = 2.88, SD = .89$); $t(203) = .974, p = .331$.

Hypothesis 1

Following recommendations from Vickers and Altman (2001), a one-way ANCOVA was conducted to determine a statistically significant difference between the exposure conditions on participants' mean scores on the post measure of the AMMSA controlling for participants' mean scores on the pre measure of the AMMSA. There was a significant difference between exposure conditions on participants' mean scores on the post measure of

the AMMSA, after controlling for their mean scores on the pre measure of the AMMSA: $F(1, 202) = 10.410, p = .001$.

A multiple linear regression was calculated to predict participants scores on the post measure of the AMMSA based on their mean score on the pre measure of the AMMSA, and the exposure condition they were allocated to. Preliminary analyses were performed to ensure there were no violations of the necessary assumptions. A significant regression equation was found: $F(2, 202) = 212.458, p < .001$, with an R^2 of .678. Participants' predicted scores on the post measure of the AMMSA is equal to $-.072 + .880$ (PRE MEASURE AMMSA) + $.247$ (EXPOSURE CONDITION), where mean scores on the pre measure of the AMMSA are measured on a scale ranging from 30-210 (where higher scores indicate greater endorsement of myths about sexual aggression) and exposure condition is coded as 0 = Non-Sexual Images (Control Condition), 1 = Sexual Images (Experimental Condition). Participant's scores on the post measure of the AMMSA decreased .880 of a score for each whole score on the pre measure of the AMMSA scale, and participants exposed to non-sexual images scored .247 of a whole score less on the post measure of the AMMSA than those exposed to sexual images. Both pre measure mean scores on the AMMSA and exposure condition were significant predictors of post measure scores on the AMMSA.

Although the ASI variable was a significant predictor of post measure scores on the AMMSA when added into the regression model ($p = .001$), it only

increased the R^2 value to .696 (from .678). Thus, it was deemed unnecessary to include in the final model. A Pearson's correlational coefficient analysis revealed that sexism was significantly positively correlated to participants' pre measure mean score on the AMMSA ($r = .662, p = <.001, 2\text{-tailed}$). This explains the minimal increase in the R^2 value of the regression model when including the variable of sexism as a predictor.

The control and experimental conditions did not differ significantly across any of the demographic variables measured (see Table 6, page 112; age, highest level of education, employment status, use of pornography, and exposure to SCP). Therefore, it was not considered appropriate to control for any demographic variable in the regression model.

Preliminary analysis revealed that the IRMA-SF variable was non-normally distributed across both the control, with skewness of 1.11 ($SE = .240$) and kurtosis of .57 ($SE = .476$), and experimental, with skewness of 1.02 ($SE = .241$) and kurtosis of .40 ($SE = .478$), condition. Preliminary analysis also revealed that the RP scale variable was non-normally distributed for both the control, with skewness of 2.95 ($SE = .237$) and kurtosis of 10.59 ($SE = .469$), and experimental, with skewness of 2.02 ($SE = .237$) and kurtosis of 3.98 ($SE = .469$), condition. Although attempts were made to transform these variables using square root and log transformations, they

remained non-normally distributed. Thus, it was deemed inappropriate to analyse these variables in the regression model.

Subsequently, a Spearman's rank-order correlation was conducted to explore the relationship between rape proclivity and mean attitudes towards sexual aggression post exposure to the either sexual or non-sexual images. A scatterplot confirmed that the relationship between these two variables was monotonic and therefore the assumptions of this analysis were met. There was a strong, positive correlation between mean rape proclivity and mean attitudes towards sexual aggression post exposure to either non-sexual or sexual images of women, which was statistically significant; $r_s(206) = .463, p = <.001$.

Hypothesis 2

A paired samples t-test was conducted in order to compare attitudes toward sexual aggression pre and post exposure to non-sexual images of women (control condition). There was a significant difference in attitudes toward sexual aggression pre ($M = 2.99, SD = .89$) and post ($M = 2.57, SD = .89$) exposure: $t(101) = 9.063, p = <.001$.

A second paired samples t-test was conducted in order to compare attitudes toward sexual aggression pre and post exposure to sexual images of women (experimental condition). There was a significant difference in

attitudes toward sexual aggression pre ($M = 2.88$, $SD = .89$) and post ($M = 2.71$, $SD = 1.02$) exposure: $t(102) = 2.814$, $p = .006$.

The results demonstrate that attitudes became less endorsing of myths about sexual aggression within both conditions following exposure to the images. It is noted that this attitudinal change may be due to socially desirable responding, which will be explored further in the Discussion.

Hypothesis 3

A Mann-Whitney U test was conducted to compare mean rape proclivity scores across conditions. There was no significant difference in rape proclivity between the control ($Mdn = 1.2$) and the experimental ($Mdn = 1.1$) condition: $U = 5171$, $p = .568$. Thus, the null hypothesis is accepted.

Discussion

Whilst the literature presents mixed findings concerning the effects of exposure to pornography on individuals, there is support for the argument that exposure to pornography has a negative impact of males' attitudes towards sexual aggression (Hald et al., 2010; Chapter 2). SCP seems to have received less attention despite its widespread prevalence in mainstream media. Research suggests that the media often depicts sexist content and displays women and girls as sex objects (e.g. Stankiewicz & Rosselli, 2008). Moreover, there appear to be negative consequences for those who consume sexualised media, specifically advertising. This research explored the effects of short-term exposure to general sexualised media content (that can be defined as SCP) on males' attitudes towards sexual aggression.

Summary of Results

The results demonstrated that participants' attitudes toward sexual aggression post exposure to the images (sexual/non-sexual) was significantly different between conditions, after controlling for participants' pre exposure scores. Further, attitudes toward sexual aggression could be significantly predicted by their attitudes toward sexual aggression pre exposure, and the types of images they were exposed to (exposure condition). Research suggests this type of regression model is appropriate (Vickers & Altman, 2001); although it is acknowledged that there are alternative ways of analysing this data. The analysis of the second

hypothesis suggests that overall, participants' attitudes toward sexual aggression decreased significantly from pre to post measure, that is, their attitudes became less endorsing of myths about sexual aggression after exposure to the images. Although, the limitations of this method of analysis are noted (see Bland & Altman, 2011). This effect was apparent across both conditions (the control and the experimental group). The results indicate that attitudes became significantly less supportive of sexual aggression for both groups following exposure to the images, but more significantly for the control group who were exposed to non-sexualised images. It can be argued that exposure to the sexualised images of women reduced the expected size of the decrease in attitudes toward sexual aggression. Thus, it is suggested that exposure to sexualised images of women appeared to have a detrimental effect on males' attitudes toward sexual aggression within the context of this research.

Interpretation

Overall the results suggest that exposure to either group of images decreased participants' endorsement of myths about sexual aggression. This is an interesting finding that does not appear supported by previous research and a number of hypotheses are suggested to explain it. Firstly, and perhaps most significantly, the study did not involve any deception; participants were told the purpose of the experiment in the information sheet. This is suggested as the most significant limitation of the research. There is wealth of research considering the impact of social desirability bias

in psychological research, particularly in research exploring sensitive topics (for a review see Krumpal, 2013). Moreover, it appears typical of research in this area to use some form of deception to avoid the results being confounded by a social desirability bias. Future research in this area should ensure this limitation is considered and accounted for in the research methodology.

Briefly, another explanation of the results is that the images of women could have had a short-term humanising effect on participants. Before viewing the images in either condition, participants answered the ASI, the IRMAS-SF, and half of the AMMSA. Given the nature of such scales, it is reasonable to suggest that women were framed largely in the context of inequality and sexual violence, perhaps congruent with prevailing social norms for males in the age range included in this research. It is suggested that the images portrayed the women as humans or individual's (even the sexualised images), thus humanising women generally and framing women in a different context to the frames of the above questionnaires. Therefore, it could be argued that women were viewed in a more humane context by participants at the post measure of attitudes towards sexual aggression. Moreover, the results suggest that the sexualised images of women had less of a humanising effect than the non-sexualised images of women. The concept of humanising appears relevant to the wider context of sexual aggression against women. For example, Rudman and Mescher (2012) found that men who implicitly dehumanise women (through objectification)

are more likely to sexually victimise them. The sexual images used in this research could be defined as objectifying, indeed research increasingly recognises the objectification of women in sexualised media content, thus reducing the humanising effect of viewing the images found in the control group. Briefly, previous research suggests that exposure to pornography appears to have a more significant negative effect in studies which have used an experimental methodology (Hald et al., 2010; Chapter 2). This study used an experimental methodology; it is unclear what impact exposure to SCP would have in different context, again suggesting that the context of exposure to pornographic material is an important mediating factor. This could be suggested as supportive of the HCM of sexual aggression (Hald & Malamuth, 2017); in that the context/setting of exposure to pornography interacts with a range of other factors to produce an effect.

Limitations

Within this research, non-sexual images of women were considered an appropriate control due to their similar content minus the sexualised component. It was hypothesised that this would offer a useful comparison to sexualised images of women (the experimental group), and would allow conclusions to be drawn about the specific effects of sexualising women in the media. Whilst one is still able to draw tentative conclusions, the validity of the control group is questioned. The post measure of attitudes toward sexual aggression in the control group was significantly different to the pre-

measure. This suggests that exposure to non-sexual images of women acted as an unintentional intervention. One would expect the stimuli provided in the control group to have no significant effect on the variable being measured (Boot et al., 2013). It is suggested that a third group, which exposed participants to gender neutral images found in the media that are unrelated to women would have been more appropriate as a control group. It also noted that participants completed no follow up measure of attitudes toward sexual aggression. Given the nature of the interventions (viewing 15 images) it is likely that the changes observed in attitudes were short-term. Although, the exposure time in this research is similar to that of other research (e.g. Romero-Sánchez et al., 2015). Briefly, this is related to limitations highlighted in the systematic review presented earlier in this portfolio (Chapter 2; page 63). There appear difficulties in establishing appropriate control conditions, which should be considered in future research.

It is noted that whilst this research focused on general sexualised media content defined as SCP (rather than sexualised advertisements specifically); the images participants were exposed to did include some advertisements. This may have been a limitation and somewhat confounded the results. It could have been helpful to focus on one specific type of sexualised media (e.g. in newspapers) to draw more specific conclusions. In considering the representativeness of the images used in this research, it also noted that future research could use a more robust

framework for selecting appropriate images for this type of research. Such a framework should consider the fame of celebrities featured in images, the expression and body language of individuals in the images, the setting of the image etc. Having a pre-defined framework of criteria for selecting images would increase the replicability of this study and allow for increased control of confounding variables, ultimately increasing the value of research in this area. It would also ensure that the images selected in future research are as representative as possible of this kind of material in the media. The above issue appears pertinent. In research exploring the effects of exposure to violent media, a closely related area, Browne and Hamilton-Giachritsis (2005) found that children's identification with the perpetrator of on screen violence predicted later aggression. This finding appears to be well supported (e.g. Browne & Pennell, 1998; Konijn, Bijvank, & Bushman 2007; Lin, 2013; Pennell & Browne, 1999), suggesting that identification with a violent character acts as a mediator in the relationship between exposure to violent media and aggression. This research adds weight to the limitation discussed above; one could suggest that prior knowledge/identification with the celebrities in the images shown to participants may have significantly confounded the results.

The representativeness of participants included in this research, and the pilot study, is also a limitation worthy of discussion. The average age of participants in this study was 25 years, which parallels concerns with the representativeness of samples in this area, highlighted in the systematic

review (see Chapter 2). With reference to the pilot study specifically, young males may conceptualise what constitutes sexualised media differently to males of an older age. What is defined as sexualised media may also differ depending on other demographic characteristics, such as race or socioeconomic status. Indeed, the identification of what material meets the definition of SCP may differ across populations, perhaps providing further evidence for the conceptual issues in defining pornography. Exploration of this issue would be a valuable venture for future research, as would ensuring future research recruits more diverse samples.

Briefly, a number of post-doctorate publications are planned. For example, it would be worth exploring the results of the experimental group further. It may be that there is a subset of participants within the experimental group who became more endorsing/supportive of myths about sexual aggression rather than less endorsing following exposure to the sexualised images of women. It would be interesting to explore the demographic characteristics of this group and to determine if any variables explored in this research, such as rape myth acceptance, are different in this group of individuals. Finally, the RP scale variable measured in this research was not extensively analysed due to being non-normally distributed, although non-parametric testing revealed that rape proclivity did not differ significantly between conditions. Correlation analyses suggested that rape proclivity was significantly positively related to attitudes towards sexual aggression post exposure to the images across both conditions, meaning that as attitudes

towards sexual aggression became more endorsing, individuals reported higher rape proclivity. Whilst there was no pre-measure of rape proclivity and therefore conclusions are limited, these results are generally supported by previous literature (Malamuth et al., 2000) and would be worth further exploration.

Recommendations

It is suggested that future research should continue to explore the effects of exposure to sexualised media content defined as SCP, with the view to exploring the reliability of the findings presented in this paper further possibly with the inclusion of further participant groups (such as clinical samples) and more stimuli conditions, in addition to a more robust methodological framework for choosing the images shown to participants. Future research should also continue to explore any causal link between exposure to SCP and sexual aggressiveness. The longer-term consequences of exposure to sexualised media content defined as SCP should also be explored to provide more robust conclusions within this area.

Implications

The implications of this research are important. Whilst only a short-term effect is evident, it is noted that the average individual's exposure to the media, and therefore SCP, is significant (participants reported on average, they spend 5.26 hours engaging with the media, and view approximately 20 sexualised images of women in the media, per day). The effect found

in this research has real-world significance given individuals' frequent and daily exposure to sexualised media content, and it worth considering how such an effect may be impacted by long-term consistent exposure to sexualised images. In addition, there are potential implications of this research for clinical practice. Secure establishments typically deny service users access to pornographic material, in particular explicit pornography, but also highly sexualised media material often deeming it inappropriate (e.g. see patient A's experience in high secure mental health services; Chapter 5). The results of this research potentially do not support such common place policy. Although, it is acknowledged that this research was conducted with a general population sample and there were significant limitations to the project. Further research could explore the replicability of such findings within forensic populations.

Overall, this research suggests that the way women are portrayed in the media (whether sexualised or not) appears to impact males' attitudes toward sexual aggression. This is significant and further exploration is necessary. Moreover, this research prompts interesting questions regarding the availability and accessibility of sexualised media content.

**Chapter 5 - A case study exploring the association between
pornography use and inappropriate sexual behaviour in an adult
male residing in a secure forensic mental health setting**

Abstract

This paper evaluated the effectiveness of a compassion focused therapy (CFT) informed group intervention that was completed with a 33-year-old male (patient A) in a medium secure therapeutic community. Patient A had a diagnosis of mild intellectual disability, paranoid schizophrenia, and mixed personality disorder. He suffered significant and repeated sexual abuse throughout his childhood, including excessive exposure to violent pornography. He had a history of violent offending and a well-established history of sexually inappropriate behaviour towards females, although he has never received any convictions for this behaviour. A psychometric assessment, the Sexuality Scale, suggested that patient A was both sexually depressed and sexually preoccupied, which was consistent with his presentation on the ward. Analysis of records of patient A's behaviour using the St Andrews Sexual Behaviour Assessment pre-intervention suggested that patient A had been sexually inappropriate towards females on a number of occasions. Formulation suggested that patient A felt threatened by sex but also used sex to make himself feel safe, and pornography use appeared to play an important role in his behaviour. The intervention focused on exploration of patient A's pornography use in relation to his behaviour, as well as the messages he received about women from viewing

pornographic material. Patient A engaged well and the results suggested that his sexual depression and preoccupation decreased following the intervention. Analysis indicated that there were no recorded incidents of sexually inappropriate behaviour in the month following the intervention, which suggested that the intervention had therapeutic benefit. The limitations of the intervention are discussed and the results are explored in relation to the restriction of pornography for those in secure services and the role of pornography use in the commission of sexually aggressive behaviour.

Keywords: *pornography, sexually inappropriate behaviour, intellectual disability, compassion focused therapy*

Introduction

The work reported in this paper was conducted during the trainee's fourth placement at a secure forensic mental health hospital of a private healthcare charity. The ward operated as a medium secure democratic therapeutic community (TC) for men with a co-morbid diagnosis of personality disorder (PD) and mild intellectual disability (ID). Whilst it is beyond the scope of this report to discuss the treatment model of TCs, readers are referred to the following resources: Brown et al. (2014a), Pearce and Haigh (2017), and Shuker (2010). Briefly, the basis of their clinical approach is four key principles which aim to govern the social climate created (Haigh, 2002; Rapoport, 1960): democratisation, communalism, permissiveness, and reality confrontation. TCs are becoming increasingly accepted as alternative treatment pathways for those with PD, with an emerging evidence base supporting their clinical effectiveness (Bateman & Fonagy, 2001; Chiesa & Fonagy, 2000; Lees et al., 1999; Lees et al., 2004; Lees, Manning, & Rawlings, 2004; Pearce & Haigh, 2017; Norton & Warren, 2004).

Miles (1969) first introduced TCs for patients with ID, arguing that traditional treatment methods were not suitable for this population with a co-morbid PD. A growing research base supports the effectiveness of TCs for this population (e.g. Morrissey & Taylor, 2014; Morrissey, Taylor, & Bennett, 2012). This case study documents a group intervention although focuses specifically on work with one patient, who will be referred to as

patient A. Given patient A's diagnosis of ID, his informed consent was gained in front of an observer using an adapted consent form (appendix Q) from a standard template (appendix R).

Supervision

The trainee's designated and coordinating supervisor was Dr Jon Taylor (Consultant Forensic Psychologist/Psychotherapist). The trainee had weekly supervision with the designated supervisor and also engaged in daily staff process meetings where they were able to discuss and reflect upon the work documented within this paper with the ward staff team. The trainee's research supervisor was Dr Simon Duff. This work was discussed briefly during research supervision on a number of occasions.

Patient History

Patient A was a 33-year-old man of White British ethnicity who was admitted to the TC from a high secure forensic mental health hospital in March 2015. The information below was gathered by an extensive file review, throughout the intervention, and from the trainee's therapeutic work with patient A which formed part of the TC structured timetable. Note that only the most relevant aspects of patient A's history have been documented in this report.

Early Life/Trauma

It is reported that patient A grew up with his mother and father, being the eldest of five siblings. Patient A's mother is considered to have a mild ID. Patient A's childhood is reported to have been chaotic and characterised by extensive physical and sexual abuse, and neglect. He first came into contact with social services at age 5 when he was placed on the child protection risk register.

Briefly, until being taken into local authority care it is documented that patient A was forced to watch violent pornography (see definition provided on page 26 of the thesis) from approximately 3 years old, was forced to watch his parents engaging in sexual acts and sexual intercourse, was forced to perform and receive sexual acts on/from his younger siblings in front of his parents, and was extensively sexually abused by his father and his father's friends. There is little further information available, although reports suggest that pornography was on in the household on a daily basis and patient A's father gained sexual gratification from forcing his children to watch pornographic material. It is noted that patient A reported that the pornography he was exposed to as a child exclusively depicted scenes of rape, extreme and explicit physical violence (particularly towards women), as well as other illegal acts, such as sex with animals. It is also reported that patient A was forced to have sexual contact with young girls during his childhood which was arranged and watched by his father. Reports suggest that patient A's mother was complicit to the abuse although not the main

perpetrator of it. There are also multiple reported incidents of patient A engaging in non-consensual sexual acts with his peers, including one incident when patient A was 11 where he was forced to perform oral sex on a male peer of a similar age whilst being threatened with a knife. In addition, significant neglect within the family home is documented.

Patient A was placed in local authority care at age 11 where it is reported he suffered abuse and neglect from staff. It is documented that between the ages of 11 and 21, patient A resided in 13 different placements, 6 of those being secure settings. Patient A reported that he was sexually abused by staff within various institutions although such reports are unsubstantiated in official documentation. Reports suggest that staff were unable to manage patient A's antisocial behaviour which resulted in the breakdown of numerous care placements. Patient A presented with behaviours that challenge from early childhood, receiving a diagnosis of conduct disorder. His behaviour included fire setting, property damage, verbal aggression, threats of violence, violence and aggression towards others, and sexualised behaviour. Patient A's history of fire-setting began in his early adolescence and most frequently took the form of him setting fire to his bedroom in institutional settings. It is unclear if this behaviour was motivated by a desire to self-harm or attempt suicide. It is reported that patient A associated with gangs during his childhood.

Patient A has no contact with his siblings who were also placed in local authority care as children and no contact with his father. He has a complex and unstable relationship with his mother whom he has intermittently remained in contact with whilst in secure services. For a number of years their contact appears to have been exclusively via telephone as it is reported that patient A's mother was stopped from visiting him following a visit to secure services where she began masturbating during the visit. There are a number of additional concerns related to their current contact which mainly include patient A and his mother's discussion of sexually inappropriate topics.

Mental Health

Patient A's first contact with mental health services was with child psychiatric services at age 6 due to conduct problems. Currently, patient A has a diagnosis of paranoid schizophrenia (despite updated guidelines in the DSM-V; APA, 2013), mixed and other personality disorders (including antisocial, dissocial, and emotionally unstable), and mild ID. He has a full scale intelligence quotient score of 67 (Weschler, 2008), with levels of cognitive, adaptive, and social functioning congruent with this. Patient A also has a history of self-harm and suicide attempts that date back to his childhood. These include ingesting rat poison, swallowing glass and staples, ligating, and secreting medication for the purpose of overdose.

Relationship History

Patient A has no history of intimate relationships and due to the young age at which he entered care and secure settings he has never had the opportunity to develop an appropriate intimate relationship. Patient A has reported that the only women he has ever known (besides his mother and sister) have been members of staff.

Offence History

The trainee was not able to access patient A's police national computer records for the purposes of this report. In a HCR-20 v3 (Douglas et al., 2013) risk assessment report dated October 2017, it is reported that in 2009 patient A was convicted of two counts of assault occasioning actual bodily harm and one count of assault by beating which he committed whilst in secure care. Following conviction of these offences, patient A was transferred to a high secure forensic mental health hospital under Section 37/41 of the Mental Health Act (MHA; 1983 amended 2007) although there is no further information given about these offences. The HCR-20 v3 goes on to report that patient A has other convictions for violence towards staff members (although does not specify these) and there is evidence of several other assaults which were not reported or did not result in a criminal conviction.

As well as violent behaviour within institutional settings, patient A has a well-documented history of inappropriate sexualised behaviour towards

female members of staff although he has never received any formal warnings or convictions for this behaviour. This includes an incident of sexual assault where patient A pushed a female member of staff into a side room and groped her breasts (it is not clear from file information when this incident occurred).

Since patient A's admission to the ward in March 2015, he has continued to demonstrate behaviours that are challenging, mostly inappropriate sexualised behaviours towards females. This behaviour has been so persistent that a number of female health care assistants have transferred to work on different wards within the hospital for their safety. As the trainee was female, the trainee and supervisor considered at length the potential risk that patient A posed to her given his behaviour towards other female members of staff (e.g. the health care assistants who were required to transfer wards). It was considered that the risk could be appropriately managed by the trainee's acquired ability and skill to enforce and maintain professional boundaries with patient A, and the different role of the trainee to that of a health care assistant. This issue was also discussed regularly in supervision.

Briefly, it is appropriate to consider the quality of information recorded related to this case. The trainee often found that there was a lack of specific information related to patient A's history. This is problematic; and perhaps

a reflection of wider issues related to record keeping (Trace, 2002; Weir et al., 2003).

Referral/Rationale

This piece of work was conducted within the context of a TC and thus the rationale for the development of an intervention that explored appropriate sexual behaviour was discussed in various forums with the entire staff team. Following discussions, the trainee received a referral from the designated supervisor for the intervention. The rationale was as follows. Most significantly, there was daily sexually inappropriate behaviour on the ward (not just perpetrated by patient A), which the intervention aimed to explore and challenge. It was also noted by the team that patients had unrestricted access to pornography and this seemed to play a significant role in some patients sexually inappropriate behaviour (particularly patient A's).

For example, at times when patient A would self-report having just watched pornography to female staff, he would present as somewhat hyper, make numerous inappropriate comments, and ask multiple inappropriate questions. At these times, patient A would also attempt to touch female members of staff inappropriately. On one specific occasion during the trainee's placement, patient A reported that he had just watched "rough" pornography to a female health care assistant. He made a number of inappropriate comments towards her regarding how she looks, stating that

he thought she was “sexy” and telling her to come into his room with him (implying that they would engage in sexual contact). As the staff member disengaged from this conversation, patient A touched her back and grabbed her bra strap. Patient A reported that he had hoped the member of staff would turn around to challenge him, at which point his hand would have touched her breasts. Another example includes patient A asking a female member of staff how big her breasts are and how much they would “bounce” when she is having sexual intercourse; patient A reported watching pornography shortly before asking the staff member these questions.

Based on the above evidence, the intervention aimed to explore the association between pornography use and sexually inappropriate behaviour. Further rationale for the intervention included there being little scope within the established treatment model to explore healthy sexual behaviour within the context of the ward environment. Finally, the intervention aimed to explore patients’ attitudes towards sex and encourage discussion about healthy sexual expression within secure services. A more general aim of the intervention was to encourage the clinical team to consider restriction of patients’ access to pornography and whether this was appropriate.

Based on the above rationale, the research question relevant to this case study was: Is patient A's pornography use related to his commission of sexually inappropriate behaviour?

Assessment, Analysis, and Formulation

Assessment Methods

The assessment of patient A for this intervention was multi-dimensional. Consistent with one of the core principles of TCs, communalism (Pearce & Haigh, 2017), the assessment methods included self-assessment, community/peer assessment, and staff assessment. Patient A's sexually inappropriate behaviour appeared to be related to his level of sexual preoccupation, which was formulated to be linked to his pornography use and a consequence of repeated trauma (see Figure 3 page 160, and appendix S). Thus, it was deemed appropriate to explore patient A's sexual preoccupation during assessment to inform both the formulation and subsequent intervention, and to use as a pre and post intervention measure of change. The final two assessment methods were utilised to gain a measure of the frequency of patient A's sexually inappropriate behaviour from both the community and the staffs' perspective, and to use as a pre and post intervention measure of change.

Self-Assessment

The Sexuality Scale (SS; Snell & Papini, 1989; appendix T)

The SS is a 30-item self-report measure designed to assess an individual's sexuality. The authors define sexuality as consisting of three components; sexual-esteem (defined as positive feelings for one's capacity to experience their sexuality in a satisfying/enjoyable way), sexual-depression (defined as feelings of depression about one's sex-life), and sexual-preoccupation (defined as the tendency to excessively think about sex). The SS demonstrates good psychometric properties. The authors report good internal reliability of the scale (Snell & Papini, 1989). The internal reliability of each subscale is reported using the Cronbach's alpha coefficients (α): sexual esteem ($\alpha = .92$), sexual depression ($\alpha = .90$), and sexual preoccupation ($\alpha = .88$). These results indicate the subscales of the SS had high internal consistency (George & Mallery, 2003). Good convergent and discriminant validity and external reliability of the scale is also reported (see Snell, Fisher, & Schuh, 1992). All responses are given on a five-point Likert-type scale ranging from agree to disagree, where agree equals 2 and disagree equals -2.

Following discussion with the supervisor, the subscale of sexual-esteem was removed from the scale. Patient A has never had a consensual sexual experience as an adult and therefore the questions included in this subscale were considered potentially distressing and inappropriate (e.g. Item 1: I am a good sexual partner and Item 4: I would rate my sexual skill quite

highly). A number of questions within the remaining subscales of sexual-depression and sexual-preoccupation were simplified whilst still maintaining their meaning given patient A's ID. The response scale was also adapted (see appendix T).

Table 8

The SS Results Pre Intervention

Subscale	Score
Sexual Depression	9/20
Sexual Preoccupation	20/20

Interpretation

Patient A's results suggest that he was both sexually depressed and sexually preoccupied. These results were consistent with patient A's presentation; he regularly expressed sadness that he does not have a girlfriend and is not able to have sex, and he reported regularly to multiple staff members that he thought about having sex with women "all the time". It is not clear if these thoughts related to consensual sex. This preoccupation also appeared to be reflected in his sexually inappropriate behaviour. Note that the SS does not provide guidance on distinguishing scores on subscales. As such there are no categories or cut off scores provided to guide interpretation. Therefore, clinical judgment was used to interpret these results, mainly via discussion with the team through a range of forums, such as in ward round and staff reflection groups. In addition,

the trainee used supervision to discuss and interpret patient A's results, enabling the trainee to be guided by the supervisors extensive knowledge of and experience working with patient A since his admission to the ward.

Community and Staff Assessment

Community Assessment

A common TC practice is community meetings in which any relevant issues are discussed by the community in order to come to a resolution (Pearce & Haigh, 2017). The TC in which this work was carried out used an agenda book to structure this process; any member of the community was able to record issues in the agenda book to be discussed at community meetings. This typically took the form of members of the community challenging other member's behaviour (particularly patients challenging other patients), however positive entries were also encouraged. It was deemed appropriate to use the agenda book as a measure of frequency and content of patient A's sexually inappropriate behaviour pre and post intervention as his behaviour was often challenged within this meeting. Staff monitored patient entries made in the agenda book to ensure it was a valid and reliable measure of issues within the community. A time sampling method was utilised and the trainee analysed the records in the agenda book for the month period prior to the intervention (July 2017). Briefly, time sampling is a data collection method that records the frequency of a specific behaviour within a set period of time. This time sample was considered

appropriate for multiple reasons but mostly due to the lack of resources available to analyse a longer period.

The St Andrew's Sexual Behaviour Assessment (SASBA; Knight et al., 2008; appendix U) was utilised to assess the type and severity of patient A's behaviour from clearly defined categories, providing a more objective method of assessment. The SASBA defines four categories of sexually inappropriate behaviour (verbal comments, non-contact, exposure, and touching others), each of which has four levels of severity. The authors report that the categories of behaviour were established by reviewing the literature (e.g. Johnson, Knight, & Alderman, 2006) and the psychometric properties of the assessment appear robust (Knight et al., 2008).

Staff Assessment

The trainee analysed clinical records (RiO notes) made by staff to gain a behavioural measure of the frequency and content of patient A's sexually inappropriate behaviour pre intervention. Similar to above, a time sample of the month prior to the intervention was analysed utilising the SASBA (Knight et al., 2008; appendix U). Guidelines provided to staff for clinical record keeping advised recording of any sexually inappropriate behaviour that would meet the categories identified in the SASBA, increasing the reliability and validity of this measure. The results are presented below.

Table 9

Analysis of Agenda Book and RiO Notes Pre Intervention Using the SASBA
(Knight et al., 2008)

Category of Behaviour	Severity Level	Frequency - Agenda Book (Community)	Frequency - Rio Notes (Staff)
Verbal Comments	Level 1	0	3
	Level 2	0	0
	Level 3	0	1
	Level 4	0	0
	Total	0	4
Non-Contact	Level 1	1	0
	Level 2	0	0
	Level 3	0	0
	Level 4	0	0
	Total	1	0
Exposure	Level 1	0	0
	Level 2	0	0
	Level 3	0	0
	Level 4	0	0
	Total	0	0
Touching Others	Level 1	2	3
	Level 2	0	0
	Level 3	0	0
	Level 4	0	0
	Total	2	3

Overall Total		3	7
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Interpretation

Consistent with patient A's presentation and history, there were no exposure behaviours reported throughout the time sample. Although not evidenced in the agenda book, 4 incidents of inappropriate comments were recorded by staff. This discrepancy is likely due to this behaviour being exclusively aimed at staff and therefore the wider community not necessarily being aware of it, or not classifying this behaviour as inappropriate. Patient A would make sexualised comments towards female staff (often aimed at the trainee) and once (within the time sample) inappropriately commented on a female member of staffs' appearance (the level 3 behaviour recorded). There was 1 non-contact behaviour reported in the agenda book which referred to an incident where patient A stared at a female member of staff's breasts and groin for a prolonged period of time. It is unclear why this behaviour was not also recorded by staff. In this instance patients noticed this behaviour before staff and challenged patient A, although typically patient A did not present with this behaviour. Finally, there were numerous touching others behaviours recorded across both assessment measures. This was a common feature of patient A's presentation and took the form of him inappropriately touching female members of staffs shoulders, backs, hands, and legs.

Summary of Assessment

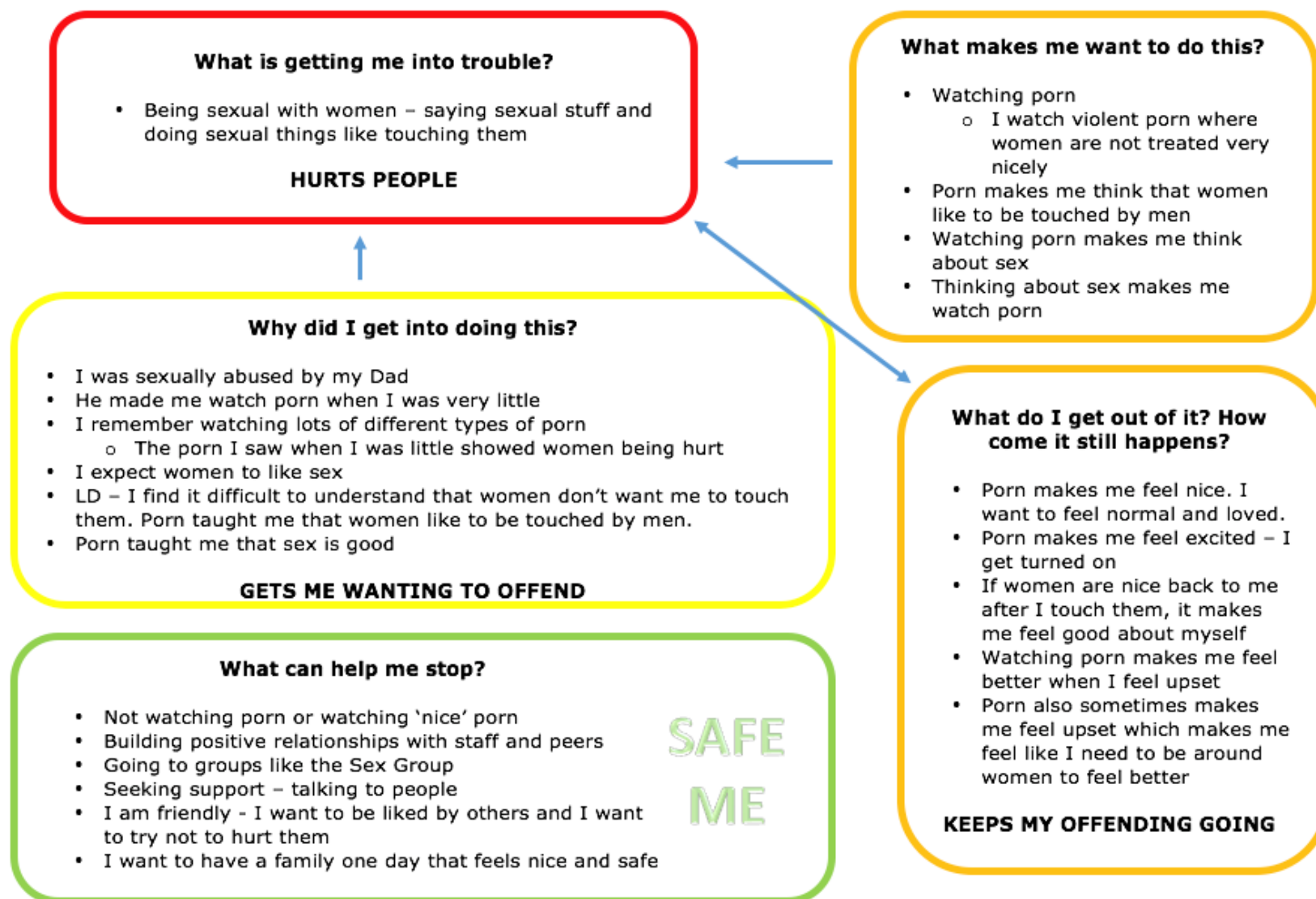
In addition to the assessment methods described above, it is worth noting the trainee's and the supervisor's contact with patient A. Given that the ward ran as a TC the trainee and supervisor were ward based, meaning that the trainee spent a significant amount of time with patient A and their knowledge of him was detailed. This way of working provided the trainee with substantial opportunity to observe patient A's behaviour within the context of therapy groups and the general ward environment, allowing the trainee and supervisor to assess the needs of patient A thoroughly and on an ongoing basis.

Formulation

A 5 P model of formulation (Weerasekera, 1996) was utilised by the TC for a number of reasons, despite the TC practising using a compassion focused therapy approach (CFT; Gilbert, 2010). Firstly, it is a relatively simply model of formulation that can be easily adapted to meet the needs of a population with mild ID. For example, the following simplified headings were used: "HURTS PEOPLE" = presenting problem, "GETS ME WANTING TO OFFEND" = predisposing factors, "SETS MY OFFENDING OFF" = precipitating factors, "KEEPS MY OFFENDING GOING" = perpetuating factors, and "STOPS ME OFFENDING" = protective factors. Secondly, consistent with the model of TCs (Pearce & Haigh, 2017), the entire staff team was involved in the formulation of patient behaviour and thus the simplicity of the model increased the accessibility of formulation for

disciplines other than psychology (a CFT model of formulation was considered to be less accessible for the multi-disciplinary team given the theoretical knowledge required of the model – see appendix V for a template). The formulation of offending behaviour was therefore able to be completed entirely collaboratively within the community; individual's formulations were routinely reviewed, updated, and explored within therapy groups. The formulation presented in appendix S is a general formulation of patient A's sexually inappropriate behaviour and was developed collaboratively with him, his peers, and the staff team since his admission to the TC. The formulation presented below specifically focuses on the role of pornography in the commission of patient A's sexually inappropriate behaviour. Patient A was involved in developing aspects of this formulation.

Figure 3. Patient A's formulation – The link between sexually inappropriate behaviour and pornography use.



Relevant Literature

The effect of exposure to pornography on attitudes supportive of sexual aggression has been the focus of this thesis. Whilst the focus of this case study is the impact of pornography use on sexually inappropriate behaviour, there appears to be evidence to support the formulation presented above (see Hald et al., 2010).

The formulation above links to the results presented in Chapter 2 of this thesis. Patient A reported watching both violent and non-violent pornography however his exposure to violent pornography appeared to be most significant in the commission of his sexually inappropriate behaviour. After watching violent pornography patient A reported thinking “less nice things” about “women and sex” than when he watched non-violent pornography. Although patient A appeared to struggle to verbalise specifically what he meant by this, it seems that he generally held less positive attitudes towards women following exposure to violent pornography. This appeared to impact his behaviour; he often appeared more intent or obsessive in seeking out female members of staff to engage with after watching violent pornography (seemingly for the purpose of attempting to inappropriately touch them). This is interesting and appears to be supported by literature in this area that suggests that exposure to violent pornography has a greater deleterious impact than exposure to non-violent pornography on the individuals exposed (see the Results presented in Chapter 2, page 39; Allen et al., 1995a; Hald et al., 2010; Malamuth et

al., 2000). In addition, patient A's behaviour (e.g. seeming to present as riskier towards females after viewing violent pornography) is supported by the results from Chapter 2, which suggest that studies that used an experimental methodology found a more significant negative effect of exposure to pornography. It appears that the context of patient A's exposure appeared to mimic the methodology used in experimental studies (see the Results presented in Chapter 2, page 39).

Briefly, patient A reported watching significantly more violent pornography than any other type. This appeared linked to patient A's desensitisation to pornography in general, seemingly a consequence of his repeated and extensive exposure to this type of material from such an early age. Patient A reported watching increasingly violent/explicit pornography, describing "normal porn" as "boring".

The theoretical framework of the thesis for understanding the relationship between exposure to pornography and sexually inappropriate behaviour (or sexual aggression) is detailed in Chapter 1 (see page 2). Briefly, the HCM (Malamuth, 2003) contends that sexual aggression is the result of an interaction between a range of risk and protective factors, of which pornography use is considered a risk factor. Importantly, the HCM emphasises the consideration of 'individual factors' as risk factors, and how the presence of multiple risk factors interact with each other to increase or decrease the risk of sexually aggressive behaviour. For example, a study

included in the systematic review (Chapter 2) found that men with higher levels of the personality trait of agreeableness were more likely to endorse attitudes supportive of violence against women following their exposure to pornography (Hald & Malamuth, 2015).

When considering patient A, it is interesting to consider his diagnosis of personality disorder (mixed – antisocial, dissocial, and emotionally unstable) as a risk factor. It is suggested that his personality disorder may act to increase the risk of him behaving in a sexually aggressive manner following his exposure to pornography, particularly violent pornography (see Malamuth, 2018). Moreover, his diagnosis of mild ID may act as a similar risk factor; patient A appeared to struggle to understand his behaviour and the impact he had on others when he acted inappropriately, as well as the impact watching pornography had on him.

This case study also links to the literature that considers the expression of sexuality in secure forensic mental health services. As this is not the main focus of this case study this literature is not included here, although see appendix W for more detail.

The TC utilised a CFT approach (Gilbert, 2010). Briefly, CFT is a trauma-focused psychotherapy which suggests that there are three distinct neurophysiological affect regulation systems that humans operate in: threat focused, soothing focused, and drive focused (Gilbert, 2009). CFT

views the threat focused system as overdeveloped and the soothing focused system as typically underdeveloped in individuals who have experienced trauma (especially in relation to attachment trauma; Ainsworth et al., 2015; Allen, 2001; Bowlby, 1988) and experience high levels of shame and self-criticism (Gilbert, 2009). It is suggested that individuals with an overdeveloped threat system (feelings of being unsafe) and underdeveloped soothing system (feelings of being safe) are more vulnerable to engaging in offending behaviour. CFT aims to develop feelings of safety and self-compassion, reduce feelings of shame, and ultimately develop the soothing focused affect regulation system through a range of exercises (Gilbert, 2009; Lee & James, 2010).

Briefly, a CFT approach to understanding offending behaviour can be linked to the theoretical framework of the thesis presented in Chapter 1; the HCM of sexual aggression (Malamuth, 2003). The HCM considers an evolutionary perspective in the development of risk factors that increase the risk of sexual aggression, as does the CFT approach through the conceptualisation of the threat system. For example, personality traits linked to the threat system in the CFT model (such as a hostility) are also considered in the HCM as traits that may act to mediate the relationship between pornography use and sexual aggression (see Malamuth, 1996). The significance of sexual power as a factor relevant to the commission of sexual offending is also central to the HCM of sexual aggression (Malamuth et al., 1995). The importance of sexual power can also be explored through

the threat system in CFT. For example, when the threat system is triggered an individual may experience a lack of power or a feeling of humiliation which they then may attempt to alleviate/soothe e.g. through the use of pornography. In fact, it could be suggested that the impact of pornography use on sexual aggression is mediated by the development of the threat system, and thus this could be considered a relevant factor of exploration in the HCM. For example, the impact of past sexual abuse/trauma (activation of the threat system) is likely to influence the impact exposure to pornography may have on sexual aggression.

The implications of this thesis are also considered in Chapter 1 (page 13), such as the treatment of those who perpetrate sexual violence. It is suggested that a CFT approach, which emphasises the importance of a compassionate, non-shaming relationship with the therapist (Gilbert, 2010), links to research exploring the rehabilitation of men who have committed sexual offences. For example, research suggests that high levels of shame may be detrimental to the rehabilitation and reintegration of those who have committed sexual offences, into our society (McAlinden, 2005; Svenja, Ward, & Willis, 2012).

Rationale

The group was designed in response to the frequency of incidents of sexually inappropriate behaviour on the ward, the literature identified above (and in appendix W), and patient A's formulation which suggested

that his exposure to pornography played a role in the commission of his sexually inappropriate behaviour. The intervention was exploratory in nature and aimed to develop patient A's understanding of the impact of pornography on his behaviour through the development of a working formulation, as well aiming to challenge his thinking (see Intervention section). It is noted that collaborative formulation work is increasingly considered intervention (Aston, 2009; British Psychological Society, 2011; Thew & Krohnert, 2015).

TCs generally do not facilitate individual interventions (Pearce & Haigh, 2017), however it was considered that there were a range of additional benefits of completing this intervention in a group format. Yalom (1995) proposed a number of therapeutic factors of group psychotherapy which are relevant to this intervention, including universality, altruism, installation of hope, and catharsis.

This case study is relevant to the trainee's research portfolio; the intervention sought to explore the link between patient A's pornography use and sexually inappropriate behaviour.

Intervention

The trainee ran seven group sessions in total each approximately an hour in length, all of which patient A attended. The group began by explaining the purpose of the group to participants and establishing appropriate

boundaries. The content of each session was roughly planned by the trainee and the supervisor based on key topics identified as appropriate (such as pornography use and masturbation). Group members were also encouraged to identify topics that they thought would be useful to explore. The focus of each of session that is detailed below.

Table 10

Content of Intervention

Session	Session Content
1	Introductory session – purpose of group explained. Identification of key topics and start of exploratory formulations (e.g. how to pornography use impact behaviour on the ward?).
2	Exploration of sexually inappropriate behaviour as “the only sex [we] have” and the use of sex to soothe (continuation of formulation).
3	Exploration of use of pornography to soothe. Patient A made links between feeling distressed and being sexually inappropriate (continuation of formulation).
4	Exploration of the roles of women and men in pornography and how exposure to pornography links to thoughts about female staff and sexually inappropriate behaviour (continuation of formulation). Thinking challenged through exploration of fears,

blocks, and resistances towards compassion for others (compassionate mind training).

- 5 Exploration of exposure to violent pornography as a child (threat system; continuation of formulation). Continued challenging of thinking regarding female staff (compassionate mind training).
 - 6 Exploration of appropriateness of risk assessing pornography before individual's have access to it.
 - 7 Continued exploration of use of pornography and messages portrayed about consent in violent pornography. Continued challenging of thinking (compassionate mind training). End of intervention.
-

During session 4, patient A identified exposure to "nice porn" (non-violent pornography) and "angry porn". He described "nice porn" as: one man and one woman, scenes of romance, love, and care, a build up to the depiction of sex which shows the couple have a 'happy life' (e.g. are in a relationship and their house is "cosy and warm"), "nice" interaction between the man and the woman when they are having sex, respect – meaning that the man does not hurt the woman (importantly, this is not deducted by the woman's behaviour but from objective consideration of the man's behaviour. This is due to women often seeming to enjoy things that are likely to hurt them in pornography). Patient A also reported that "nice porn" often includes scenes in slow motion.

In contrast, patient A described “angry porn” (violent pornography) as: missing any of the “nice porn” parts, angry, aggressive, demeaning (e.g. the man calling the woman a “dirty fucking whore”), “messed up”, the woman being hurt (e.g. by being strangled), including whips and chains, disgusting (e.g. the man urinating on the woman), rape (e.g. “she doesn’t want to do it. It’s sick.”), incest story lines, and “hard-core physical action”. Interestingly, when patient A described “angry porn” he noted the above negative aspects of it but also reported that “angry porn” is the only type that sexually arouses him. In addition, when describing “nice porn”, he presented as conflicted when stating that it includes respect; he also stated “but how can porn be respectful? It’s porn.” This session appeared to be particularly helpful for patient A in developing his insight and understanding of how his pornography use affected his thinking and behaviour, linking to the use of formulation as intervention (Aston, 2009; British Psychological Society, 2011; Thew & Krohnert, 2015).

Throughout the intervention a range of thoughts about female staff were explored following patient A’s exposure to pornography. Patient A reported that he thought “nasty things” about female staff members after watching violent pornography. Some of these thoughts included “she wants me to touch her”, “she’s flirting with me”, “she’s teasing me”, “she’s a slut”, “she lies because I know she likes me”, “I don’t care if she doesn’t want me to touch her”, “I’m a man and bigger and stronger than her”, and “it’s her fault if I touch her for being around me and making me do it”. The

intervention explored these aspects of patient A's pornography use, aiming to increase his insight into the link between pornography use and his sexually inappropriate behaviour, and also challenged his thinking about women/his pornography use. Patient A's thinking was challenged by exploring his fears, blocks, and resistances towards being compassionate towards others and himself (an aspect of CFT; Gilbert, 2010). For example, patient A recognised that he was scared to be nice or compassionate to other people in case they "are nasty in reply." Patient A also reported that he did not think others deserved his compassion (e.g. women to be treated with respect) because nobody was nice to him throughout his childhood. The unhelpful nature of this thinking was challenged throughout the intervention by the trainee and other group members, forming an aspect of compassionate mind training (e.g. helping patient A feel and act compassionately towards others in addition to himself, Beaumont & Irons, 2016).

A key aspect of the intervention was also the compassionate therapeutic relationship with the trainee. It is noted that the development of an attuned therapeutic relationship is considered fundamental to most branches of psychotherapy, particularly CFT (Gilbert, 2010; Wylie & Turner, 2011). All of the topics were explored within the context of the threat and soothing systems and patient A was encouraged to explore his use of sex to soothe (e.g. sexually inappropriate behaviour). An overarching aim of the intervention was to provide a safe space for patient A to explore his sexually

inappropriate behaviour where he did not feel judged or ostracised from the community.

Engagement

Patient A attended every session of the group although on occasion needed encouragement to do so. He generally presented as open to and interested in the purpose of the group and expressed numerous times that he thought it was “cool” that he was allowed to talk about sex “without getting into trouble”.

Response

There were a number of responsivity issues that were relevant to the efficacy of this intervention, one of which directly impacted patient A’s engagement in the intervention.

Firstly, patient A’s engagement was somewhat disruptive at times when other group members discussed their homosexuality. Patient A appeared to spend a significant amount of time telling people that that he was heterosexual (“I only like women, I’m not gay”); he was highly sensitive to perceiving that his heterosexuality was being questioned and appeared to use his consumption of heterosexual pornography as definitive evidence that he was heterosexual. This behaviour was apparent throughout the group and patient A was hostile towards other group members when they discussed homosexuality. Patient A made explicitly homophobic comments

towards certain individuals and appeared to disengage from the group when he was encouraged by the trainee to be respectful of other group members. Whilst patient A never left a session before the end, at such times he appeared to fall asleep or pretend to fall asleep within the group. Patient A's response to the topic of homosexuality was explored within the group and formulated to most likely stem from patient's A belief that the men (including his father) who sexually abused him as a child were homosexual. Patient A seemed to struggle to make any distinction between homosexuality and the rape of a child and therefore the topic of homosexuality seemed to be highly threatening for patient A (activation of the threat system; Gilbert, 2010).

This was explored throughout the group as ongoing formulation hypothesised that an element of patient A's sexually inappropriate behaviour may stem from a desire to continually prove his heterosexuality. Briefly, this can be related to the literature exploring the eroticisation of fear in children that are sexually abused (Davies & Frawley, 1994; James, 1989). Moreover, the staff team had formed the impression since his admission that patient A was homosexual, but in the absence of being able to explore his sexuality in consensual adult sexual relationships, and the fear of homosexuality from his understanding of his experiences as a child, patient A presented as hostile towards the topic of sexual orientation. Thus, patient A's engagement in the intervention when sexual orientation was

discussed was considered a live treatment need, indicating what his response to the therapy might have been.

Despite patient A's sexually inappropriate behaviour on the ward, he presented as appropriate throughout the group. During the first session, patient A asked a number of questions of the trainee that the trainee explained were inappropriate, such as "Do you wank?" and "When you wank, you can finish, right?", which followed a discussion about patient A's perception that certain medication prevented him from ejaculating when he masturbated. Following the trainee reiterating the boundaries of the group and the boundaries of professional relationships between staff and patients (Hamilton, 2010), patient A asked no further inappropriate questions of the trainee throughout the remainder of the group. This was somewhat surprising; patient A appeared to struggle to manage his behaviour on the ward in other contexts. This was viewed as encouraging; patient A demonstrated that he was capable of acting appropriately when given a safe space to discuss sex, and when the boundaries of the space were explicit and consistent.

Results

The methods of assessment utilised pre intervention were utilised post intervention to assess change and assess the research question.

Self-Assessment

Patient A completed the SS (Snell & Papini, 1989; appendix T) following the last session of the group. The results are presented below.

Table 11

The SS Results Pre and Post Intervention

Subscale	Pre Score	Post Score	Total Score Post Intervention
Sexual Depression	9	4	4/16
Sexual Preoccupation	20	19	19/20

Interpretation

Patient A's results suggest that he was less sexually depressed and less sexually preoccupied following the intervention. The reduction in patient A's scores on the sexual depression subscale were consistent with his presentation on the ward; he appeared to make less statements about feeling sad that he could not have sex and he seemed to have an increased sense of hope that he could have a fulfilling consensual sexual relationship in the community in the future. Note that the SS does not provide guidance on distinguishing scores on subscales. As such there are no categories or cut off scores provided to guide interpretation. Therefore, clinical judgment was used to interpret these results, mainly via discussion with the team through a range of forums, such as in ward round and staff reflection

groups. In addition, the trainee used supervision to discuss and interpret patient A's results, enabling the trainee to be guided by the supervisors extensive knowledge of and experience working with patient A since his admission to the ward.

Community and Staff Assessment

The trainee analysed clinical records (RiO notes) made by staff and records made in the agenda book for the month following the intervention (December 2017) to gain a behavioural measure of the frequency and content of patient A's sexually inappropriate behaviour. Patient A's behaviour was analysed using the SASBA (Knight et al., 2008; appendix U). The results are presented below.

Table 12

Analysis of Agenda Book and RiO Notes Pre and Post Intervention Using the SASBA (Knight et al., 2008)

Category of Behaviour	Severity Level	Agenda Book Pre Intervention - Frequency	Agenda Book Post Intervention - Frequency	Rio Notes Pre Intervention - Frequency	Rio Notes Post Intervention - Frequency
Verbal Comments	Level 1	0	0	3	0
	Level 2	0	0	0	0
	Level 3	0	0	1	0
	Level 4	0	0	0	0
	Total	0	0	4	0
Non-Contact	Level 1	1	0	0	0
	Level 2	0	0	0	0
	Level 3	0	0	0	0
	Level 4	0	0	0	0
	Total	1	0	0	0
Exposure	Level 1	0	0	0	0

	Level 2	0	0	0	0
	Level 3	0	0	0	0
	Level 4	0	0	0	0
	Total	0	0	0	0
Touching Others	Level 1	2	0	3	0
	Level 2	0	0	0	0
	Level 3	0	0	0	0
	Level 4	0	0	0	0
	Total	2	0	3	0
Overall Total		3	0	7	0

Interpretation

The results suggest that the intervention had a positive therapeutic effect; there were no sexually inappropriate behaviours recorded in the month following the intervention. These results were consistent with patient A's stable presentation on the ward. Following his apparent reduction in risk related behaviour patient A was granted access to section 17 leave, which appeared to link to staffs' perception of his increased sense of hope for the future. Moreover, the community recognised the progress patient A appeared to have made and were supportive of his change in behaviour.

Discussion

The purpose of this case study was to evaluate the effectiveness of a group based CFT informed intervention run within a TC that focused on the use of pornography and sexually inappropriate behaviour within a secure environment. The specific research question was: Is patient A's pornography use related to his commission of sexually inappropriate behaviour?

The results suggested that patient A was both less sexually depressed and sexually preoccupied following the intervention and this appeared consistent with his presentation on the ward. Formulation suggested that patient A felt threatened/distressed by sex (threat system, Gilbert, 2010) but also used sex (particularly pornography use) as a mechanism of self-soothing in the absence of any other ways to feel safe. This concept can be

related to the 'eroticised child' literature; Davies and Frawley (1994) suggested that sexual abuse can evoke both fear and excitement in children simultaneously, leading to complex and contradictory sexual experiences as an adult. It is suggested that the intervention may have facilitated change, specifically with regard to sexual depression, by enabling patient A to explore and process the role of sex and pornography in his threat system within a safe environment, thus making it a less traumatic and distressing topic (Gilbert, 2010). Consequently, patient A needed to self-soothe through sexually inappropriate behaviour or the use of pornography less often. It is also possible that the intervention (as well as the TC timetable) facilitated patient A's development of his soothing system which enabled him to manage any distress related to sexual trauma with the use of less sexually inappropriate behaviour and less exposure to pornography. There were no recorded incidents of sexually inappropriate behaviour in the month following the intervention, suggesting that the reduction in patient A's sexual depression had an impact on his behaviour.

Patient A's reduction in sexual depression is interpreted as related to an increase in hope, both in relation to sex and release, that patient A demonstrated on the ward following the intervention. For example, patient A made comments indicative of having more hope about the possibility of a fulfilling future intimate relationship that were different in content to the previous narrative he had about his future, such as "I could have a girlfriend" and "what if I could get married; I could love her very well" (in

reference to wanting to treat any future partner with respect and equality). The role of hope is significant (e.g. Shorey et al., 2003); there are a number of ways that the intervention may have served to increase patient A's hope for the future. Firstly, it may have been that sex no longer felt as threatening or shameful for patient A (see above) which served to increase his positivity about what his future sex life could be like. Secondly, due to the group format of the intervention, patient A may have felt less alone in his distress related to sex (e.g. his previous sexual trauma and current sexual deprivation) and his current struggles to manage himself in a sexually appropriate way on the ward. This may have helped to normalise patient A's experiences and further connect and embed him into a compassionate and caring community, providing the foundation for the learning of secure attachment. It is noted that such benefits of a group intervention are discussed by Yalom (1995). Finally, the compassionate therapeutic relationship between the trainee and patient A may have indirectly impacted hope although this was not an explicit aim of the intervention (see Larsen, Edey, & Lemay, 2007).

There were a number of limitations to this intervention. For example, The SS (Snell & Papini, 1989) could be critiqued. This psychometric assessment was chosen due to its simplistic structure and language in comparison to other scales such as The Multidimensional Sexuality Questionnaire (Snell, Fisher, & Walters, 1993). The SS was considered easily adaptable for patient A's ID, although it lacks robust normative research allowing for a

more thorough analysis of change. It is suggested that a measure of sexuality specifically developed for individuals with an ID would be useful, particularly given the increasing academic focus on healthy sexual expression within this population (see appendix W). Moreover, analysing clinical records of behaviour as an indicator of change relies on the validity of the records, which can not necessarily be assumed (Trace, 2002; Weir et al., 2003) for staff or patient records of patient behaviour. In fact, the discrepancy demonstrated above between staff and patient accounts of patient A's behaviour is indicative of inaccurate record keeping. This issues appears exacerbated for patient records of patient behaviour. If the trainee had had more resources, analysing clinical/patient records over longer time samples or time samples of behavioural observation may have been a preferable method.

It is also difficult to distinguish the effect of the wider treatment environment and the TC; patient A mostly engaged well with the therapeutic programme which consisted of approximately 5-6 hours of therapeutic activity a day.

Despite the noted limitations, the results suggest that the intervention had therapeutic value and was worthwhile; there was a clinically significant reduction in patient A's sexually inappropriate behaviour.

Pornography

This intervention provided qualitative evidence regarding the effect of exposure to pornography on sexually inappropriate behaviour, which is related to the focus of the trainee's thesis. A main focus of this intervention was patient A's pornography use. Throughout, he identified a range of mechanisms through which his exposure to pornography appears to negatively affect him. Patient A was able to identify that he largely watches "angry porn" that involves violence and depictions of rape (which evoked discussions about the risk assessment of sexually explicit material on the ward). Through exploration, patient A recognised that this material influences his thoughts about female staff members; e.g. "women like to be touched", and thus his behaviour towards them particularly immediately after having watched pornography (which had implications in terms of his risk management). Evidence from this case study and patient A's self-reported experience appears to be consistent with the literature which suggests that exposure to pornography has deleterious consequences on those that consume it, particularly with regard to attitudes supportive of sexual aggression against women (see Hald et al., 2010). Moreover, this case study provides further support for the HCM (Malamuth & Hald, 2017). For example, patient A presents with a range of individual factors that may increase his risk of experiencing negative consequences after watching pornography, such as personality disorder.

Ethical Issues

The main ethical issue relevant to this case study was the consideration of restricting patient A's access to pornography. The issue of pornography use in forensic settings appears to have gained significant attention following the high-profile Fallon Inquiry in 1999. This inquiry investigated practices at a high secure hospital for the treatment of men who have committed sexual offences with a diagnosis of personality disorder. The inquiry reported that patients had unrestricted access to pornography, including material which depicted bestiality, sado-masochism and significant violence, as well as child sexual abuse (Laurence, 1999; Warden, 1999). Although, it seems that similar concerns about access to pornography in forensic services had been raised sometime previously (Duff, 1995).

Today, this issue remains contentious with a number of factors contributing to the debate. For example, Mercer and Perkins (2014) report that the term 'pornography' appears too broad for specific decisions around access and risk to be made for patients. They suggest that more specific classification of material would aid decision making about access to pornographic material for individuals. Research also suggests that access to pornography may not only jeopardise individual treatment but also creates a culture that is overly male dominated, promoting gender inequality, thereby threatening the treatment integrity of a service (Mercer, 2012). That being said, a uniform policy around access appears inappropriate; exposure to pornography may not increase risk for every individual. Therefore, it seems

difficult to balance the right for sexual expression for some patients (see Bartlett et al., 2010; Tiwana, McDonald, & Völlm, 2016, and appendix W) with research that suggests that pornography may increase the risk of sexual aggression for others (Hald et al., 2010).

From a policy perspective, there remains little cohesion across services over the control of access to pornography in secure forensic services. For example, Crichton (2009) discussed the security, and control of access to items such as pornography, in secure forensic mental health services across Scotland. He stated "Prohibited item lists appeared to have been generated by a combination of common sense and adverse incident." (p. 350) and "There remained wide variation." (p. 350). This perhaps reflects an aspect of patient A's experience; he reported having no access to pornography whilst residing in high secure services and having unrestricted access whilst residing in medium secure services. The complexity of this issue appears to reflect the significant difficulty clinical teams have when considering this issue. It is suggested that for some patients, a restriction of access to pornography may be therapeutic in managing risk behaviour and sexual aggression towards members of staff, particularly in units of a lower security where access is less likely to be restricted.

Recommendations

It would be useful for patient A to continue to engage in a trauma-focused psychotherapy that specifically focuses on sexually inappropriate

behaviour. Of specific importance is the continuation of an intervention or therapeutic timetable that aims to increase patient A's insight into his use of pornography and how this appears to increase his commission of sexually inappropriate behaviour. The length of such an intervention also appears important. TCs are long term treatment pathways for individuals that reside in them, which reflects the complexity of patients' needs and the entrenched nature of personality disorder (Pearce & Haigh, 2017). The intervention that the trainee ran, although it appears to have had positive treatment outcomes, was not run on a long term basis and may not have fitted consistently with the TC treatment model. Therefore, the intervention could be considered too short to have maintained any clinically significant change over time, particularly given patient A's diagnosis of mild ID and the need for continued repetition of information to aid his retention. Based on the evidence presented throughout this case study, it is also recommended that the clinical team review patient A's access to pornography, particularly in relation to his exposure to violent pornography, either with a view to restrict this or encouraging patient A to make 'healthier' choices regarding his consumption of this material.

Finally, it is worth noting that patient A may not have had the opportunity to reflect upon the results of this intervention, his learning, and his change in behaviour, as the results were collected following the end of the trainee's placement. It is recommended that patient A be given the opportunity to

reflect on the results of this intervention with a member of staff to further his insight and understanding of his behaviour.

Chapter 6 – Thesis Discussion

This thesis explored the impact of exposure to pornography on sexual aggression in adult males. For the purposes of this thesis, pornography is defined as sexually explicit material that is intended to be sexually arousing to the consumer (Hald et al., 2010). Further definitions relevant to this thesis are detailed in Chapter 1. The focus of this thesis appears topical, both within academia and the media (e.g. Fight the New Drug, 2018; Rymell, 2016; The Guardian, 2019). The use of pornography and the possible consequences of this for individuals appears a controversial topic and there is a wide evidence base that reports mixed results. While it is suggested that there is a link between exposure to pornography and increased sexual aggression in adult males (Hald et al., 2010; Malamuth et al., 2000) this evidence has been contested. For example, Ferguson and Hartley (2009) suggest that the narrative around harmful pornography consumption was fuelled by public agenda and is now outdated. Moreover, they cite inconsistent research methodology as a limitation to research in this area (see Kohut et al., 2019 for an up to date review).

The ongoing debate in this area provided a rationale for the focus of this thesis. Briefly, this thesis explored the effect of exposure to pornography on attitudes supportive of sexual aggression, rather than on the behavioural outcome measure of sexual aggression itself. Focusing on

attitudinal research in this area appears justified and is explained in depth in Chapter 1.

The theoretical framework of the thesis is the Hierarchical Confluence Model of sexual aggression (HCM; Malamuth & Hald, 2017), which is explained in detail in Chapter 1 and therefore will not be repeated here. The chapters of the thesis provide further support for this theory and will be critically discussed below.

Given the mixed findings and substantial criticism of the literature (see Ferguson & Hartley, 2009), the systematic review provided an updated review of the evidence base exploring the impact of exposure to pornography on attitudes towards sexual aggression in males. A narrative synthesis of both experimental and non-experimental studies suggested that, on the whole, exposure to pornography appeared to be linked to attitudes more supportive of sexual aggression. In particular, violent pornography appeared to have the most deleterious effect on individuals. These results corroborate those found by Hald et al. (2010) and previous literature. For example, Hald et al. (2010) reported the effect of exposure to pornography on attitudes supportive of violence against women was strongest for participant's exposed to violent pornography. It is suggested that this finding is relatively robust; early systematic reviews in this area report similar results, particularly from experimental studies (e.g. Allen et al., 1995a and 1995b). Thus, findings from the systematic review appear

to be congruent with that of previous research. In an effort to ensure that the research included in the review was conceptually and methodologically sound, a limited number of studies were included in the review. Whilst this could be considered disadvantageous, it is suggested that the review provides some support for the argument that pornography has deleterious effects on those that consume it. Moreover, a number of issues within the research were identified, such as the use of dated measures of rape myth acceptance and the inconsistency in the nature of exposure to pornographic materials in experimental studies. The results of this review provided further support for the HCM of sexual aggression (Malamuth & Hald, 2017). Briefly, the results indicated that personality factors may mediate the relationship between pornography and attitudes supportive of sexual aggression, as well as factors such as how degrading the material is, and endorsement of risky sexual scripts. Pornography may also prime/activate attitudes that act as disinhibitors to sexual aggression (Hald & Malamuth, 2015).

In Chapter 2, a critique of the Illinois Rape Myth Acceptance Scale (IRMA; Payne et al., 1999) was conducted in response to conclusions drawn from the systematic review; a limitation highlighted within the review was the use of dated measures of rape myth acceptance in the literature, in particular, the seemingly widespread use of Burt's (1980) original rape myth acceptance scale. The IRMA was developed in response to criticism of Burt's scale and has been referred to as the 'gold standard' in assessing the

construct of rape myth acceptance (McMahon & Farmer, 2011). A critique of the psychometric properties of the IRMA revealed that it has value in comparison to more dated measures of rape myth acceptance being used, but that it generally has limitations, particularly given the development of the Acceptance of Modern Myths of Sexual Aggression scale (AMMSA; Gerger et al., 2007), which appears a more robust measure. Recommendations were made for the use of the IRMA or the AMMSA in future research to improve the validity of results. The results of this critique link to the findings of the systematic review; a range of limitations of measures of rape myth acceptance are highlighted in the critique which suggests limitations to conclusions drawn from the research. In particular, there are limitations to the results of studies which utilise even more dated measures of rape myth acceptance than the IRMA. This is discussed in more detail in the systematic review.

Despite the evidence suggesting a deleterious impact of exposure to pornography on attitudes towards sexual aggression in adult males, there has been a relative lack of focus within the literature on soft-core pornography. This is suggested as an area of interest given the prevalence of this kind of pornographic material in mainstream media. The research project (Chapter 3) utilised a cross-sectional design and investigated how exposure to soft-core pornographic images of women from the media affected males' attitudes towards sexual aggression. Overall, the results suggested that participants' attitudes were less supportive of sexual

aggression following exposure to both sexual and non-sexual images of women from the media, although this effect was smaller for those participants exposed to sexual images. Thus, it suggested that within the context of the research, participants' exposure to sexualised images of women had a more negative impact on their attitudes towards sexual aggression. These results did not support the general consensus from the literature base; one would expect that exposure to sexualised images of women would increase the endorsement of attitudes supportive of sexual aggression (e.g. Machia & Lamb, 2009; Wright & Tokunaga, 2016). The results were discussed in relation to limitations such as a social desirability bias and the lack of deception used in the study. Furthermore, a potential humanising effect of the images of women and the context of exposure to pornography is highlighted as important, seemingly providing further support for the HCM (Malamuth & Hald, 2017).

Further research considering the impact of an increasingly sexualised media environment is recommended. Moreover, in line with the results from the systematic review and case study, it would be interesting to explore the impact of exposure to soft-core pornography that contains themes of violence and degradation.

The penultimate chapter, the case study, documented a compassion focused therapy informed intervention completed with a male in a secure forensic mental health service that operated as a therapeutic community.

The presenting problem was the patient's sexually inappropriate behaviour towards females and following formulation, the intervention focused on the patient's pornography use (as well as trauma). Formulation suggested that the patient's pornography use contributed to his behaviour in that it negatively influenced his thoughts about women. The patient was sexually inappropriate towards women following his exposure to pornography, mainly in the form of sexually inappropriate comments and inappropriate touching. The intervention explored and challenged a range of attitudes the patient appeared to have developed about women which were related to the pornographic content he watched, such as "women like to be touched". The patient also completed compassionate mind training within the intervention. Significantly, the patient watched largely violent pornography, which seemed to have the most detrimental impact on his behaviour.

Despite limitations, the intervention demonstrated therapeutic benefit and discussed the issue of restriction of access to pornography, which seems to be an issue of increasing academic interest (see Mellor & Duff, 2019). The results of this case study link to the wider literature and the results found in Chapter 2 of the thesis (e.g. Hald et al., 2010). For example, the patient's pornography use appeared to increase his endorsement of attitudes supportive of sexual aggression, moreover, violent pornography appeared to have the strongest effect. Support was also found for the HCM of sexual aggression (Malamuth & Hald, 2017). For example, a number of personality characteristics may have mediated this relationship for the patient, such as

his diagnosis of personality disorder. The results of the case study, and those of the systematic review, suggest that violent pornography has a negative impact of those that are exposed to it. These results link to the research project; it is suggested that some individuals may be more vulnerable to a negative impact of soft-core pornography, particularly if the soft-core pornography includes themes of violence and degradation. It is important to note that it is difficult to establish causal relationships in this area of research, which links to limitations in research methodology used (see Kohut et al., 2019).

The chapters of the thesis are cohesive and integrated, and the thesis as a whole adds value to the field. Chapter 1 clarifies definitions used throughout the thesis, evaluates theoretical approaches to this subject, and explains the rationale for the focus on attitudinal outcome measures rather than behavioural ones in the thesis. Chapter 1 also explains the theoretical framework of the thesis. Chapter 2 provides an initial exploration of the main research question: How does exposure to pornography impact attitudes towards sexual aggression in adult males? The systematic review also provides an updated review of the literature that includes both experimental and non-experimental research methodology, synthesising the results of this research as a whole. Following on from a finding of the review (the use of dated outcome measures), the critique evaluated the IRMA (Payne et al., 1999), making recommendations that this measure or the AMMSA (Gerger et al., 2007) be used in future research. Following the

focus of the systematic review on pornography, it was noted that soft-core pornography has received relatively little attention, hence the focus of the research project. This chapter adds value to the field by highlighting an increasingly sexualised media climate and adding to our understanding of how sexualised media content impacts attitudes supportive of sexual aggression, at least in the short term. Finally, the case study explored the role of exposure to pornography on a male's commission of sexually inappropriate behaviour in a forensic mental health setting. Results from this case study supported findings from the wider literature and previous chapters. The issue of restricting access to pornography in secure settings, and the inconsistency of policy surrounding this in the UK, was also highlighted.

There are potentially wide reaching implications of this thesis, which broadly sits within the literature exploring the effects of exposure to media on violence. For example, pornography has, at times, been considered somewhat of a public health issue (Ferguson & Hartley, 2009). This thesis provides some support for this argument, on the whole suggesting there are negative consequences for those who consume pornographic material, although there are less clear conclusions for the consumption of sexualised media. It is suggested that further research clarifies the effects of exposure to sexualised media on individuals, with a particular focus on sexualised media content that includes themes of violence or degradation, providing clearer conclusions or recommendations for the potential greater regulation

of media. Moreover, this thesis has implications for the practice of forensic psychology. It is suggested that the use of pornography be routinely considered within risk assessment and formulation for sexual violence, particularly when the individuals appear more at risk of experiencing negative consequences from exposure (e.g. low in agreeableness or with a diagnosis of personality disorder). Factors that may increase an individual's vulnerability to the negative impact of pornography could be highlighted through both assessment (e.g. personality assessment) and formulation. Finally, the thesis highlights the lack of consistent policy around restriction of pornography use in forensic mental health services in the UK, which may be helpful when assessing and managing the risk of individuals who are sexually aggressive or violent.

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Appendices

Appendix A – Systematic Review Search Syntax

1. exp Pornography/ or porn*.mp.
2. exp Eroticism/ or erotic*.mp.
3. x-rate*.mp.
4. "adult material*".mp.
5. "sexually explicit m*".mp.
6. "adult media".mp.
7. cyberporn*.mp.
8. exp Obscenity/ or "obscene m*".mp.
9. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8
10. exp Intimate Partner Violence/ or exp Anger/ or exp Aggressive Behavior/ or exp Violence/ or exp Aggressiveness/ or aggress*.mp.
11. exp Sex Offenses/ or exp Rape/ or exp Sexual Abuse/ or "sexual* aggress*".mp.
12. "rape myth*".mp.
13. "sexual offen*".mp.
14. "violent behav*".mp.
15. 10 or 11 or 12 or 13 or 14
16. 9 and 15
17. limit 16 to ("300 adulthood " and english and male)

Appendix B – Quality Assessment Tool

Quality Assessment Form

Date Quality Assessment Completed:

Study Reference:

Study Design:

Setting:

Question	Criterion Met?				Comment(s)
	Y (2)	P (1)	N (0)	UC	
Screening					
Is the population adult males?					
Is the exposure to pornography clearly defined/explained?					
Is the exposure to pornography clearly measured?					
Is the attitudinal measure of sexual aggression (inc. RMA) clear?					
Is the attitudinal measure of sexual aggression (inc. RMA) valid?					
Does the study address specific research questions?					
Did the authors use an appropriate method to answer their question/s?					
CONTINUE ONLY IF ALL SCREENING QUESTIONS ARE ANSWERED WITH YES					
Sampling and Selection Bias					
Was the sample recruited appropriately?					

Is the population representative of adult males?		
If comparator group: Were participants randomly allocated to conditions?		
Are groups comparable? (E.g. Were they drawn from same community as the other group? Were the groups treated equally aside from the intervention?)		
Performance Bias		
Was exposure to pornography measured appropriately/accurately?		
Outcome Reporting Bias		
Is there evidence that more outcomes were measured than reported? (Reverse Scored* Specify answer in comments.)		
Detection Bias		
If relevant: Were researchers appropriately trained/experienced to determine attitude(s) towards sexual aggression?		
If conducted outside of the UK/USA, are findings thought to be applicable to British adult males?		
Were objective measures rather than subjective measured used?		
Were the same official and valid measures used for all participants?		
Can the measures be applied to general adult male population?		

Were sufficient participants included in the research? (E.g. consider particularly small samples sizes, power analyses reported in research, the number of participants included in experimental conditions, the analysis used and the assumptions which need to have been met for this.)		
Were confounding variables accounted for? (e.g. attitudes towards women)		
Could any outcome effect be due to bias? (Reverse Scored*)		
Is the design flawed sufficiently to bias the results? (Reverse Scored*)		
Attrition Bias		
Are drop-out rates reported?		
If relevant: Was there a follow up provided to all participants?		
Is loss at follow up accounted for or indicated?		
Was the follow up period long enough?		
Was the follow up period thorough enough?		
Statistical Analysis		
Have appropriate tests been applied? (E.g. Have confounding variables been accounted for in the analysis?)		
Have differences between groups been reported if relevant?		

Was missing data reported?		
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Total Score (%):

Include if over 65%: **Y** **N**

Reason if excluded:

Appendix C – Data Extraction Form

Data Extraction Form

Reference:

Country of Origin:

Study Design:

Date Data Extraction Completed:

General Study Information	
Verify study meets PICO criteria	P: I: C: O:
Setting	
Study Design	
Recruitment procedure (e.g. where recruited from)	
Participant Information	
Number of participants	
Age of participants	
Inclusion/Exclusion criteria of study (if specified)	
Number of participants in each condition (if relevant)	A B C
Intervention - Exposure	
Context of exposure to pornography	Over what time period? How much exposure? In what setting exposed? Where is pornography accessed?
What type of pornography?	
How is exposure to pornography measured?	Self-report?
Is there are comparator group?	
Is the exposure and comparator group suitable/comparable?	
Outcomes	
What measures of sexual aggression were taken?	
Are these measures deemed valid?	

Are measures self-report?	
When were measures taken?	e.g. before and after exposure/after exposure
Pre and post exposure measures taken?	
Time interval between pre and post measures?	
Confounding variables measured?	
Any specific attempts made to reduce bias?	
Attrition rate recorded?	
Reason for attrition recorded?	
Analysis	
What statistical analysis was used?	
Did the analysis adjust/control for confounding variables?	
Was there any missing data?	
How was missing data dealt with?	
Results	
Main descriptive statistics	(e.g. Mean age of participants, percentage of participants at follow up)
Quantitative Statistics (Report test and significance. Report effect size if applicable)	
Qualitative Statistics (if relevant)	
Implications of findings	

Appendix D - The Illinois Rape Myth Acceptance Scale (Payne et al., 1999)

RAPE MYTH		49
TABLE 2 IRMA and IRMA-SF Items		
Label	Number	Item
SA-3*	1.	If a woman is raped while she is drunk, she is at least somewhat responsible for letting things get out of control.
WI-5*	2.	Although most women wouldn't admit it, they generally find being physically forced into sex a real "turn-on."
MT-3	3.	When men rape, it is because of their strong desire for sex.
TE-5*	4.	If a woman is willing to "make out" with a guy, then it's no big deal if he goes a little further and has sex.
LI-4	5.	Women who are caught having an illicit affair sometimes claim that it was rape.
FI-1	6.	Newspapers should not release the name of a rape victim to the public.
LI-3	7.	Many so-called rape victims are actually women who had sex and "changed their minds" afterwards.
WI-1*	8.	Many women secretly desire to be raped.
DE-5	9.	Rape mainly occurs on the "bad" side of town.
DE-4	10.	Usually, it is only women who do things like hang out in bars and sleep around that are raped.
FI-2*	11.	Most rapists are not caught by the police.
NR-1*	12.	If a woman doesn't physically fight back, you can't really say that it was rape.
DE-2*	13.	Men from nice middle-class homes almost never rape.
TE-1	14.	Rape isn't as big a problem as some feminists would like people to think.
SA-2	15.	When women go around wearing low-cut tops or short skirts, they're just asking for trouble.
LI-2*	16.	Rape accusations are often used as a way of getting back at men.
NR-5	17.	A rape probably didn't happen if the woman has no bruises or marks.
WI-4	18.	Many women find being forced to have sex very arousing.
SA-4	19.	If a woman goes home with a man she doesn't know, it is her own fault if she is raped.
MT-5	20.	Rapists are usually sexually frustrated individuals.
FI-3*	21.	All women should have access to self-defense classes.
DE-3*	22.	It is usually only women who dress suggestively that are raped.
WI-2	23.	Some women prefer to have sex forced on them so they don't have to feel guilty about it.
NR-3*	24.	If the rapist doesn't have a weapon, you really can't call it a rape.
SA-6	25.	When a woman is a sexual tease, eventually she is going to get into trouble.
TE-3	26.	Being raped isn't as bad as being mugged and beaten.
DE-7*	27.	Rape is unlikely to happen in the woman's own familiar neighborhood.
DE-1	28.	In reality, women are almost never raped by their boyfriends.
TE-2*	29.	Women tend to exaggerate how much rape affects them.
MT-2	30.	When a man is very sexually aroused, he may not even realize that the woman is resisting.

TABLE 2—*Continued*

Label	Number	Item
LI-1*	31.	A lot of women lead a man on and then they cry rape.
FI-4*	32.	It is preferable that a female police officer conduct the questioning when a woman reports a rape.
LI-5	33.	A lot of times, women who claim they were raped just have emotional problems.
NR-2	34.	If a woman doesn't physically resist sex—even when protesting verbally—it really can't be considered rape.
DE-6	35.	Rape almost never happens in the woman's own home.
SA-5*	36.	A woman who "teases" men deserves anything that might happen.
SA-8*	37.	When women are raped, it's often because the way they said "no" was ambiguous.
TE-4	38.	If a woman isn't a virgin, then it shouldn't be a big deal if her date forces her to have sex.
MT-1*	39.	Men don't usually intend to force sex on a woman, but sometimes they get too sexually carried away.
FI-5	40.	This society should devote more effort to preventing rape.
SA-1*	41.	A woman who dresses in skimpy clothes should not be surprised if a man tries to force her to have sex.
MT-4*	42.	Rape happens when a man's sex drive gets out of control.
SA-7	43.	A woman who goes to the home or apartment of a man on the first date is implying that she wants to have sex.
WI-3	44.	Many women actually enjoy sex after the guy uses a little force.
NR-4	45.	If a woman claims to have been raped but has no bruises or scrapes, she probably shouldn't be taken too seriously.

Note. * Indicates IRMA-SF (short-form) items; item label prefix refers to the subscale corresponding to the item: SA, *She asked for it*; NR, *It wasn't really rape*; MT, *He didn't mean to*; WI, *She wanted it*; LI, *She lied*; TE, *Rape is a trivial event*; DE, *Rape is a deviant event*; FI, filler item (not scored).

Appendix E – Inclusion Criteria

Inclusion Criteria:

- Any British male aged between 18-35.
- Must identify as heterosexual.
- Must not have a criminal record.
- First language must be English.
- Must live in the UK.

Appendix F – The Ambivalent Sexism Inventory (Glick & Fiske, 1996)

Relationships Between Men and Women

Below is a series of statement concerning men and women and their relationships in contemporary society. Please indicate the degree to which you agree or disagree with each statement using the following scale: 0 = disagree strongly; 1 = disagree somewhat; 2 = disagree slightly; 3 = agree slightly; 4 = agree somewhat; 5 = agree strongly.

1. No matter how accomplished he is, a man is not truly complete as a person unless he has the love of a woman.
2. Many women are actually seeking special favors, such as hiring policies that favor them over men, under the guise of asking for "equality".
3. In a disaster, women ought not necessarily to be rescued before men.
4. Most women interpret innocent remarks or acts as being sexist.
5. Women are too easily offended.
6. People are often truly happy in life without being romantically involved with a member of the other sex.
7. Feminists are not seeking for women to have more power than men.
8. Many women have a quality of purity that few men possess.
9. Women should be cherished and protected by men.
10. Most women fail to appreciate fully all that men do for them.
11. Women seek to gain power by getting control over men.
12. Every man ought to have a woman whom he adores.
13. Men are complete without women.
14. Women exaggerate problems they have at work.
15. Once a woman gets a man to commit to her, she usually tries to put him on tight leash.
16. When women lose to men in a fair competition, they typically complain about being discriminated against.
17. A good woman should be set on a pedestal by her man.
18. There are actually very few women who get a kick out of teasing men by seeming sexually available and then refusing male advances.
19. Women, compared to men, tend to have superior moral sensibility.
20. Men should be willing to sacrifice their own well-being in order to provide finically for the women in their lives.

21. Feminists are making entirely reasonable demands of men.
22. Women, as compared to men, tend to have a more refined sense of culture and good taste.

Reverse score the following items (0 = 5, 1 = 4, 2 = 3, 3 = 2, 4 = 1, 5 = 0: 3, 6, 7, 13, 18, 21.

Hostile sexism score = average of the following items: 2, 4, 5, 7, 10, 11, 14, 15, 16, 18, 21.

Benevolent sexism score = average of the following items: 1, 3, 6, 8, 9, 12, 13, 17, 19, 20, 22.

Appendix G – The Acceptance of Modern Myths About Sexual Aggression

Scale (Gerger et al., 2007)

Please answer all questions honestly and carefully, as this is of great importance for the success of our study. You will be presented with a set of statements and asked to indicate the extent to which you agree or disagree with each. There are no right or wrong answers – we are only interested in your personal opinion.

Please read each statement carefully and then circle that number from 1 to 7 that you feel best represents your opinion. The points on the scale have the following meaning:

- 1 = completely disagree
- 2 = disagree
- 3 = disagree somewhat
- 4 = neutral
- 5 = agree somewhat
- 6 = agree
- 7 = completely agree

Please use the complete range of the scale to express your exact opinion.

1. When it comes to sexual contacts, women expect men to take the lead.
2. Once a man and a woman have started "making out", a woman's misgivings against sex will automatically disappear.
3. A lot of women strongly complain about sexual infringements for no real reason, just to appear emancipated.
4. To get custody for their children, women often falsely accuse their ex-husband of a tendency towards sexual violence.
5. Interpreting harmless gestures as "sexual harassment" is a popular weapon in the battle of the sexes.
6. It is a biological necessity for men to release sexual pressure from time to time.
7. After a rape, women nowadays receive ample support.
8. Nowadays, a large proportion of rapes are partly caused by the depiction of sexuality in the media as this raises the sex drive of potential perpetrators.
9. If a woman invites a man to her home for a cup of coffee after a night out this means that she wants to have sex.
10. As long as they don't go too far, suggestive remarks and allusions simply tell a woman that she is attractive.
11. Any woman who is careless enough to walk through "dark alleys" at night is partly to be blamed if she is raped.

12. When a woman starts a relationship with a man, she must be aware that the man will assert his right to have sex.
13. Most women prefer to be praised for their looks rather than their intelligence.
14. Because the fascination caused by sex is disproportionately large, our society's sensitivity to crimes in this area is disproportionate as well.
15. Women like to play coy. This does not mean that they do not want sex.
16. Many women tend to exaggerate the problem of male violence.
17. When a man urges his female partner to have sex, this cannot be called rape.
18. When a single woman invites a single man to her flat she signals that she is not averse to having sex.
19. When politicians deal with the topic of rape, they do so mainly because this topic is likely to attract the attention of the media.
20. When defining "marital rape", there is no clear-cut distinction between normal conjugal intercourse and rape.
21. A man's sexuality functions like a steam boiler – when the pressure gets too high, he has to "let off steam".
22. Women often accuse their husbands of marital rape just to retaliate for a failed relationship.
23. The discussion about sexual harassment on the job has mainly resulted in many a harmless behaviour being misinterpreted as harassment.
24. In dating situations the general expectation is that the woman "hits the brakes" and the man "pushes ahead".
25. Although the victims of armed robbery have to fear for their lives, they receive far less psychological support than do rape victims.
26. Alcohol is often the culprit when a man rapes a woman.
27. Many women tend to misinterpret a well-meant gesture as a "sexual assault".
28. Nowadays, the victims of sexual violence receive sufficient help in the form of women's shelters, therapy offers, and support groups.
29. Instead of worrying about alleged victims of sexual violence society should rather attend to more urgent problems, such as environmental destruction.
30. Nowadays, men who really sexually assault women are punished justly.

Appendix H – The Rape Proclivity Scale (Bohner et al., 1998 & 2010)

Situation 1

Please read the following text carefully and imagine yourself in the situation presented.

You have gone out a few times with a woman you met recently. One weekend you go to a film together and then back to your place. You have a few beers, listen to music and do a bit of petting. At a certain point your friend realises she has had too much to drink to be able to drive home. You say she can stay over with you, no problem. You are keen to grab this opportunity and sleep with her. She objects, saying you are rushing her and anyway she is too drunk. You don't let that put you off, you lie down on her and just do it.

Now please answer the following questions, ticking the answer that is most applicable to you:

1. In this situation, how sexually aroused would you be?

1	2	3	4	5	6	7
not at all						very
sexually						strongly
aroused						sexually
						aroused

2. In this situation, would you have done the same?

1	2	3	4	5	6	7
would						would
definitely						definitely
not have						have
done the						done the
same						same

3. In this situation, how much would you enjoy getting your way?

1	2	3	4	5	6	7
would not						would
enjoy it						greatly
at all						enjoy it

4. In this situation, how much is the victim to blame?

1	2	3	4	5	6	7
not at all						entirely
to blame						to blame

Situation 2

Please read the text carefully and again imagine yourself in the situation presented.

A while back, you met an attractive woman in a disco and you would like to take things a bit further with her. Friends of yours have a holiday home, so you invite her to share a weekend there. You have a great time together. On the last evening you are ready to sleep with her, but she says no. You try to persuade her, insisting it's all part of a nice weekend. You invited her, after all, and she did accept. At that she repeats that she doesn't want to have sex, but then puts up hardly any resistance when you simply undress her and have sex with her.

Now please answer the following questions, ticking the answer that is most applicable to you:

1. In this situation, how sexually aroused would you be?
- 1 2 3 4 5 6 7
- not at all very strongly sexually aroused
2. In this situation, would you have done the same?
- 1 2 3 4 5 6 7
- would definitely not have done the same would definitely have done the same
3. In this situation, how much would you enjoy getting your way?
- 1 2 3 4 5 6 7
- would not enjoy it at all would greatly enjoy it
4. In this situation, how much is the victim to blame?
- 1 2 3 4 5 6 7
- not at all to blame entirely to blame

Situation 3

Please read the text carefully and again imagine yourself in the situation presented.

Imagine you are a firm's Personnel Manager. You get on specially well with a new female member of staff. At the end of a busy week, you invite her out to dinner and take her home afterwards. As you want to spend some more time in her company, you suggest she might ask you in for a coffee. Next to her on the sofa, you start fondling her and kissing her. She tries to move out of reach, but you tell her that her career prospects stand to be enhanced by her being on good terms with her boss. In due course she seems to have accepted this, and she doesn't resist when you have sex with her.

Now please answer the following questions, ticking the answer that is most applicable to you:

1. In this situation, how sexually aroused would you be?

1	2	3	4	5	6	7
not at all						very
sexually						strongly
aroused						sexually
						aroused

2. In this situation, would you have done the same?

1	2	3	4	5	6	7
would						would
definitely						definitely
not have						have
done the						done the
same						same

3. In this situation, how much would you enjoy getting your way?

1	2	3	4	5	6	7
would not						would
enjoy it						greatly
at all						enjoy it

4. In this situation, how much is the victim to blame?

1	2	3	4	5	6	7
not at all						entirely
to blame						to blame

Please read the text carefully and again imagine yourself in the situation presented.

You are at a party and meet a good-looking and interesting woman. You chat, dance together and flirt. After the party you give her a lift home in your car, and she invites you in. You both sit down on the floor, then your new friend kisses you and starts to fondle you. That's absolutely fine by you, and now you want more. When you start to undress her in order to sleep with her, she suddenly pushes you off and says she wants to stop now. Her resistance only turns you on more, and, using some force, you press her down to the floor and then penetrate her.

Now please answer the following questions, ticking the answer that is most applicable to you:

- | | | | | | | | |
|---|---|---|---|---|---|-------------------------------------|--|
| 1. | In this situation, how sexually aroused would you be? | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| not at all sexually aroused | | | | | | very strongly sexually aroused | |
| 2. | In this situation, would you have done the same? | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| would definitely not have done the same | | | | | | would definitely have done the same | |
| 3. | In this situation, how much would you enjoy getting your way? | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| would not enjoy it at all | | | | | | would greatly enjoy it | |
| 4. | In this situation, how much is the victim to blame? | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| not at all to blame | | | | | | entirely to blame | |

Situation 5

Please read the text carefully and again imagine yourself in the situation presented.

You helped a young woman recently when her car broke down. She invites you to supper in her flat as a way of saying thank you. It's a very pleasant evening, and you have the impression she likes you. When your hostess indicates she is beginning to feel rather tired, you are not at all ready to leave. You would rather you finished the evening in bed together, and you try to kiss her. At that the woman gets mad and tells you to clear out. Instead, you grab her arms and drag her into the bedroom. You throw the woman on to the bed and force her to have sex with you.

Now please answer the following questions, ticking the answer that is most applicable to you:

1. In this situation, how sexually aroused would you be?

1	2	3	4	5	6	7
not at all						very
sexually						strongly
aroused						sexually
						aroused

2. In this situation, would you have done the same?

1	2	3	4	5	6	7
would						would
definitely						definitely
not have						have
done the						done the
same						same

3. In this situation, how much would you enjoy getting your way?

1	2	3	4	5	6	7
would not						would
enjoy it						greatly
at all						enjoy it

4. In this situation, how much is the victim to blame?

1	2	3	4	5	6	7
not at all						entirely
to blame						to blame

Appendix I – Exposure to Soft-Core Pornography Measure

For the purposes of this research, the terms 'soft-core pornography' is broadly defined as "commercial still or film photography that has a pornographic component, in that it is sexually suggestive, but that is less sexually explicit than pornography. Soft-core pornography is intended to be sexually arousing and typically contains either nude or semi-nude performers. Crucially, while soft-core pornography may include images or films of simulated sexual intercourse, penetration is not explicit."

Please answer the following questions as accurately as possible.

1. On average per day, how many hours do you spend engaging with the media?
2. To what extent do you agree with the following statement: I use the media in order to view soft-core pornography?
 - a. Strongly Disagree
 - b. Disagree
 - c. Neither Agree nor Disagree
 - d. Agree
 - e. Strongly Agree
3. On average per day, how many images do you see that you would describe as soft-core pornography using the definition provided above?
 - a. 0
 - b. 1-10
 - c. 11-20
 - d. 21-30
 - e. 31-40
 - f. 41-50
 - g. 51-100
 - h. 101-200
 - i. 201-300
 - j. 301+
4. Please indicate to what extent you agree with the following statement: Soft-core pornography should be a part of mainstream media.
 - a. Strongly Disagree
 - b. Disagree
 - c. Neither Agree nor Disagree
 - d. Agree
 - e. Strongly Agree

5. Soft-core pornography accurately educates young men on society's gender roles?
- a. Strongly Disagree
 - b. Disagree
 - c. Neither Agree nor Disagree
 - d. Agree
 - e. Strongly Agree
6. Do you think that exposure to soft-core pornography has any impact on you?
- a. Strongly Disagree
 - b. Disagree
 - c. Neither Agree nor Disagree
 - d. Agree
 - e. Strongly Agree

Appendix J – Sexual Images

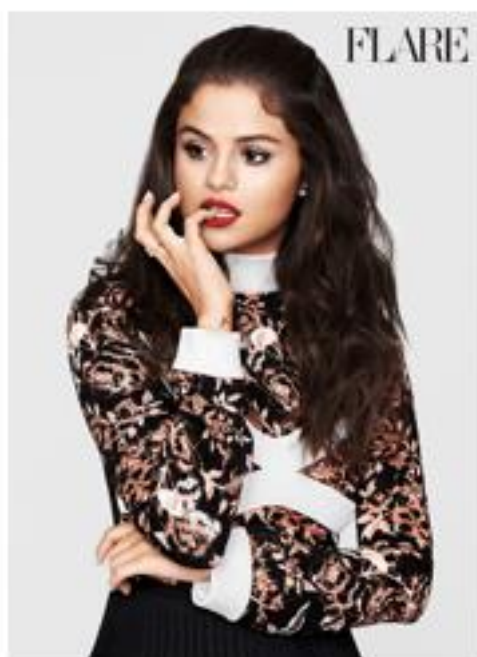






Appendix K – Non-Sexual Images







INFORMATION SHEET

Title of Study: Does short-term exposure to soft-core pornography affect attitudes towards women, sexual aggression, and rape proclivity?

Name of Researcher: Sophie Daniels

We would like to invite you to take part in our research. Before you decide, we would like you to understand why the research is being done and what it would involve for you. Please read the following information carefully.

What is the purpose of the study?

The purpose of this study is to research the effects of soft-core pornography in the media on attitudes towards sexual aggression, rape myth acceptance, and rape proclivity. As the majority of us go about our daily lives there appears to be countless examples of this kind of material that we encounter in passing when accessing different types of media. As yet, it is unclear if exposure to this material does affect our attitudes towards women and rape. As the majority of this material in the media involves women, it is suggested that it is likely such attitudes may be affected by passive exposure.

Why have I been invited?

You are being invited to take part because you are a male. We are inviting as many participants as possible to take part.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part, you are still free to withdraw from the study at any time and without giving a reason. This would not affect your legal rights.

What will happen to me if I take part?

Upon signing the consent form you will be asked to fill in a demographic form. You will then be asked to fill in a questionnaire about your attitudes towards women. Following this you will fill in 2 short questionnaires about your attitudes toward sexual aggression and rape, and then be exposed to a number of images containing women. Please be aware that these images may contain partial nudity and may be offensive to some individuals. If you are likely to find viewing these images offensive or embarrassing, it is

suggested that you do not participate in this research. You will then fill in another 2 questionnaires about sexual aggression and rape, a questionnaire about your behaviour in a fictional situation, and a questionnaire measuring your exposure to soft-core pornography in the media. The study will then be complete and you will be given a de-brief form which will explain the purpose of the study and give you the contact details of the researcher, should you need to get in touch with them in the future. It is expected this research will take approximately 20 minutes.

Please note that some individuals may find answering the questionnaires included in this research difficult, upsetting and/or embarrassing. They are of a sensitive nature and it is important that you think you will be comfortable expressing your opinion to the questions provided. If don't think you will be, it is advised that you withdraw from the study. Please be aware that if you proceed with the study and become distressed at any time, you can withdraw from the research without having to provide any reason for doing so.

What are the possible disadvantages and risks of taking part?

It is not expected that there are any disadvantages or risks associated with taking part in the study. However, it is of note that some participants may find the examples of soft-core pornography provided offensive. Additionally, some may find the measures used upsetting or uncomfortable. If so, some resources will be provided at the end of the study. As mentioned above, please only participate in this research if you understand the sensitive nature of this study.

What are the possible benefits of taking part?

The information we get from this study will help us to understand the effects of the media (in particular, the soft-core pornography which is common place) on our attitudes towards to women and rape.

What happens when the study stops?

Your data will be stored securely and then analysed. Only the principle researcher and the supervisor will have access to it, and your data will only be used for the research purposes outlined here.

What if there is a problem?

If you have a concern about any aspect of this study, you should speak to the researcher who will answer your questions. The researcher's contact details are given at the end of this information sheet. You can also contact the researcher's supervisor. If you remain unhappy and wish to complain formally, you should then contact the Research Ethics Committee Administrator, c/o The University of Nottingham, School of Medicine

Education Centre, B Floor, Medical School, Queen's Medical Centre Campus, Nottingham University Hospitals, Nottingham, NG7 2UH. E-mail: louise.sabir@nottingham.ac.uk

Will my taking part in the study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential. It will be stored securely and on a password protected computer. Any information that you provide will be anonymised (have your name removed) and a unique code will be used so that you cannot be recognised. The information you provide will be viewed by the researcher and the researcher's supervisor. It may be viewed by other authorised individuals at the University of Nottingham who will check that the study is being carried out correctly. All will have a duty of confidentiality to you as a research participant. All research data will be kept securely for seven years. After this time your data will be disposed of securely. All procedures for handling your data within the course of the research will meet the requirements of the Data Protection Act (1998).

What will happen if I don't want to carry on with the study?

Your participation is voluntary and you are free to withdraw at any time, without giving any reason, and without your legal rights being affected. If you do withdraw from the study, then any unidentifiable information collected so far cannot be erased and this information may still be used in the project analysis, however, will remain completely anonymous. This is due to the online nature of the study.

What will happen to the results of the research?

The results of the research will be written up as part of the researcher's educational qualification, in the hope of the research later being published. You will not be identified in any reports, dissertations or publications. If you would like a summary of the results, then please email the researcher.

Who has reviewed the study?

This study has been reviewed and approved by Nottingham's Faculty of Medicine and Health Sciences' research ethics committee.

Further information and contact details

Researcher's name: Sophie Daniels

Researcher's e-mail address: msxsd@nottingham.ac.uk

Supervisor's name: Dr. Simon Duff

Supervisor's e-mail address: simon.duff@nottingham.ac.uk

Appendix M – Consent Form

CONSENT FORM

Title of Study: Does short-term exposure to soft-core pornography affect attitudes towards women, sexual aggression, and rape proclivity?

Name of Researcher: Sophie Daniels

1. I confirm that I have read and understand the information sheet provided for the above study.
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my legal rights being affected.
3. I understand that should I withdraw, then the unidentifiable information collected so far cannot be erased and that this information may still be used in the project analysis.
4. I understand that the study will contain imagery that I may find offensive, and questionnaires of a sensitive nature.
5. I understand the sensitive nature of this research.
6. I agree to take part in the above named study and understand that by ticking 'Yes' to this and the above questions I am giving my consent to take part in this research.

(Participants were required to provide an answer of 'Yes' or 'No' for each statement. Participants were only able to progress to the next stage of the research if they answered 'Yes' to all six questions.)

Appendix N – Demographic Form

DEMOGRAPHIC FORM

1. Age?
2. What is your highest level of qualification?
 - a. GSCE or equivalent (e.g. O-Level)
 - b. A Level or equivalent (Diploma)
 - c. NVQ or equivalent
 - d. Undergraduate degree
 - e. Postgraduate diploma or certificate
 - f. Postgraduate Masters degree
 - g. Doctoral degree
 - h. Other (please specify)
3. What is your occupation?
4. Do you regularly use pornography?
 - a. Yes
 - b. No
 - c. Prefer not to say

Please create your unique anonymity code using your month and year of birth (for example: 101990).

DE-BRIEF SHEET

Thank you for your participation in this study. This debrief sheet provides you with more information about the study.

Previous research suggests a relationship between exposure to pornography and negative attitudes towards sexual violence and rape victims (Oddone-Paolucci, Genuis & Violato, 2000). However, as of yet, there seems to be little research into the effects of soft-core pornography on similar attitudes. Whilst individuals may not voluntarily expose themselves to soft-core pornography, there are countless examples of this material in the media. Thus, the aims of this research are to investigate how exposure to this kind of material affects attitudes towards sexual aggression, rape myths, and rape proclivity.

It is hoped that this study may spark further interest in this area, especially given the practical implications of such research.

Please utilise the following resources if you feel affected by any issues raised in this research:

- University of Nottingham Counseling Service – 0115 9513695
- SupportLine (Confidential Emotional Support for Children, Young Adults and Adults) – 01708 765200
- Rape and Sexual Abuse Support Centre – 0800 8029999 (free phone).

All resources provided above are completely confidential.

If you would like to any further information about the study, or would like to know the outcome of the study, you can contact the researchers in the following ways:

Sophie Daniels (Researcher)

msxsd@nottingham.ac.uk

Dr. Simon Duff (Supervisor)

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Appendix P – Ethical Approval Letter



Faculty of Medicine and Health Sciences

Research Ethics Committee
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18th April 2016

Sophie Daniels
Doctorate in Forensic Psychology Student
c/o Dr Simon Duff
Director, Top-Up Doctorate in Forensic Psychology
Centre for Forensic and Family Psychology
Psychiatry and Applied Psychology
Room B15 YANG Fujia
Jubilee Campus
Wollaton Road
Nottingham
NG8 1BB

Dear Sophie

Ethics Reference No: S15032016 SoM DFP- please always quote
Study Title: Does short-term exposure to soft-core pornography affect attitudes towards rape, sexual aggression and rape proclivity?
Chief Researcher/Academic Supervisors: Dr Simon Duff, Lecturer/ Director, Top-Up Doctorate in Forensic Psychology Centre for Forensic and Family Psychology, Psychiatry and Applied Psychology, School of Medicine.
Other key researchers/student: Sophie Daniels, Doctorate in Forensic Psychology Student, Psychiatry and Applied Psychology, School of Medicine.
Duration of Study: 01/04/16-01/10/17, 19mths **No of Subjects** 351 (18-29 yrs).

Thank you for submitting the above application which was considered by the Committee and the following documents were received:

The affects of short-term exposure to soft-core pornography version 1.0, 19/02/2016:

Research Ethics Checklist
Research Proposal, Final Version 1.0 19/02/2016.
Appendix A: The Acceptance Modern Myths about Sexual Aggression Scale (Gerger et al 2007)
Appendix B: The Illinois Rape Myth Acceptance Scale (Payne et al 1999)
Appendix C: Rape Proclivity Measure (Bohner et al, 1998 & 2010)
Appendix D: Exposure to Soft-Core Pornography Measure
Appendix E- Ambivalent Sexism Inventory (Glick & Fiske, 1996)
Appendix F- Images
Appendix G – Social Media Advert
Appendix H – Information Sheet final version 1.0 19/02/2016
Appendix I – Consent Form final version 1.0 19/02/2016
Appendix J – Demographic
Appendix K – Debrief Sheet

These have been reviewed and are satisfactory and the study is approved.

Have you thought about using the platform "Call For Participants"? which has been designed for use by Universities in the UK to advertise research studies and should reach a wider audience.



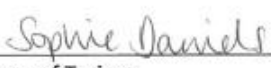
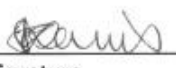
Approval is given on the understanding that the conditions set out below are followed:

1. You must follow the protocol agreed and inform the Committee of any changes using a notification of amendment form (please request a form).
2. You must notify the Chair of any serious or unexpected event.
3. This study is approved for the period of active recruitment requested. The Committee also provides a further 5 year approval for any necessary work to be performed on the study which may arise in the process of publication and peer review.
4. An End of Project Progress Report is completed and returned when the study has finished (Please request a form).

Yours sincerely

Professor Ravi Mahajan
Chair, Faculty of Medicine & Health Sciences Research Ethics Committee

Appendix Q – Adapted Consent Form Patient A

 The University of Nottingham UNITED KINGDOM • CHINA • MALAYSIA	 St Andrew's HEALTHCARE	
Consent Form		
Name of Trainee: Sophie Daniels (Trainee Forensic Psychologist)		
Name of Participant: _____		
• I am doing some work with Sophie. I agree that she can use this work in her studies. ✓ • Sophie will not use my name when she talks about me in her studies. ✓ • I can change my mind and ask her not to use the work we are doing together in her studies. ✓ • I can see what she writes about me if I want to. ✓ • Sophie can look at my notes if she needs to. ✓ • People that mark Sophie's work may read it. ✓ • The work I do with Sophie is being supervised by Jon. ✓ • I can ask Sophie or Jon questions about this work and what Sophie writes about me at any time. ✓		
_____ Name of Participant	11/09/17 Date	_____ Signature
 Name of Trainee	11/09/17 Date	 Signature
Observed by Grace Thorne (Assistant Psychologist ¹) 		

Appendix R – Standard Consent Form Template

 The University of Nottingham UNITED KINGDOM • CHINA • MALAYSIA	 St Andrew's HEALTHCARE	
Consent Form		
Name of Trainee: Sophie Daniels (Trainee Forensic Psychologist)		
Name of Participant: _____		
		<i>Please initial box</i>
1. Having had the purpose of the case study explained to me by the trainee I agree to have details of my case and treatment used anonymously as part of the trainee's doctoral thesis. ☐ 2. I understand that my agreement to have my details used is voluntary and that I am free to withdraw my consent for them to be used within the trainee's academic work at any time, without giving any reason, and without the way I'm being treated changing or my rights being affected. <i>Should I decide to withdraw my consent beyond the end date of the trainee's current placement at the Wells Road Centre a member of the psychology department will be able to contact the trainee on my behalf.</i> ☐ 3. I understand that relevant sections of my clinical notes may be looked at by the trainee, only where it is relevant to my assessment and treatment and necessary for inclusion in this case study. I give permission for this individual (trainee) to have access to these records and, in line with the Data Protection Act 1998, to collect, store, analyse and academically publish information obtained from my participation in this case study. ☐ 4. I understand that if I want to see the work prior to publication then the trainee will accommodate this. ☐ 5. I understand that details of my case and treatment as outlined in this case study may be looked at by authorised individuals from the University of Nottingham and regulatory authorities to ensure ethical conduct by the trainee. I give permission for these individuals to have access to this information. ☐ 6. I understand that my personal details will be kept confidential and I will not be personally identified in any published articles or within the thesis itself. ☐ 7. I understand that any issues arising should be discussed with the trainee in the first instance (either in person or in writing). <i>The trainee will be acting under the supervision of a qualified Forensic Psychologist.</i> ☐ 8. I agree to take part in the above study. ☐		
_____ Name of Participant	_____ Date	_____ Signature
_____ Name of Trainee	_____ Date	_____ Signature
1		

Appendix S – General Formulation of Patient A's Behaviour

The items of the formulation in red text have been added by the staff team and were not necessarily identified by patient A.



Appendix T – The Sexuality Scale (Snell & Papini, 1989)

The original questions of the scale are presented first, followed by the adapted questions read to patient A. Respondents are required to rate their agreement with each item on a 5-point Likert-type scale ranging from Agree, Slightly Agree, Neither Agree nor Disagree, Slightly Disagree, and Disagree. This scale was adapted to; Agree, Agree a little bit, Not sure, Disagree a little bit, Disagree. Items that are reverse scored are indicated with an *. Items 4 and 5 are filler items and not included in scoring the sexual depression subscale.

	Questions
	Sexual Depression Subscale
1	I am depressed about the sexual aspects of my life.
	I feel sad about sex in my life.
2	I feel good about my sexuality.
	I feel good about sexual stuff.
3*	I am disappointed about the quality of my sex life.
	I am disappointed about sex in my life.
4	Thinking about sex makes me happy.
	Thinking about sex makes me happy.
5	I derive pleasure and enjoyment from sex.
	I enjoy sex.
6*	I feel down about my sex life.

	I feel sad about sex.
7	I feel unhappy about my sexual relationships.
	I feel unhappy about the sex I have.
8	I feel pleased about my sex life.
	I feel pleased about the sex I have.
9	I feel sad when I think about sexual experiences.
	I feel sad when I think about sex.
10	I am not discouraged about sex.
	I am not put off sex.
Sexual Preoccupation Subscale	
11	I think about sex all the time.
12	I think about sex more than anything else.
13	I don't daydream about sexual situations.
14*	I tend to be preoccupied with sex.
	I tend to think about sex a lot.
15*	I'm constantly thinking about having sex.
16*	I think about sex a great deal of the time.
	I think about sex a lot of the time.
17	I seldom think about sex.
	I don't really think about sex.
18*	I hardly ever fantasise about having sex.
	I don't really fantasise about having sex.
19*	I probably think about sex less often than most people.
	I think about sex less often than most people.
20	I don't think about sex very often.

Appendix U – The St Andrews Sexual Behaviour Assessment (Knight et al., 2008)

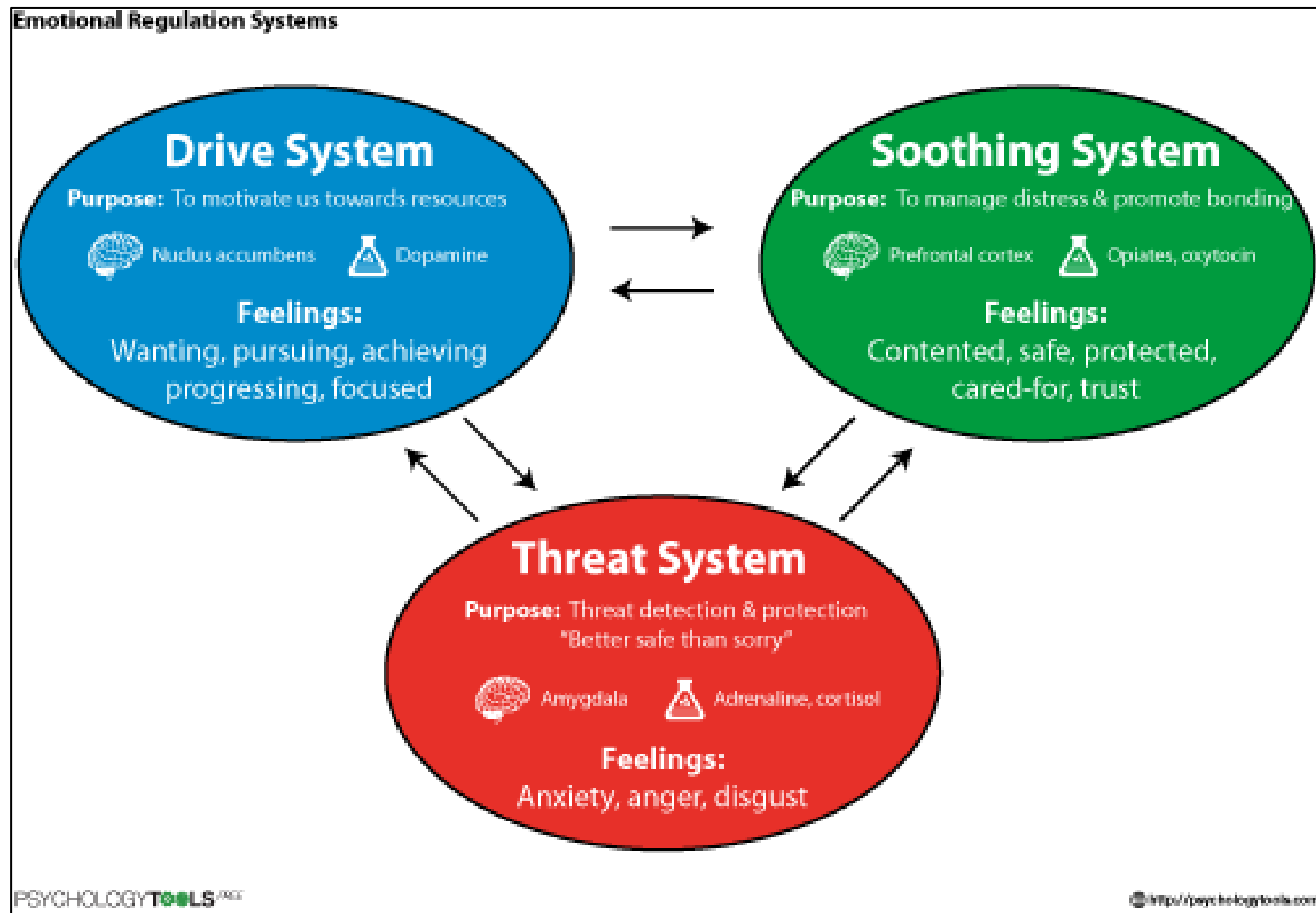
ST ANDREW'S SEXUAL BEHAVIOUR SCALE (SASBA)
(Knight, Alderman, Johnson, Green, Birkett-Swan & Yorston)

1.BEHAVIOURS

	Verbal Comments VC	Non Contact NC	Exposure E	Touching Others TO
1	Intimate personal comments of mild severity, e.g. "Have you got a girlfriend?", "I love you", "You're gorgeous"	Blowing kisses, kissing self or staring at another persons groin, female breasts or buttocks, or makes obscene gesture	Appears unaware that is exposing genitals, female breasts or buttocks in a public setting	Touches for a prolonged period (excess of 2 seconds) or strokes another person – does not include groin, female breasts or buttocks
2	Comments of a sexual nature, clearly not person directed, e.g. "I've got a big dick"	Touches own groin, female breasts or buttocks over or under clothes (no exposure)	Wearing no clothes in a public setting, clearly not person directed	Kissing another person
3	Descriptions of another persons groin, female breasts or buttocks clearly directed to another person e.g. "You have a nice bottom", "She's got lovely breasts"	Masturbates in a non shared setting where staff are present (e.g. begins when staff enter bedroom or in bath)	Intentionally exposes genitals, female breasts or buttocks to another person (appears to be a deliberate premeditated behaviour)	Lifting skirts, pinching or touching buttocks, sitting on other's knee
4	Explicit accounts of sexual intent, requests or activity e.g. "Show me your knickers", "I want to shag you"	Masturbates without genitals being exposed in a public setting, including ward shared areas (e.g. dining room)	Masturbates with genitals being clearly exposed in a public setting, including ward shared areas (e.g. patient's lounge)	Touching others groin, female breasts, or rubbing own genitals or female's breast against another person

a) Masturbation = rubbing own genitals b) Bedrooms and bathrooms are non public/ non-shared environments c) Attempts to touch which are only prevented by staff intervention, should be rated as if contact occurred.

Appendix V – Compassion Focused Therapy Formulation Template (Gilbert, 2010)



Appendix W – Literature Regarding Sexual Expression in Secure Forensic Services

Article 8 of the Human Rights Act (1998) protects an individual's right for respect for their private and family life, yet the rhetoric surrounding this right for individuals who reside in secure psychiatric services appears to be one of repression, despite the World Health Organisation (WHO; 2006, p. 5) defining sexuality as "A central aspect of being human throughout life..." Whilst there are difficulties related to safeguarding with maintaining this right and facilitating the expression of sexuality for individuals who reside in secure psychiatric services, such as capacity to consent, sexual exploitation of vulnerable patients, unsafe sex practices, and the management of rape allegations (Dein & Williams, 2008), prohibition of sexual expression in such services appears to reflect "a protective-moral discourse" (Dein & Williams, 2008, p. 284). In fact, research suggests that the UK appears to be the most prohibiting of sexual expression by forensic patients in a sample of 14 European countries (Tiwana, McDonald, & Völlm, 2016), with policy risk averse and neglecting of patient's sexual rights/needs. Such findings are supported by Brown et al., (2014b) and McCann (2000). There also appears to be no uniform national policy or consistency amongst services which appears problematic in terms of patient care (Bartlett et al., 2010). For example, patient A reported that whilst residing in a high secure mental health hospital he was not allowed access to any pornography or sexually explicit material, yet was allowed

unrestricted access to pornography whilst residing in the current service. This decision did not appear to be related to a reduction in risk and seemed more reflective of differing local policies (highlighted by Tiwana et al., 2016). Finally, it is worth noting that Gilbert, Rose, and Slade (2008) reported that positive sexual experiences are linked to positive treatment outcomes in inpatients, suggesting that not only is the prohibition of sexual expression a violation of an individual's rights but it may also be detrimental to the individual's wellbeing. Briefly, one notes that the rhetoric surrounding sexual expression in patients with an ID appears to be considerably more repressive (Alexander & Gomez, 2017; Perlin & Lynch, 2014). The intervention therefore sought to provide a space for patient A to discuss his sexual expression within his current environment.

Note that this topic can be considered an ethical issue; clearly the sexual rights of any individual are a fundamental aspect of their human rights. The media is increasingly discussing this topic (Kamerling, 2016; Yates, 2016) which appears to reflect the recognition within academic literature that there has been an absence of focus on this issue within psychiatric services. The sexual expression of those that forensic psychologists work with forms a part of a wider discourse about sex and disability generally (Appel, 2010).