

**Developing an Understanding of the Roles of Fantasy
and Empathy in Sexual sadism.**

Thesis submitted for the degree of
Doctor of Clinical Psychology

Department of Psychology
University of Sheffield

By

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Declaration

This original work has not been submitted to any other institution, or for any other qualification.

Overview of thesis

The **Literature review** examines the published literature relevant to developing an understanding of the relationship between the concepts of sexual sadism and fantasy. Early influential studies into the role of fantasy in sadism continue to dominate the research despite their methodological limitations with more recent empirical studies doing little to advance the evidence base. More promising recent theoretical developments are summarised. The review concludes by recommending further research in areas such as the moderating effects of concepts such as empathy using more diverse populations and methodology.

The **Research report** set out to test a number of traditional assumptions about the roles of fantasy and empathy in sadism through the use of an online questionnaire. This questionnaire was completed by a sample of 497 sadomasochistic (SM) practitioners and 904 comparison group members. Dominants (sadists) were found to have comparable cognitive empathy but lower levels of affective empathy when compared to other SM and comparison groups. However, analyses suggested the possible presence of lower empathy in more 'extreme' dominants. Dominants showed the lowest rates of deviant sexual fantasies, cognitive rehearsal and use of masturbatory fantasies and were not more fantasy prone than the comparison group. These findings have theoretical and clinical implications and require further investigation.

The **Appendices** section contains instructions for authors for both selected journals, copies of ethical, governance and journal approval and the full online questionnaire. Recruitment emails, distribution graphs of 2 variables and a full list of the 13 studies reviewed in the literature review are also appended to the thesis.

Structure and word counts

Structure:

The literature review has been written in accordance with the guidelines for articles to be submitted to Aggression and Violent Behaviour.

The research report has been written in accordance with the guidelines for articles to be submitted to Journal of Forensic Psychiatry and Psychology.

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An Exploration of the Role of Fantasy in Sexual Sadism and Sexually Sadistic Offending Behaviour: A Critical Review of the Literature.

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**An Exploration of the Role of Fantasy in Sexual Sadism and
Sexually Sadistic Offending Behaviour: A Critical Review of
the Literature.**

Abstract

The present review examines the published literature that is relevant to developing an understanding of the relationship between the concepts of sexual sadism and fantasy.

Relevant articles were identified through searches of multiple databases.

The concepts of sadism and fantasy are initially considered separately and a brief overview of the literature relating to their definition and prevalence is presented. Early influential models and studies into the role of fantasy in sadism are then reviewed.

Despite their methodological limitations they continue to dominate the research in this area. More recent empirical studies arising from this early research are then critically appraised and it appears these studies have done little to advance the existing evidence base. Finally, more recent and promising theoretical developments are summarised. The review concludes by questioning the proposed central role of trauma in the development of sadistic fantasies. Further research is suggested to examine alternative pathways to the development of sadistic fantasies and to investigate the moderating effects of concepts such as empathy using more diverse populations and methodology.

Introduction

The present review examines the published literature that is relevant to developing an understanding of the relationship between the concepts of sexual sadism and fantasy. It focuses specifically on sexual sadism, the diagnosis, as opposed to the broader more inclusive term of sadism. It has recently been noted that although many scholars have described and explained the concepts of fantasy and sadism separately, few have linked them together (Chan & Heide, 2009). There has also been little consideration of the functions served by fantasy in sadism or the mechanisms that lead to the translation of fantasy into action. In this narrative review, the concepts of sexual sadism and fantasy are initially considered separately and a brief overview of the literature relating to their definition and prevalence is presented. Early influential models and studies into the role of fantasy in sexual sadism are reviewed. More recent empirical studies arising from this early work are then critically appraised. Finally, recent theoretical developments are summarised and the implications for future research are outlined.

Search strategy

The literature search was conducted on OVID (databases selected were PsychArticles, Medline, PsychInfo and Amed), Sciencedirect, Blackwell Synergy, Web of Knowledge, PubMed and Google Scholar. The following 'wildcard' keywords were used as search terms: 'Sadis*', 'somasochis*', 'fantas*', 'sexual homicid*'. The search revealed 673 articles. Articles were selected if they were written in English and contained empirical data relating to both sexual sadism and fantasy within the forensic literature. Articles relating primarily to Sadistic personality disorder and psychodynamic models of sadism and fantasy were excluded. Thirteen studies were selected for the review (see Appendix H), which included early influential studies and models and a number of more recent studies testing these models. Finally, additional theoretical models and perspectives of fantasy and sadism were also highlighted within the review.

Sadism: an overview of the literature.

Sadism is a commonly used term in the forensic literature however, there is a considerable lack of consensus or clarity in defining this concept. This confusion continues to hamper advances in research in this area (Marshall & Kennedy, 2003). The term sadism was first coined by Richard von Kraft-Ebing (1886), who defined sadism as 'the experience of sexual, pleasurable sensations (including orgasm) produced by acts of cruelty... (and) may also consist of an innate desire to humiliate, hurt, wound or even destroy others' (von Kraft-Ebing, 1886, p109). Kraft-Ebing believed that the root motivation for sadism was a desire for 'unlimited mastery' which was combined with eroticism in certain circumstances. Almost a century later MacCulloch, Snowden, Wood, & Mills (1983) defined sadism as 'the repeated practice of behaviour and fantasy which is characterised by a wish to control another person by domination, denigration or inflicting pain, for the purpose of producing mental pleasure and sexual arousal (whether or not accompanied by orgasm) in the sadist'.

Sexual sadism is classified in the DSM-IV-TR as a paraphilia involving 'recurrent, intense sexually arousing fantasies, sexual urges, or behaviours involving acts (real not simulated) in which psychological or physical suffering (including humiliation) of the victim is sexually exciting to the person' (American Psychiatric Association, 2000 p.574). A diagnosis requires that the person has acted on these sexual urges with a non-consenting person, or the sexual urges or fantasies have caused marked distress or interpersonal difficulty. The ICD-10 classification combines sadism with masochism and defines sadomasochism as 'a preference for sexual activity that involves bondage or the infliction of pain or humiliation. If the individual prefers to be the recipient of such stimulation this is called masochism; if the provider, sadism... where violence is necessary for erotic arousal the diagnosis can be clearly established (World Health

Organisation, 1992). The definition suggested a dimensional view of sadomasochism and provided an explicit differentiation between sexually motivated acts and those motivated by cruelty and anger in a sexual context (Fedoroff, 2008). However, this definition has been criticised for lacking clarity, being unsupported by research, and for combining consensual and non-consensual sexual behaviours (Reiersol & Skeid, 2006). Both diagnostic systems definitions have been criticised for omitting any reference to power or control (Myers, Husted, Safarik, & O'Toole, 2006).

Sexual sadism has been conceptualised as a continuum ranging in severity from consenting sadomasochistic (SM) practices on one end, to the torture and killing of non-consenting victims at the other (Kirsch & Becker, 2007). Many individuals identify themselves as sadists or masochists while strongly advocating only consensual sexual activities (Fedoroff, 2008). Within this population sadomasochism has been defined as 'a broad term which refers to an interest in giving or receiving intense stimulation, bondage, or the purposeful enacting of dominant and submissive roles, usually for sexual gratification' (Dancer, Kleinplatz & Moser, 2006, p82). Recent research found that those who engage in SM behaviours had different personality characteristics to a comparison group, with a greater proportion of the SM group reporting experience of childhood abuse (Powls, 2006). However, some research points to the relationship between consensual sexual SM activities and sexual homicide (Warren & Hazelwood, 2002).

The term sadism is also sometimes used when referring to someone with Sadistic Personality Disorder (SPD). This diagnosis was included in DSM-III-R under 'Disorders Needing Further Study' and was characterised by the use of cruel, violent, demeaning and humiliating behaviour that is specifically not exhibited for sexual

pleasure. It also included a fascination with weapons, violence and torture (American Psychiatric Association, 1987). This diagnosis has since been declassified and removed from subsequent versions of the DSM, however it is still used in forensic settings. The distinction between sexual sadism and SPD is further complicated by research into SPD being primarily conducted on sexual offenders with suggestions of a link between the two concepts (Berner, Berger & Hill, 2003, Hill, Habermann, Berner & Briken, 2006).

There are also considerable differences in how sadism has been operationalised in the research literature (Marshall & Kennedy, 2003). A range of behaviours including power, control, aggression and violence with a range of effects including pain, suffering and humiliation of the victim have all been identified by various authors as defining characteristics of sexual sadism (Knoll & Hazelwood, 2009). In addition, the sexually sadistic serial murderer has received much description and research focus. However, much of the literature sampled sexual or serial murderers and made the assumption that they were representative of sadists. This makes direct comparison between studies difficult.

Prevalence rates of sadism

The prevalence rates of sadism in sex offending populations have been estimated at between 45 and 99 % (Kirsch & Becker, 2007). It is likely that the large variations in prevalence rates are due to difficulties in the definition and operationalisation of the diagnosis (Marshall & Kennedy, 2003). As obvious behavioural evidence of sexually sadistic motives is not usually present, diagnosis often relies on inferring sadistic motives from the nature of the crime or self-reported fantasies (Kirsch & Becker, 2007). Both of these methods of assessment are potentially problematic and unreliable.

Other methodological limitations make comparison of prevalence rates across studies difficult. Most studies rely on small sample sizes, retrospective accounts or phallometric data. All of these have potential limitations in providing an accurate diagnosis (for a review of these issues see Marshall & Kennedy, 2003).

The rates of sadism in general population are presently unknown. It has been suggested that 10-50% of people have fantasies of hurting or humiliating others, and 2-5% obtain sexual gratification from inflicting pain on others (Crepault & Couture, 1980). A more recent study of 407 undergraduate students from the UK and Ireland found that 6.9% considered themselves sadistic (Davies & O' Meara, 2007). It is likely that similar difficulties with the definition and measurement of sadism would hamper research in non-offending populations too.

In summary, the concept of sadism is frequently used but there is a lack of solid theoretical and empirical work in this area (Kirsch & Becker, 2007). A recent review of the literature in this area questioned the utility and reliability of this diagnosis in forensic populations (Marshall & Kennedy, 2003). Critics have suggested a reform of the diagnosis to remove consensual sadomasochistic activities (Reiersol & Skeid, 2006), the addition of a subtype 'sexual sadism homicidal type' to differentiate this subgroup (Myers et al, 2006), while others have suggested abandoning the use of the diagnosis altogether (Marshall & Kennedy, 2003). The considerable difficulties with defining, operationalising and measuring sadism are common themes in the research literature.

Fantasy: A brief overview of the literature.

Fantasy is an inclusive term that is not easily defined or measured (Leitenberg & Henning, 1995). A fantasy or daydream is considered an 'act of the imagination, a thought that is not simply an orienting response to external stimuli or immediately directed at solving a problem or working on a task' (Singer, 1966). Fantasy has been defined as 'an elaborate thought with great preoccupation, anchored with emotion and having its origins in daydreams' (Burgess, Hartman, Ressler, Douglas, & McCormack, 1986, p256). A fantasy is usually experienced as a collection of thoughts, although the individual may also be aware of images, feelings and internal dialogue (Prentky et al, 1989). Fantasy, daydreams and imagination are all thought to be integral to healthy psychological functioning (Rauschenberger & Lynn, 1995).

It appears that certain individuals are more prone to fantasy and have been labelled 'fantasiers' (Merckelbach, Horselenberg & Muris, 2001). Fantasy proneness refers to a unique constellation of personality traits and experiences that coalesced around a deep, profound, and long standing involvement in fantasy and imagination. These individuals 'engage in fantasy for most of their waking life, often in secret due to an awareness of social norms' (Lynn & Rhue, 1988). There are two hypothesised developmental pathways to fantasy proneness: the first is through encouragement to fantasise from a significant adult in childhood; the second is by using fantasy as a coping mechanism for loneliness and isolation in childhood, or as a defensive function to escape from an aversive early life environment (Lynn & Rhue, 1988).

It has been estimated that 20-35% of fantasy prone individuals exhibit significant signs of maladjustment, psychopathology or deviant ideation (Lynn & Rhue, 1988). It has been suggested that an inability to control cognitive processes, such as fantasy and

daydreaming, may be associated with psychopathology through poor regulation of attention, emotion, and behaviour (Rauschenberger & Lynn, 1995). It is also possible that various affective disturbances, behavioural problems and psychological disorders may infiltrate a person's imaginal life. More recent research has begun to establish links between fantasy proneness, dissociation and childhood abuse (Rauschenberger & Lynn, 1995, Geraerts, Merckelbach, Jelicic, Smeets & van Heerden, 2006).

A sexual fantasy refers to almost any mental imagery that is sexually arousing or erotic to the individual, in which the individual has the ability to control 'in imagination' exactly what takes place (Leitenberg & Henning, 1995). In their extensive review of sexual fantasy, Leitenberg & Henning found that while an equal proportion of men and women had sexual fantasies during non-sexual activity and sexual activity with a partner, men were more likely to have sexual fantasies during masturbation than women. Men were also found to fantasise about sex more frequently and have more fantasies of dominating or forcing a partner into sexual activities. By contrast, women were found to have more fantasies of submission, although the authors suggest that fantasies of both dominance and submission may serve a similar purpose of affirming sexual power and irresistibility (Leitenberg & Henning, 1995).

The concept of 'deviant' sexual fantasy and its link to deviant behaviour, has received much research attention (Leitenberg & Henning, 1995). The underlying hypothesis appears to be that deviant sexual arousal increases the likelihood of deviant sexual fantasy, which in turn increases the likelihood of deviant sexual behaviour (Abel, Blanchard & Jackson, 1974). However, various studies have found high rates of deviant fantasy among the general non-offending population and as a result it has been argued that the terms 'deviant fantasy' and 'deviant arousal' are misleading unless they are

directly linked to deviant behaviour. Attempts to change or pathologise fantasies that are not linked to criminal or paraphilic behaviour are not recommended as this may have negative effects on the individual (Leitenberg & Henning, 1995).

There are a number of challenges to the accurate assessment of sexual fantasy. The majority of studies either use self-report fantasy checklists or narrative descriptions of fantasies. These methods both rely on retrospective recall of the data and potentially lead to unreliable reports (Leitenberg & Henning, 1995). Another major challenge is bias introduced by demand characteristics such as socially desirable answering. This may be of particular relevance when the population consists of convicted sex offenders. Finally, some methods of assessment require the researcher to infer fantasies and these are subject to bias in interpretation.

A review of the relationship between sadism and fantasy- empirical studies.

Fantasy is a very important aspect in the understanding of human sexuality (Leitenberg & Henning, 1998) and the role of fantasy in the development of sexual sadism has been outlined in the DSM-IV-TR definition (A.P.A., 2000). However, there is currently a need for more research linking these concepts together (Chan & Heide, 2009). Many authors have stated that fantasy is central to the development, maintenance and progression of sexual sadism. and the empirical and theoretical evidence for this hypothesis is now summarised and critically appraised (see Appendix H for a full list of the studies reviewed).

Early influential, descriptive models and studies.

Robert Brittain (1970) wrote a seminal paper which attempted to provide a clinically useful, descriptive account of what he called the 'sadistic murderer'. Brittain drew on professional experience and case material to formulate the sadistic murderer in terms of personality, sexuality, interests, crime and prognosis. Brittain described the sadistic murderer as 'almost always male, introspective, obsessional, withdrawn, with no close friends'. He stated that a sense of isolation from others resulted in him feeling insecure and inferior to others (Brittain, 1970).

Brittain made reference to the role of fantasy in sadism stating 'he is typically a day-dreamer with a rich, active fantasy life. He imagines sadistic scenes and these he acts out in his killings'. This fantasy life had its origins in childhood when the sadistic murderer lived 'in a world of his own', and became more important to the sadist than his ordinary life. Brittain stated that repeated exposure to cruel, sadistic fantasies resulted in 'emotional flattening' and a lack of sensitivity and empathy for others. Some common interests which were potential sources of fantasy material for the sadist were

listed. These included an interest in weapons, guns, knives, and a great interest in pornography, particularly sadistic pornography. Brittain described the motivation for sadistic offending as a desire to have power over others. He stated that offending was likely to occur after a loss of self esteem, as feelings of inferiority were reduced during the planning and commissioning of the offence. Following the offence (murder), the sadist experienced a relief of tension. Brittain also predicted a high likelihood of re-offending in this population.

Brittain's account of the 'sadistic murderer' has been hugely influential in subsequent investigations of the role of fantasy in sadism. Brittain acknowledged that he deliberately made no attempt to quantify this data, aiming instead for a clinical description which was of practical value. As a result, the account lacked any scientific investigation or rigour. However, a study of causation and a fuller description of each of the elements were recommended. A further limitation was that although Brittain observed that the majority of sadists restrict themselves to fantasy, he offered no casual explanation for why some people act out these fantasies and others do not.

Over ten years later, MacCulloch et al (1983) built upon the work of Brittain by describing the relationship between sadistic fantasy, sadistic behaviour and criminal offending. This study described 16 male special hospital patients and their index offences, previous offending and use of sadistic fantasies (MacCulloch et al, 1983). A good working definition of sadism was provided which suggested the desire for control lies at the heart of sadism. The authors found that 81% of the sample (13 patients) reported rehearsing sadistic fantasies prior to their offences. These sadistic fantasies were linked to sexual arousal and had themes of rape, bondage, kidnap and torture. The

authors concluded that each individual's index offence and previous non-sadistic offences could be seen as 'behavioural try outs' of their fantasy life.

Based on this data, the authors offered an explanatory model of the role of fantasy in sadism. In this model sadistic fantasies are maintained and reinforced through masturbation, becoming strengthened through rehearsal. The authors conceptualised sexual arousal from a classical conditioning perspective and hypothesised that fantasies are continually changed and progressed in order to maintain their efficiency as a source of arousal. In order to avoid habituation this progression then leads to in-vivo or 'behavioural try-outs' of the cognitive fantasy (MacCulloch et al, 1983).

The consideration of what factors lead to some individuals acting on their fantasies is a particular strength of this study. The authors point to the relevance of childhood trauma and early difficulties in social relationships in the development of sadistic fantasy.

However, the use of a retrospective design and a small sample size from a selected group are major limitations to the generalisability of the findings. Another limitation is that for some of the patients in the study their offending pre-dated their fantasies. This is problematic as the model suggests that fantasy precedes 'behavioural try-outs'. The authors also emphasised the role of progression of fantasies however, for a number of the patients in this study their fantasy did not progress over time. These limitations threaten the utility of the model.

In the United States, Burgess et al (1986) described the background characteristics of 36 sexual murderers. They concluded that 'the central role of daydreaming and fantasy in the lives of these 36 murderers was critical to what motivated them to kill' (Burgess et al, 1986). By reviewing archival records and interviewing the offenders they found that the majority of this sample (81-82%) reported daydreaming and compulsive

masturbation during childhood, adolescence, and in adulthood. This is similar to the percentage reported by MacCulloch et al (1983). However, as no comparison group was used and indicators such as 'compulsive masturbation' were not defined it is unclear whether these rates are similar to those experienced by non-offending populations (Gray, Watt, Hassan, & MacCulloch, 2003).

The authors outlined a developmental account of how sadistic fantasy develops that draws heavily on the work of Brittain (1970), and MacCulloch et al (1983). Early trauma and abuse lead to the development of fantasies of control and dominance. Social isolation in childhood encourages reliance on fantasy as a substitute for human encounter and a preference for fantasy over reality develops. The early sexual and aggressive components of fantasy result in 'acting out' of these fantasies through play and other behavioural try-outs (Burgess et al, 1986).

The authors developed a 'motivational model' of sexual homicide and suggested that these men were motivated to murder by their way of thinking. The model suggested that early traumatic experience, lack of positive attachment bonds and social isolation set into motion patterned responses to these formative events. Critical personality traits and fantasies of dominance, power and control emerge and a structure of thinking develops that motivates and sustains deviant behaviour. Interpersonal failure results in poor development of empathy for others and fosters distorted perceptions of others. As a result there is an increased reliance on aggressive sexualised fantasy for emotional arousal. Through a feedback filter the murderers' actions are justified and the internal fantasy world is protected and preserved (Burgess et al, 1986).

This model suggests that sadistic fantasy is the central mechanism in motivation to kill. However, as no empirical support for the model was provided outside of the small sample, the utility of this model cannot be established. The authors also appear to equate the term 'sexual homicide' with sadism and it is possible that the model is more representative of sexual offending than of sadism. Methodological problems such as a small sample size and the use of retrospective archival data once again limit the generalisability of the findings.

Prentky et al (1989) used predominately the same sample as Burgess et al (1986), to examine the presumptive role of fantasy as an internal drive mechanism for repetitive acts of sexual violence. Twenty-five serial sexual murders were compared with 17 sexual murderers who had only killed once. Serial sexual murderers evidenced higher rates of obtrusive violent fantasies (86%) when compared to single homicide cases (23%). A higher prevalence of paraphilias and a higher degree of organisation of the crime scene was also found in the serial murderer group (Prentky et al 1989). However, contrary to expectations no differences were found between the groups on the planning variable. The authors recognised that a methodological error resulting in poor distinction between planning of the offence and planning the murder may account for the lack of difference between the groups (Prentky et al, 1989).

The authors suggested a functional link between fantasy and assaultive behaviour similar to that described by MacCulloch et al (1983). They stated that the more a fantasy is rehearsed the more power it acquires and the association between fantasy content and arousal is strengthened through positive reinforcement. Once the restraints inhibiting the acting out of fantasy are no longer present, the individual engages in progressively more accurate trial runs in an attempt to enact the fantasy (Prentky et al,

1989). However, the presence of fantasy alone was seen as a poor indicator of future conduct. The authors suggest that paraphilias such as exhibitionism and voyeurism may encourage the translation of cognitive fantasy into reality by a process of disinhibition. The main strength of this study was the comparison of the groups of sexual offenders which provides some evidence that repetitive acts of sexual violence may be due to a fantasy-based drive mechanism. However, this study suffered from similar methodological problems to those already outlined including the use of retrospective design and a small sample size.

The descriptive accounts, empirical studies and models of Brittain (1970), MacCulloch et al (1983), Burgess et al (1986), and Prentky et al (1989), have been hugely influential in subsequent study of the role of fantasy in sadism. Many of these authors suggested a causal role of childhood trauma or abuse in the development of sadistic interest and fantasies. Recent research found that childhood abuse was not present in a large proportion (60.8%) of sadistic SM practitioners (Powls, 2006); therefore, a clear causal link between abuse and sadistic interest was not found. This threatens the utility of these influential models and theories, particularly with consenting SM groups. It is clear that other theories of development of sadistic fantasies need to be considered. Despite their small sample sizes and other methodological limitations, these models have been used as the basis for further investigations into the nature and prevalence of fantasy in offending and non-offending populations.

Prevalence figures and studies arising from early models

Using the description of a sadistic murderer by Brittain (1970), Grubin (1994) compared 21 sexual murderers with 121 rapists using a semi-structured interview. The majority of men were reluctant to divulge any information relating to fantasies at interview: only 1

sexual murderer and 8 rapists admitted to having more than occasional sexual fantasies and similar numbers reported fantasies of rape (Grubin, 1994). This lack of disclosure by the offenders severely affected the reliability of the findings. The authors suggested that rates of fantasies were actually higher in the murderer group, inferring the presence of fantasy based on evidence of the use of pornography, prostitutes and other paraphilias. However, this difference was not found to be significant and inferring the presence of fantasy can be problematic and subject to bias. Therefore, the results of this study should be interpreted with caution. In line with Brittain (1970), a theme of social isolation was common in the sexual murderers.

Warren, Hazelwood & Dietz (1996) reported that at least 85% of sexually sadistic serial murderers had violent fantasies that remained consistent over time. These fantasies contained a ritualised, repetitious core that became assimilated into ritualised, repetitious behaviour across successive murders. However, similar to the study by Grubin (1994), the presence of sadistic fantasies was inferred from sketches, videos and pornography accumulated by the men. The presence of these fantasies was not confirmed with the offenders and so the high prevalence rates reported by the authors cannot be verified. Furthermore, the lack of a non-offending control group means that the prevalence of sadistic pornography use in this sample cannot be compared with prevalence in the general population.

Warren, Hazelwood & Dietz (1996) also found high rates of planning, sexual rituals and sexual bondage suggesting elements of fantasy in the planning and enactment of the murder. Interestingly, a third of the offenders had previously enacted these core fantasies with women they were in relationships with, possibly showing evidence of behavioural try-outs (MacCulloch et al, 1983). The authors suggested that murders

become fantasy material for subsequent masturbation which reinforced the sadistic arousal pattern and the desire to murder (Warren, Hazelwood & Dietz 1996). Once again the use of retrospective archival data, the lack of a comparison group and the focus on serial sexual murderers makes it difficult to generalise the data from this study.

Langevin, Lang & Curroe (1998) compared 5 groups of male sex offenders with a group on non-sexual offenders and a group of community heterosexual controls on the Clarke Sexual History Questionnaire. The authors found high rates of non-deviant sexual fantasy across all of the groups with the non-offender control group reporting the highest percentage (90.9%). Homosexual paedophiles reported the highest rate of age/gender deviant fantasy (56.5%), with non-offender controls reporting the lowest rates (9.1%). The 5 sex offender groups together had statistically more deviant fantasies than either control group. However, the prevalence of sexual aggressives who reported deviant fantasies (58.3%) was lower than non-sexual offender and community controls (64% and 77% respectively). It is possible that there were higher rates of denial in the offender populations. Denial is thought to be a pervasive characteristic among offenders, sexual offenders in particular, which routinely complicates assessment and treatment (Schneider & Wright, 2004). A lack of disclosure or denial of the presence of fantasy in this population group was one of the major threats to the validity and reliability of the data obtained.

The authors could not reliably distinguish sex offenders from non sexual violent offenders or community controls on the basis of any fantasy. As a result they concluded that fantasy was a poor discriminator of sex offenders and so was not central to sexual deviance as previously suggested (Langevin et al, 1998). However, important differences between the groups such as the vividness or duration of the deviant and non-

deviant fantasies were not examined. The authors also considered that fantasy may be the result, not the precursor of deviant sexual preferences (Langevin et al, 1998).

It is also possible that denial and a lack of disclosure may result in sadists being misdiagnosed. Marshall, Kennedy & Yates (2002) compared rates of self-reported fantasies among 59 sexual offenders and found no significant differences between the sadists and non-sadists on sadistic, sexually violent, rape, murder, control or other paraphilic fantasies. When these differences approached significance the direction of the difference suggested higher rates of deviance in the non-sadists. Overall, the authors found that the non-sadists were more deviant than the sadists and actually displayed more sadistic features. These included significantly more use of torture during the offence, higher rates of self-reported sadistic, sexually violent and rape acts, and greater levels of arousal to rape and sexual violence in phallogometric assessments. The authors recognised the lack of supportive evidence that sexual arousal to sexual or non-sexual violence is indicative of a sadistic disposition. The authors cautioned against the use of the diagnosis of sexual sadism in prisons.

The main limitation of this study was its reliance on evaluations of offenders which were made for practical purposes such as sentencing and release decisions. It appears likely that offenders may have withheld information in these situations in order to gain a favourable outcome and so the validity of the results is compromised. By contrast higher rates of self-reported sadistic fantasies at assessment appeared to be a key factor influencing the diagnosis of sadism. Finally, these results may simply reflect inconsistencies in the criteria used to diagnose sadism in these prisons (Marshall et al, 2002).

As denial, dishonesty or giving answers that are 'socially desirable' are common difficulties in the assessment of deviant sexual fantasy with offending populations, projective methods such as the Criminal Fantasy Technique may be useful in preventing these demand characteristics (Schlesinger & Kutash, 1981). This projective technique allows the offender to reveal their fantasies without having to admit to them and three of the cards were specifically designed to elicit pathological fantasy of a sexual nature. Deu & Edelman (1997) compared groups of predatory and opportunistic sex offenders with a group of non-sexual offenders and a community group of non-offenders to examine the content of projected criminal fantasy. Predatory sex offenders (identified by the authors as 'most likely sadistic') were significantly more organised in their crime stories and had more planned and elaborate criminal fantasies than the opportunistic sex offenders and control groups. However, there were no between group differences in the number of sexual criminal fantasies or nonsexual/non-violent themes projected in criminal fantasies (Deu & Edelman, 1997). The reliability and validity of the projective methodology used is questionable as the cards did not always elicit the fantasy they had been designed to depict and scoring was different to that suggested by the original authors.

The authors concluded that the elaborate and organised nature of predatory fantasies suggests the escalating use of fantasy as crimes continue. They also raised the possibility that opportunistic sex offenders were arrested before they could begin the process of rehearsal and try-outs suggested by MacCulloch et al (1983). However, no explanation was offered for the comparable rates of sexual and violent fantasies found in non sex offenders and non-offenders. It is also difficult to generalise the findings of this study given the small group sizes and the narrow population of special hospital patients they were drawn from.

Hill et al (2006) attempted to differentiate sexually sadistic from non-sadistic sexual homicide perpetrators on the basis of diagnostic developmental and criminal characteristics. Sexual sadists had significantly higher rates of masturbation with sadistic fantasies (90.4%), homicidal fantasies (46%) and use of sadistic pornography (40.5%) when compared to the non-sadistic group. The sadistic group had higher rates of transvestic fetishism, voyeurism, a higher number of co-morbid paraphilias and the majority of this group (70%) reported being sexually aroused during the homicidal act. Sexual sadists also showed more frequent, similar sexually aggressive behaviour before the homicide itself. This suggested evidence for MacCulloch et al's (1983) model of reinforcement of sadistic fantasy through masturbation with progression of fantasies to behavioural try-outs and offending.

Sexual sadists displayed higher rates of physical abuse, isolation and behavioural problems in childhood when compared to the non-sadists. Sexual sadists also showed higher rates of Sadistic Personality Disorder and the authors suggest that a combination of sexual sadism and sadistic personality disorder may lead to higher rates of recidivism (Hill et al, 2006). Although the findings of this study lend support to models by MacCulloch et al (1983) and Burgess et al (1986) the methodology once again relied on the use of archival forensic and psychiatric reports and did not include a comparison group of non-offenders.

Research with non-offending populations

The majority of research into the relationship between sadism and fantasy has been conducted on male offending populations, with little focus on non-offending community populations. Donnelly & Fraser (1998) explored gender differences in 320 college students focusing on arousal over sadomasochistic activities and fantasies. The authors'

defined sadism as 'arousal caused by dominating, humiliating, or inflicting pain on ones sexual partner' (Donnelly & Fraser, 1998, p392), which differed from DSM definitions used in others studies. Gender differences in sexual arousal from participating in sadomasochistic activities or arousal from fantasising about these activities were compared. Men were found to be more likely to become aroused by fantasies of being dominant during sex, participating in bondage and discipline, being spanked and being restrained during sex. Men were also more likely to become aroused by participating in bondage and discipline, watching bondage and discipline and being dominant during sex. There were no gender differences on being dominated during sex. These results offer strong support for the 'male arousal hypothesis' (Donnelly & Fraser, 1998), which states that males are more aroused by sadism because of socialisation emphasising sexual aggression and experimentation. Violent pornography was also suggested as an influence on the attitudes of those surveyed.

The sample used was predominately female (72%) and Caucasian (69%) and the group were also not self-identified as participants in the SM scene. As such it is not possible to generalise the results to other populations. The measure used was originally designed for a study on masochism and so contained more questions relating to masochism than sadism. The wording of the questions was also problematic as if someone reported 'never being aroused' this could mean that they had never participated in this activity or they had participated but were not aroused by it.

Gray et al (2003) used a non-offending student population to examine the prevalence of Burgess et al's (1986) behavioural and experiential indicators in this group. Many of the experiential indicators, including daydreaming, were counterintuitively more prevalent in the volunteer sample than the original sample. This does not support Burgess et al's

(1986) assertion that daydreaming plays a central role in the motivation to murder. By contrast the behavioural indicators were more consistent with the original study with a significantly higher prevalence of compulsive masturbation in the murderer sample when compared to the control group, across childhood, adolescence and adulthood. This indicator was also found to be higher for males than females in all 3 developmental stages (Gray et al, 2003).

Sadistic sexual interest was not found to be significantly associated with the experiential indicators. However, 3 behavioural indicators were significantly more prevalent in the high sadistic interest group: fire setting in childhood, stealing in adolescence, and rebelliousness in adulthood. There was also more evidence of convulsions in the developmental history of the murderer group. It is possible that some degree of neurological impairment in this group resulted in disinhibition and a greater association between sadistic fantasy and offending. The data appears to confirm the importance of these factors in the aetiology of the development of sadistic sexual fantasy in offenders. The authors reported that sadistic fantasy and interest were present in almost half of the non-offending population. However, the degree of interest in or willingness to act on fantasies is what may distinguish these individuals from the offending populations (Gray et al, 2003).

A major strength of this study was the use of a non-offending population to investigate the findings of Burgess et al (1986). The authors also controlled for socially desirable answering with their sample. However, the comparison of prevalence rates with the original study may be confounded by lenient inclusion criteria and the construction of new working definitions for each indicator. There is also no information given on the psychometric properties of the fantasy measure and so its reliability and validity cannot

be confirmed. It is possible that differences in the group prevalence rates may simply reflect these methodological problems.

In summary, many of these studies sought to address the methodological problems of the early research studies by employing larger sample sizes and healthy non-offending populations as comparison groups. However, it is possible that some of the comparison groups contained offenders who simply had not been charged or convicted of any crime. This may have inflated the rates of sadistic fantasy found in these populations and influenced the conclusions of the studies. In addition, the continued use of self-report questionnaires is problematic as it may encourage denial of fantasy particularly in offender populations. Equally problematic is the potential for bias if retrospective archival data with many of the assessments being carried out at important times in the criminal process is solely relied upon. It is likely that a combination of these methods may overcome some of these limitations. In conclusion, despite the use of more diverse methods of assessment to examine the nature and prevalence of sadistic fantasy, little contribution was made to the development of existing causal theories and mechanisms.

Recent theoretical developments.

The research base has been criticised for not suggesting a mechanism for how sadistic fantasy may be initiated (MacCulloch, Gray & Watt, 2000). MacCulloch et al (2000) proposed that the origin of sadistic fantasy occurs by a process of sensory preconditioning. In sensory preconditioning, associations can be formed between representations of stimuli in the absence of reinforcement when these stimuli are presented together or in close succession (MacCulloch et al, 2000). These associations are then paired with reinforcement either by classical or operant conditioning. When a child first experiences sexual arousal then a representation of arousal is formed, and a

similar process occurs for forming representations of aggression. If these representations become active concurrently (most likely during abuse), then an association between these representations is formed where one pathway activates the other. This process leads to the development of sadistic fantasy, which is assumed to be of functional benefit to the individual. The severity of sadistic fantasy and behaviour is related to the frequency and severity of abuse in childhood. This model may account for the rarity of sadism as a phenomenon as sexual arousal arising from abuse is thought to be a rare response (MacCulloch et al, 2000). While this account extends existing theoretical and aetiological models of the role of fantasy in sadism, no empirical data is presented to test or support the utility of this model. It also does not account for the development of sadistic fantasy in the absence of abuse.

A central question is how and why fantasy becomes translated into action in some populations, given that sexual fantasy is frequently used by both genders and by non-offending populations (Howitt, 2004). In an integrative review Meloy (2000), considered the role of fantasy in sexual homicide and concluded that a number of 'dominant antecedents' could lead to the behavioural acting out of sadistic fantasy. Various stress factors including conflict with females, parental or marital conflict, and financial stresses were listed as factors that could contribute to this 'acting out' (Meloy, 2000). The individual's frame of mind was also identified as important with emotions such as frustration, anger, hostility and excitement all potentially increasing the likelihood of 'acting out'. Finally, planning in terms of when and where the fantasy may be acted out were also cited as important factors in the translation of fantasy into behaviour.

Meloy (2000) also suggested that masturbation to a deviant sexual fantasy will decrease in intensity over time as the frequency of its use for sexual gratification increases. As the intensity decreases, the response tendency or 'motivation to act' on the environment increases. When the threshold is passed where the response tendency exceeds the intensity of the rehearsal fantasy, the likelihood of sexual violence substantially increases dependent only on opportunity. The mechanism could then be reset and the process begins again (Meloy, 2000). This is in line with early explanatory models by MacCulloch et al (1983), Prentky et al (1989), and Burgess et al (1986). The study of sexual fantasy in non-contact sexual offenders has been identified as a potentially important research area which may offer further theoretical insight into the role of fantasy in offending and the factors which lead to 'acting out' (Howitt, 2004).

An alternative theoretical explanation (Howitt, 2004, Langevin, 1998) suggested that offending may be a potential source of fantasy material and not the primary driving mechanism as previously suggested (Prentky et al, 1989). There is currently little empirical data to support this hypothesis although it appears likely that previous offending behaviour would become incorporated into fantasy scripts.

A final area of recent theoretical developments is the investigation of the functions served by sexual fantasy. Meloy (2000) summarised a number of important functions for the sadistic offender. Fantasy may sustain pleasure when coupled with masturbation and reduce behavioural inhibition while physiologically releasing orgasmic tension. The use of sexual fantasy can stimulate feelings of grandiosity and omnipotence in the offender and compensate for sexual or relational inadequacies. Finally, fantasy serves a rehearsal function allowing the perpetrator to cognitively practice his paraphilia prior to, or between behavioural try outs (Meloy, 2000). The specific functions of sexual fantasy

in the process of sexual offending have been more fully considered by Gee, Ward & Eccleston (2003). Qualitative research interviews were conducted with 24 men and grounded theory was then used to develop a model outlining the role fantasy plays in the development and maintenance of sexual offending.

The first function served by the use of fantasy was affect regulation. Fantasy may suppress or alleviate a dysphoric mood, elevate an ambivalent mood state or enhance pre-existing positive feelings. The second function concerned the use of fantasy to either induce sexual arousal prior to sexual activity or to enhance a pre-existing state of arousal. Fantasy as a mechanism of coping was third function. Two subcategories of coping were discussed: control and escape. Control referred to the ability to exert actual or perceived control over internal and/or external threats. Control is achieved by distortion such as legitimising the content or realisation of fantasies and by manipulation of the characteristics of perceived reality. Fantasy served as a means of escape by allowing the offender to mentally detach and suppress realisation of their present situation. The final function served by fantasy was modelling experience. Modelling related to both reliving previous experiences during masturbation or consensual activity and to simulating or escalating new fantasies possibly in preparation for action (Gee et al, 2003).

This model is a useful starting point for future research and suggests a causal role of fantasy in sexual offending for some perpetrators. It also highlights the importance of fantasy in maintaining and/or escalating deviant sexual activity in line with previous research and suggests that pornography may serve a number of functions within this process including disinhibition and maintenance (Gee et al, 2003). However, given the small sample size the model is based upon, future research is required to test the clinical utility of this model.

Conclusions and implications for future research

This review examined the relationship between the concepts of sadism and fantasy. The early models and descriptions of Brittain (1970), MacCulloch et al (1983), Burgess et al (1986), and Prentky et al (1989), continue to dominate the research in this area despite their methodological limitations. More recent empirical studies have done little to advance the development of these models or to create alternative explanations. Some recent theoretical developments have proved more promising, with the increased focus on the various functions of fantasy providing scope for future research. However, these models all require further scientific investigation. In addition, most of the models point to the central role of trauma in the development of sadistic fantasies and behaviour. However, recent research suggested that trauma may not be present in a large percentage of sadistic or 'dominant' SM practitioners (Powls, 2006). Therefore, alternative pathways to the development of sadistic fantasies and behaviour require research. These pathways may include the role of loneliness, isolation and/or attachment bonds in the development of sadistic fantasies.

Much of the research in this area is hampered by difficulties defining, operationalising, and measuring the concepts of sadism and fantasy. The majority of the studies rely on small samples of male sexual offenders. There is a need for studies with larger sample sizes, using mixed gender and non-offending populations to investigate the links between fantasy and sadism in more diverse populations. One potential area for investigation is the link between fantasy and sadism in consenting SM communities. Research in this area may also offer information on the prevalence of 'deviant' fantasies, use of masturbatory fantasies and cognitive rehearsal of sexual activities in this population. There is also a lack of research into the rates of fantasy proneness in these populations (Lynn & Rhue, 1988). Future research in this area also needs to try

and control for the effects of denial and other demand characteristics. One method of reducing this bias is by using more 'anonymous' methods such as internet based studies and recruitment of participants. Internet based methodology has proved useful in recruiting large numbers of SM practitioners in previous research (Powls, 2006).

Research in this area may also be hampered by the emergence of opposing research agendas: those promoting SM as a consensual activity and those within forensic services who view sexual sadism as an indicator of risk. Future diagnostic reforms may see a clearer distinction between consensual and non-consensual populations and may resolve this issue. The study of sadism in female offending populations has received little if any attention and this is a potential area for future exploration (Kirsch & Becker, 2007). Another research area which may advance our understanding of the role of fantasy in sadism is the study of non-contact offenders particularly those who engage with internet pornography (Howitt, 2004, Gee et al, 2003).

Finally, research into the factors that lead to the translation of fantasy into action has, to date, considered only a narrow focus. One potential area of interest is to consider the moderating effect of factors such as empathy on the relationship between fantasy and sadism. It has been suggested that frequent engagement in fantasies that dehumanise or objectify their victims may result in offenders perceiving their victims as dissimilar from themselves, decreasing their affective empathy (Kirsch & Becker, 2007).

Research into the roles of both empathy and fantasy in sadism may provide further insight into the reasons why some sadistic fantasies become translated into action while others do not.

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**Developing an Understanding of the Roles of Fantasy and
Empathy in Sadomasochism (SM): An Internet Investigation.**

Abstract

It has been suggested that individuals involved in sexual sadism do not lack empathy as traditionally assumed and may have intact cognitive empathy but deficits in affective empathy. Fantasy is seen as central to the development and maintenance of sexual sadism. However, there has been no research into the rates of deviant fantasy, fantasy-proneness or empathic abilities of 'dominants' (sadists) or other consenting sadomasochistic (SM) populations.

1401 participants (497 SM practitioners and 904 comparisons), were recruited online via SM groups and a University emailing system and completed an online questionnaire. The questionnaire contained measures of empathy, psychological functioning, sadism, fantasy-proneness and deviant fantasies. Dominants were compared to other SM groups (submissives and versatiles) and to the comparison group on these measures. Dominants were found to have comparable cognitive empathy but lower levels of affective empathy when compared to other SM and comparison groups. A negative relationship was found between a measure of sadism and measures of cognitive and affective empathy in the dominant group. This suggested the possible presence of lower empathy in more 'extreme' dominants. Dominants showed the lowest rates of sexual fantasies of killing others, fantasies of force or coercion, use of masturbatory fantasies and cognitive rehearsal of fantasies and they did not differ from the comparison group on a measure of fantasy proneness. Submissives were found to be the most fantasy prone group. These findings have theoretical implications for current models of sexual sadism and empathy, and clinical implications for those working in forensic services or with SM practitioners.

Keywords

Sadomasochism, Empathy, Fantasy.

1. Introduction

There is a lack of solid theoretical and empirical research into sexual sadism and a lack of clarity in defining this concept (Kirsch & Becker, 2007). The term sadism was originally defined as ‘the experience of sexual, pleasurable sensations (including orgasm) produced by acts of cruelty...(and) may also consist of an innate desire to humiliate, hurt, wound or even destroy others’ (von Kraft-Ebing, 1886, p109). Sexual sadism is currently classified in the DSM-IV-TR as a paraphilia involving ‘recurrent, intense, sexually arousing fantasies, sexual urges, or behaviours involving acts (real not simulated) in which psychological or physical suffering (including humiliation) of the victim is sexually exciting to the person’ (American Psychiatric Association, 2000 p.574). The ICD-10 defines sadomasochism as a preference for sexual activity that involves bondage or the infliction of pain or humiliation (World Health Organisation, 1992). This definition has been criticised for combining sadism and masochism and for not distinguishing between consensual and non-consensual sexual behaviours (Reiersol & Skeid, 2006). The term sadism is also used to refer to Sadistic Personality Disorder (SPD), a diagnosis which was included in DSM-III-R under ‘Disorders Needing Further Study’ but has since been removed from the DSM-IV. SPD is characterised by the use of cruel, violent, demeaning and humiliating behaviour that is specifically not exhibited for sexual pleasure and includes a fascination with weapons, violence and torture (A.P.A., 1987).

Sexual sadism has been conceptualised as a continuum ranging in severity from consenting sadomasochistic (SM) practices on one end, to the torture and killing of non-consenting victims at the other (Kirsch & Becker, 2007). To date the majority of research into sadism has been carried out on offending populations sampling sexual murderers and offenders (see Marshall & Kennedy, 2003 for a review). However, many

individuals identify themselves as sadists (dominants), masochists (submissives), or a combination of both (versatiles), while strongly advocating only consensual sexual activities (Fedoroff, 2008). Within the SM community sadomasochism has been defined as 'a broad term which refers to an interest in giving or receiving intense stimulation, bondage, or the purposeful enacting of dominant and submissive roles, usually for sexual gratification' (Dancer, Kleinplatz & Moser, 2006, p82). A recent summary of SM theory and research found a lack of scientific studies researching SM behaviour and communities (Moser & Kleinplatz, 2006).

There are two main viewpoints of SM within the literature. Psychiatric and psychodynamic models view SM interests and behaviour as evidence of individual pathology or maladjustment and place emphasis on the formative role of abuse in the development of sadistic and masochistic interests and behaviours (Cross & Matheson, 2006). A second viewpoint explains SM in relation to the cultural and social context. Masochism is proposed to serve the function of 'escape-from-self awareness' whilst sadism bolsters the self concept by increasing feelings of power and control (Baumeister, 1988; Baumeister & Campbell, 1999). A third viewpoint emerging from the SM community itself explains SM as highly ritualised role play, which involves fantasy, is consensual, and is based on the exchange of power (Weinberg, 2006).

Recent internet-based research found that those who engage in SM behaviours had different personality traits to a comparison group, with a greater proportion of the SM group reporting experience of childhood abuse and greater levels of non-sexual sadism and masochism (Powls, 2006). However, rates of sadistic behaviours in general population are presently unknown, although a recent study found that 6.9% of 407 undergraduate students from the UK and Ireland considered themselves to be sadistic

(Davies & O'Meara, 2007). Therefore, further research is warranted in both SM and general populations.

There is an assumption in the literature that individuals involved in sexual sadism are lacking in empathy (Baumeister & Campbell, 1999; Chan & Heide, 2009). Empathy has been defined as “the ability to understand and share in another’s emotional state or context” (Cohen & Strayer, 1996, p988). Therefore, empathy involves both a cognitive component which refers to the ability to adopt the viewpoint of another, and an affective component. The affective component refers to the capacity to share in the emotional state of another or experience a similar emotional response (Jolliffe & Farrington, 2004). However, some authors have argued that empathy also includes communicative and relational elements and there have been calls to abandon a generalised or global view in favour of a multi-component view of empathy (Davis, 1983). The construct of empathy has been re-conceptualised as a process involving the stages of emotion recognition, perspective-taking (cognitive), emotion replication (affective) and response decision. The final stage refers to the observers decision whether to act or not on the basis of empathic feelings (Marshall, Hudson, Jones & Fernandez, 1995).

Empathy has been found to inhibit aggressive and antisocial behaviour (Miller & Eisenberg, 1988), and a recent meta-analysis found that low cognitive empathy was strongly related to offending, while low affective empathy was weakly related to offending. However, these results disappeared when socio-economic status and intelligence were controlled for (Jolliffe & Farrington, 2004). This suggested that differences in empathy may actually represent differences in intelligence or socio-economic status, or that empathy might mediate the relationship between these variables and offending (Lauterbach & Hosser, 2007). The role of empathy training is important

however, as it forms a critical component in 94% of treatment programs for sex offenders in North America. However, current programs emphasise the acquisition of cognitive aspects of empathy rather than helping offenders to evoke affective or emotional empathy (Covell & Scalora, 2002).

More recently it has been suggested that the presence of empathy (likely cognitive empathy), is essential for sexual sadists to truly enjoy their victims' pain and suffering and to achieve feelings of control and power (Covell & Scalora, 2002; Fox & Levin, 2005). Sexual sadists may not suffer from impairments in cognitive empathy but instead may lack the affective response to their victim's distress that is necessary for an empathic experience or they may experience a response that is positive in valence (Kirsch & Becker, 2007). Therefore, it appears likely that those who engage in the dominant SM role possess intact cognitive empathy, which enhances their awareness of the submissive partners' perspective and promotes sexual arousal and reinforcement.

A recent study tested the relationship between empathy and sadism and surprisingly found a moderate negative correlation between the concepts which suggested that the more sadistic one is the less empathic they are (O'Meara, 2006). However, the study had a number of methodological difficulties including sampling a predominately student population and using one measure of global empathy which did not consider cognitive and affective empathy in isolation. The author suggested that future research should incorporate a number of measures of empathy in order to get a clearer picture of the interrelations of the two concepts (O'Meara, 2006). There has been no research to date comparing levels of global, cognitive and affective empathy in SM and comparison groups. There has also been no research into the relationships between cognitive and affective empathy and a measure of sadism in the SM 'dominant' or sadistic population.

In addition there has also been no research to date investigating the best predictors of empathy. It has been suggested that there are links between empathy and mental health problems, specifically that individuals who are high in empathy and therefore sensitive to distress in others, are at a greater risk for depression and anxiety (O'Connor, Berry, Lewis, Mulherin & Crisostomo, 2007). It is therefore likely that factors such as anxiety, depression and sadism may significantly predict empathy over and above demographic factors such as gender and age.

Many authors have cited fantasy as a central mechanism in the development, maintenance and progression of sadistic behaviour (Brittain, 1970; Burgess, Hartman, Ressler, Douglas, & McCormack, 1986; MacCulloch, Snowden, Wood & Mills, 1983; Prentky et al, 1989). Fantasy was defined as 'an elaborate thought with great preoccupation, anchored with emotion and having its origins in daydreams' (Burgess et al 1986, p256). Sadistic fantasies were proposed to be maintained and reinforced through cognitive rehearsal and masturbation, and can result in 'behavioural try-outs' in some individuals (MacCulloch et al, 1983). The majority of theories point to the root of sadistic sexual fantasies in childhood trauma and abuse and were based on research with offending populations (Kirsch & Becker, 2007). More recently fantasy has also been identified as critical to consensual SM interactions (Weinberg, 2006). However, research into fantasy in non-offending populations has utilised predominately student samples to date (Donnelly & Fraser, 1998; Gray, Watt, Hassan & MacCulloch, 2003), and there has been little research investigating cognitive fantasy use and masturbatory reinforcement of fantasies in SM populations. Research in this area may add to existing models linking fantasy and sadomasochism.

While fantasy and daydreams are thought to be integral to healthy psychological and sexual functioning, it appears that certain individuals are more prone to fantasy and have been labelled 'fantasiers' (Merckelbach, Horselenberg & Muris, 2001). Fantasy proneness refers to a unique constellation of personality traits and experiences that 'coalesced around a deep, profound, and long standing involvement in fantasy and imagination' (Lynn & Rhue, 1988). As fantasies are universally experienced this appears to be an exaggeration of normal functioning (Leitenberg & Henning, 1995). There are two hypothesised developmental pathways to fantasy proneness: the first is through encouragement to fantasise from a significant adult in childhood; the second is by using fantasy as a coping mechanism for loneliness and isolation in childhood, or as a defensive function to escape from an aversive early life environment (Lynn & Rhue, 1988). The use of fantasy as a coping mechanism or means of escape links with the view of SM activities as a means of escape from self (Baumeister, 1988). More recently research has begun to establish links between fantasy proneness, psychopathology, dissociation and childhood abuse (Geraerts, Merckelbach, Jelicic, Smeets & van Heerden, 2006; Rauschenberger & Lynn, 1995). However, to date there has been no research examining levels of fantasy proneness in SM populations. Given the reported importance of fantasy use in SM interactions, the higher reported rates of childhood abuse in this population (Powls, 2006), and the view that SM serves the function of escaping from self awareness (Baumeister, 1988), it appears likely that SM groups may be more prone to fantasy use than other populations.

In their extensive review of sexual fantasy, Leitenberg and Henning (1995) explored the concept of 'deviant sexual fantasy' and its link to deviant behaviour. The underlying hypothesis was that deviant sexual arousal increased the likelihood of deviant sexual fantasy, which in turn increased the likelihood of deviant sexual behaviour (Leitenberg

& Henning, 1995). However, various studies have found high rates of deviant fantasy among non-offending populations. Crepault and Couture (1980) reported that between 15-30% of a non-offending male population reported sadistic fantasies, whilst Gray et al (2003) reported that sadistic fantasy or interest was present in almost half of their student sample.

The rates of deviant fantasies such as those related to killing and force are currently unstudied in SM populations however, concerns about stigmatisation and negative perceptions are common among the SM community (Weinberg, 2006). As a result this group may be more susceptible to socially desirable responding, which may bias the assessment of deviant fantasy in this population. There is also no research to date which examines the best predictors of fantasy-proneness. The existing literature would suggest factors such as childhood abuse (Lynn & Rhue, 1988), and mental health problems such as anxiety (Rauschenberger & Lynn, 1995), may significantly predict fantasy proneness over and above demographic factors such as age and gender.

Some research has started to make links between the roles of empathy and fantasy in sadism and SM populations (Kirsch & Becker, 2007). It has been suggested that frequent engagement in fantasies that dehumanise or objectify their victims may result in offenders perceiving their victims as dissimilar from themselves, further decreasing their affective empathy (Kirsch & Becker, 2007). Aggression is reported to be inhibited by perceived similarity between the aggressor and the victim (Marshall et al, 1995). Therefore empathy may inhibit the 'acting out' of sadistic fantasies in some individuals (Leitenberg & Henning, 1995).

The purpose of the current study was to design an internet based questionnaire and recruit an SM and a comparison sample to investigate empathy and fantasy in these populations. Previous research has successfully recruited large samples of SM practitioners using the internet (Brame, 1999; Powls, 2006). The use of anonymous questionnaires can provide valuable insights into subcultures where there may be a need for secrecy and the use of the internet allows for the recruitment of more diverse participants worldwide at no additional cost (Weinberg, 2006). Despite some reservations as to the generalisability of data collected in internet samples (Hewson, 2003), it has been suggested that internet samples are as representative of the general population as traditional sampling methods (Smith & Leigh, 1997). Finally, given the anonymity provided by the use of the internet, there is some evidence that this is associated with participants giving less socially desirable answers, which makes it an ideal method for researching sensitive topics such as deviant fantasy and sexuality (Joinson, 1999).

The study had a number of aims and hypotheses:

1.1. Aims of the study:

- To explore the role of empathy in sadomasochism. In particular to test if those with sadistic tendencies (dominants) demonstrate comparable levels of global and cognitive empathy but lower levels of affective empathy when compared to other SM and comparison groups.
- To explore the role of fantasy in sadomasochism. In particular to investigate if dominants or other SM groups are more fantasy-prone or report more deviant sexual fantasies than those in the comparison group.
- To examine the best predictors of fantasy-proneness and empathy in the SM and comparison population as a whole.

1.2 Hypotheses

The hypotheses of the study were:

Hypothesis 1: Dominants will score significantly lower than the comparison and other SM groups on affective empathy but not on cognitive or global empathy.

Hypothesis 2: SM participants (dominants, versatiles and submissives) will score higher than the comparison group on a measure of fantasy proneness.

Hypothesis 3: The degree of sadism will be positively associated with cognitive empathy and negatively associated with affective empathy in the dominant group

Hypothesis 4: There will be differences between the groups on self-reported rates of sexual fantasies and rehearsal.

2. METHODOLOGY

2.1. Design

The present study recruited a cross-sectional internet sample to complete an online questionnaire (see Appendix C) which was hosted on the website www.surveymonkey.com.

The Sheffield University Ethics Committee granted ethical approval and Research Governance and Sponsorship were provided by the University of Sheffield (see Appendix B, i and ii). The research adhered to the guidelines for ethical practice in conducting Psychological research online (British Psychological Society, 2007).

2.2. Participants

2082 participants were recruited to the study. Two approaches to recruitment of potential participants were used. First, a search was conducted for discussion forums and online communities for those with an interest in sadomasochism, sadism, violence or other related sexual interests. A number of search engines including 'Google.com', 'Yahoo.com', and the social networking site 'Facebook.com' were searched using the above search terms. The moderators of these groups and websites were then contacted to request permission to place advertisements and links to the online study on their website (see Appendix D). Over 50 such sites worldwide agreed to post links to the online study. Second, a similar advert (see Appendix E) was emailed to 23, 000 undergraduate and post-graduate students at the University of Sheffield via the University's email recruitment method. The email contained information about the study and provided a hyperlink to the questionnaire. It was intended that the second method of recruitment would provide the majority of a comparison sample of non SM practitioners.

In order for a participant to be included in the data analysis it was necessary that they completed all relevant questions. Of the 2082 respondents, 1401 participants aged 18 years and over completed the online questionnaire (see Figure 1). The sample consisted of 497 SM practitioners (35.5%) and 904 comparisons (64.5%). Table 1 displays a comparison of the main demographic features of these groups.

Chi square analyses between the groups revealed that the comparison group had significantly more females ($\chi^2 = 33.23$, $df = 1$, $p < .001$) and a larger proportion of 18-25 year olds ($\chi^2 = 282.41$, $df = 5$, $p < .001$) when compared to the SM group.

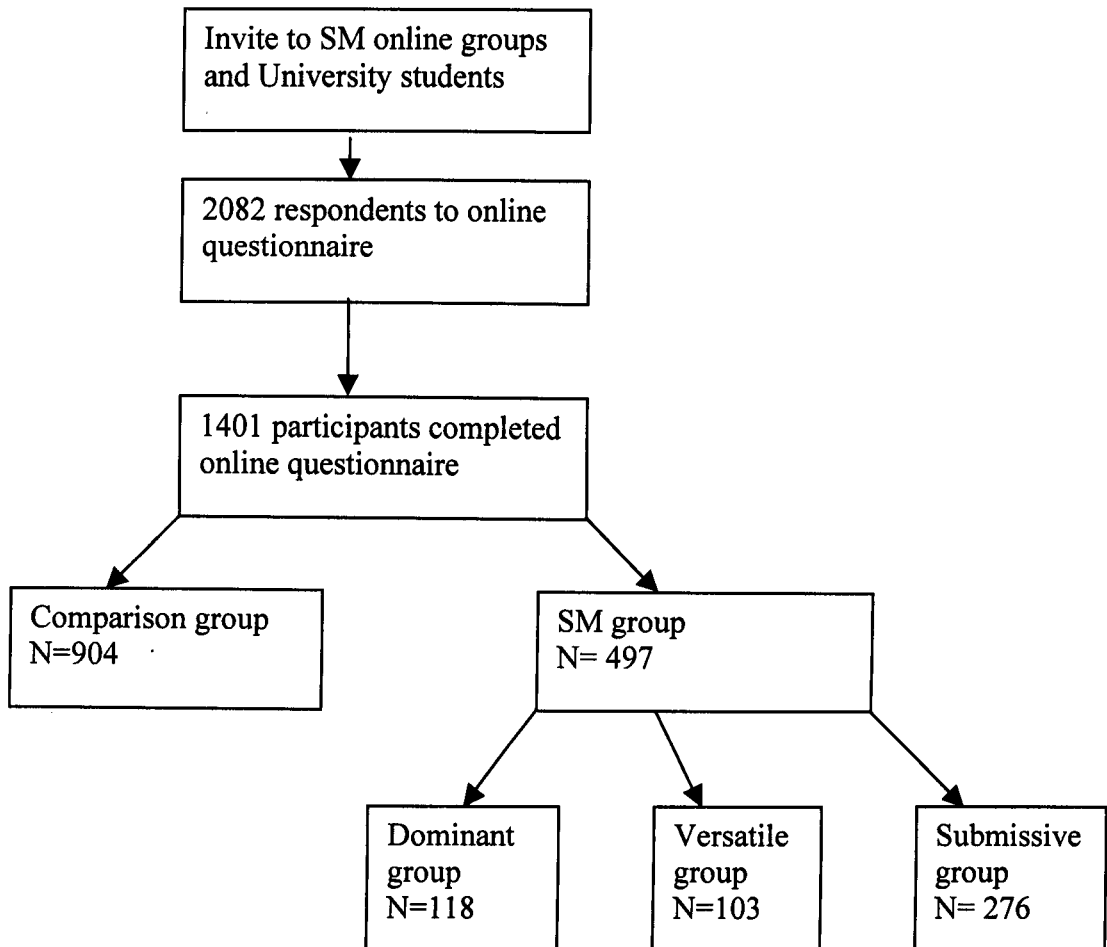
By contrast, the SM group was less skewed in terms of gender, age and educational level. However, proportionally more of the SM group reported offending behaviours ($\chi^2 = 32.84$ $df = 1$, $p < .001$), mental health problems ($\chi^2 = 91.41$, $df = 1$, $p < .001$), and childhood abuse ($\chi^2 = 65.95$, $df = 1$, $p < .001$) when compared to the comparison group. However, these differences may be due to the age differences in the groups.

Table 1 Demographic data for SM and Comparison Groups

		No of participants (% in brackets)	
		SM GROUP	Comparison group
Gender *	Male	230 (46.3%)	277 (30.6%)
	Female	267 (53.7%)	627 (69.4%)
Age *	18-25	164 (33.0%)	697 (77.1%)
	26-35	137 (27.6%)	124 (13.7%)
	36-45	109 (21.9%)	46 (5.1%)
	46-55	62 (12.5%)	24 (2.7%)
	56-65	18 (3.6%)	9 (1%)
	66+	7 (1.4%)	4 (0.4%)
Educational level *	No qualifications	11 (2.2%)	7 (0.8%)
	School leaver qualification e.g. Gcse's/O level	39 (7.8%)	15 (1.7%)
	Secondary level qualification e.g. A level	157 (31.6%)	495 (54.7%)
	Professional qualification	61 (12.3%)	20 (2.2%)
	University level Degree	158 (31.8%)	253 (28.0%)
	Post-graduate qualification	71 (14.3%)	112 (12.4%)
	MISSING DATA	0	2 (0.2%)
Sexual orientation *	Heterosexual	306 (61.5%)	788 (87.1%)
	Homosexual	29 (5.8%)	45 (4.9%)
	Bisexual	162 (32.6%)	66 (7.3%)
	MISSING DATA	1 (0.1%)	5 (0.7%)
Mental health problems *	Yes	207 (41.6%)	162 (17.9%)
	No	289 (58.3%)	738 (81.6%)
	Missing	1 (0.1%)	4 (0.5%)
Offending behaviour *	Yes	69 (13.9%)	45 (5%)
	No	428 (86.1%)	859 (95%)
Childhood abuse by parent/carer or other *	Yes	202 (40.6%)	183 (20.3%)

* p<.001

Figure 1: Flowchart of recruitment process



2.3. Measures

2.3.1. Demographics and sexual preference questionnaire (Powls, 2006) (see Appendix C, pages 3-8).

This measure contained a series of questions relating to the socio-demographics of the participants. These questions were designed to gather information about participants' age, ethnicity, education level, occupation, dominant sexuality, interest in sadomasochism, mental health difficulties, offending history and history of abuse.

2.3.2. *Fantasy proneness*: The Creative Experiences Questionnaire -CEQ,

(Merckelbach, Horselenberg & Muris, 2001) (see Appendix C, pages 9-14).

The CEQ is a brief 25-item self-report measure, with higher scores indicating higher levels of fantasy proneness. The authors of the CEQ have reported fairly good test-retest stability ($r=.95$), and adequate internal consistency (Cronbach's $\alpha=0.72$.) (Merckelbach et al, 2001). Internal consistency in this sample was also found to be adequate (Cronbach's $\alpha=0.76$). The CEQ has demonstrated good predictive and concurrent validity as it correlated well with closely related concepts such as absorption, dissociation and schizotypy (Merckelbach et al, 2001).

2.3.3. *Sexual fantasy questions (constructed by the author)* (see Appendix C, page 15).

These 4 questions were constructed by the author in order to ascertain the presence of any extreme sexual fantasies about killing or coercion, fantasy rehearsal and sexual reinforcement of fantasies.

2.3.4. *Empathy*: The Interpersonal Reactivity Index- IRI, (Davis, 1983), (see Appendix C, pages 16-21).

The IRI is 28-item self-report measure which consists of 4 7-item subscales. Each subscale measures a separate component of empathy (fantasy, perspective taking, personal distress and empathic concern). The Perspective-Taking (PT) scale measures cognitive empathy or the tendency to adopt the viewpoint of another person. The Empathic-Concern (EC) scale measures affective empathy or 'feelings of compassion and concern for unfortunate others' (Davis, 1983). The Fantasy scale (FS) measures the respondents' ability to transpose themselves into the feelings and actions of fictitious characters in books and plays. The Personal Distress (PD) scale measures self oriented feelings of personal anxiety and unease in tense interpersonal settings. Higher scores on

the IRI and the 4 subscales indicate higher levels of empathy. The IRI subscales have been shown to have sufficient internal reliability (alpha levels from 0.71 to 0.77) and test-retest reliability (from 0.62 to 0.71) (Davis, 1983). In the current study good internal consistency was found for the IRI total score (alpha =.85) and the 4 subscales (alphas of .78 to .83). However, only the Empathic Concern and Perspective taking subscales will be used in the analysis

2.3.5. The Empathy Quotient- EQ, (Baron-Cohen & Wheelwright, 2004), (see Appendix C, pages 22-33).

The EQ is a 60-item questionnaire which consists of 40 items relating to empathy and 20 'filler' items. This measure assesses empathy both on a cognitive and emotional level although attempts to separate items into purely affective and cognitive variables were abandoned by the authors. Scores on the EQ can range from 0 to 80 with higher scores indicating higher levels of empathy. The EQ was also found to have reasonable construct and external validity and its test-retest reliability was established at $r=.97$. The scale showed good internal consistency in the current study (alpha =.89).

2.3.6. *Sadism*: The Hurting Scale- HS (O' Meara, Davies & Barnes-Holmes, 2004) (see Appendix C, pages 34-35)

The Hurting Scale is a single factor scale that consists of 11 items (scored 0-3) all addressing hurting behaviours. It has been found to be a good predictor of sadism with a higher total score indicating an increased desire to hurt others. This scale has been found to have excellent internal consistency (Cronbach's Alpha of 0.91) (O'Meara, 2006). In the current study internal consistency was also excellent (Cronbach's alpha = 0.91).

2.3.7. Psychological functioning: The Hospital Anxiety and Depression Scale-HADS, (Zigmond & Snaith, 1983) (see Appendix C pages 36-39)

The HADS contains 14 items and is typically used as a screening measure to identify current levels of depression and anxiety. It has an internal consistency of .90 for depression and 0.93 for anxiety as measured by Cronbach's alpha. In this sample internal consistency was found to be lower but was still adequate (.80 for anxiety and .76 for depression).

2.4. Procedure

Participants were recruited to the study as outlined above. Interested participants used the hyperlinks provided to access the questionnaire. On page one of the questionnaire participants were instructed to read an information sheet (see Appendix C, page 1) which gave them information regarding the sensitive nature of the study, as well as indicating the estimated completion time. Participants were informed that participation was completely voluntary and that they could decline participation or withdraw from completing the questionnaire at any time by pressing the 'exit' button at the top of the page. Participants were also assured that all information was anonymous and would be kept confidentially. They were then required to confirm that they were 18 years or older and they wished to participate in the study before they could continue. Respondents who declined to participate were automatically taken to the closing information page of the study (See Appendix C, page 2).

Those who consented were then required to complete the following questionnaires in this order; the Demographic and Sexual preference questionnaire, the CEQ, Sexual fantasy questions, the IRI, the EQ, the Hurting Scale and the HADS (see Appendix C, pages 3-39). The wording and order of the original measures were maintained. For

certain sensitive questions such as those relating to childhood abuse, extra cautionary information was provided (see Appendix C, page 8) and participants were free to not respond to these questions. Upon completion of the questionnaire, respondents were presented with a thank you page and an email address for respondents to provide feedback (see Appendix C, page 40). They were then required to click 'submit' if they wished to make their data available for analysis. The questionnaire was made available for a period of 6 months.

2.5 Preparation for analysis

Respondent's data was downloaded from the 'SurveyMonkey' website on 20th January 2009 and prepared for analyses. Each participant's responses to the measures outlined above were scored in accordance with the recommended scoring criteria. This provided scores on the CEQ (0-25), the IRI (0-112) and 4 subscales the IRI: EC, PT, FS, PD (0-28), the EQ (0-80), the HS (0-33) and the HADS anxiety (0-21) depression (0-21). Each participant's response on the emotional, physical and sexual abuse items were coded (Yes=1, No=0) irrespective of who the abuser was.

For the purpose of analysis participants were grouped depending on how they responded to a categorical question (Do you have an interest in sadomasochism?). Participants who answered 'yes' then used self-selection to categorise themselves into 'exclusively dominant', 'mostly dominant', 'versatile', 'mostly submissive' or 'exclusively submissive' subgroups. Respondents who reported being mainly (N=55) or exclusively dominant (N=63) were then combined to form the Dominant or sadistic group (N=118), while those reporting to be mainly (N=136) or exclusively (N=140) submissive were combined to form the Submissive or masochistic group (N=276) in

line with previous research (Powls, 2006). The versatile group (acting in both dominant and submissive roles) contained 103 respondents.

2.6. Data analysis

Data were analysed using the Statistical Package for the Social Sciences (SPSS) version 14 (SPSS, 2005). Data were checked for normal distribution before conducting inferential statistics. This was assessed using histograms as a visual aid and by statistical analysis of skewness and kurtosis.

As outlined in Table 1, Chi square analyses found that the groups were significantly different in terms of age and gender and a number of other demographic variables. In order to adjust for the possible confounding effects on group differences, all statistical analyses were conducted controlling for the effects of gender and age. In addition, in order to manage Type II errors which can occur in larger sample sizes, the effect sizes for significant results were reported for all analyses.

One way Analysis of Variance (ANOVA) techniques were used to compare the 4 groups (Dominant, Versatile, Submissive, Comparison) on the various measures of empathy and fantasy proneness (Hypotheses 1 and 2). These analyses were repeated using 2 way Analysis of Covariance (ANCOVA) techniques using age as a covariate and gender as an additional independent variable in order to control for the effects of these variables. However, as no differences in the results or significance levels were found the obtained results from the 1 way ANOVA are reported for simplicity.

Partial Pearson's r correlations controlling for the effects of age and gender were used to assess the relationship between the Hurting Scale and measures of cognitive and

affective empathy in the dominant group (Hypothesis 3). Chi square analyses were used to explore the relationship between group membership and the presence of fantasies of killing, coercion, rehearsal of sexual activity and sexual reinforcement of fantasies (Hypothesis 4). Finally, Hierarchical Multiple Regression Analyses (MRA) were used to find the best predictors of empathy and fantasy proneness in this sample. Age and gender were entered in Block 1 of the analyses in order to control for their effects.

3. RESULTS

3.1. Tests of normality and transformations

All of the scales were assessed for normality using distribution curves and measures of skew and kurtosis. The majority of scales demonstrated a normal distribution. However, the Empathic Concern subscale of the IRI (EC-IRI) demonstrated a negative skew (-.825) in the distribution of scores (see Appendix F). The data was transformed by reversing the scores and then applying a square root transformation and was renamed Transformed Empathic Concern (TEC-IRI). The variable showed less skew (.001) and an improved distribution of scores. However, as a result of the transformation lower scores on the TEC-IRI now reflect higher levels of empathy, with higher scores reflecting lower levels of empathy.

The HADS depression scale showed a positive skew (1.28) in the distribution of the scores (see Appendix G), and the variable was transformed using a square root transformation. This variable was renamed Transformed HADS depression and showed an improved distribution of scores and reduced skew (-.126).

3.2. Results of between group analyses

Table 2 displays the mean scores for each of the 4 groups on the measures of empathy and fantasy proneness while Table 3 displays the intercorrelations between measures.

Table 2: Mean group scores (standard deviations) and published norms.

	IRI Total	Empathy Quotient	Perspective taking-IRI	Transformed Empathic Concern-IRI	Creative Experiences Questionnaire
Dominant	55.75 (13.86)	41.26(12.85)	17.02(5.42)	3.18 (.93)	8.89 (4.21)
Versatile	58.73 (13.7)	38.27(12.44)	16.35(5.14)	3.13 (.89)	9.45 (4.42)
Submissive	62.48 (14.94)	41.22(13.35)	16.75(5.72)	2.86 (.92)	10.21 (4.54)
Comparison	62.78 (14.06)	42.76(11.99)	16.52(5.20)	2.92 (.83)	8.42 (4.17)
Published Norms	None	46.2 (10.6)	16.68(4.72) Males 17.96(4.85) Females	None	7.4 (3.6)

Table 3: Intercorrelations between measures and subscales.

	IRI Total	PT-IRI	TEC-IRI	Fantasy Scale-IRI	Personal Distress-IRI	EQ	CEQ
IRI Total	1	.607	-.738	.709	.537	.424	.420
Perspective Taking-IRI	.607	1	-.479	.175	-.036	.515	.127
Transformed Empathic Concern-IRI	-.738	-.479	1	-.326	-.170	-.556	-.213
Fantasy Scale-IRI	.709	.175	-.326	1	.268	.163	.573
Personal Distress-IRI	.537	-.036	-.170	.268	1	-.098	.153
Empathy Quotient	.424	.515	-.556	.163	-.098	1	.114
Creative Experiences Questionnaire	.420	.127	-.213	.573	.153	.114	1

All correlations were significant at $p < 0.01$.

Hypothesis 1 : Dominants will score significantly lower than the comparison and other SM groups on affective empathy but not on cognitive or global empathy.

Global empathy

A one-way between groups analysis of variance (ANOVA) was conducted to explore the differences between dominants, versatiles, submissives and comparison groups on the IRI total score. There was a statistically significant difference at the $p < .001$ level in mean IRI scores for the 4 groups [$F(3, 1397) = 10.37, p = .000$]. The effect size (.02), calculated using eta squared indicated that the strength of the difference between the groups was small.

Post-hoc comparisons using Tukey HSD test indicated that the mean IRI score for the dominant group ($M = 55.75, SD = 13.86$) was significantly different from the comparison group ($M = 62.78, SD = 14.0$) and the submissive group ($M = 62.48, SD = 14.94$). The mean

IRI score for the versatile group ($M=58.73$, $SD=13.7$) was also significantly different from the comparison group. That is, the dominant group was lower on global empathy, compared to the comparison and submissive groups.

A one-way between groups ANOVA was conducted to explore the differences between dominants, versatile, submissives and comparison groups on the EQ. There was a statistically significant difference at the $p<.01$ level in mean EQ scores for the 4 groups [$F(3, 1397) = 4.77$, $p=.003$]. The effect size (eta squared = .01) indicated that the strength of the difference between the groups was small.

Post-hoc comparisons using Tukey HSD test indicated that the EQ score for the versatile group ($M= 38.27$, $SD=12.44$) was significantly different from the comparison group ($M= 42.76$, $SD=11.99$). That is, the versatile group was lower on global empathy, compared to the comparison group. There were no other significant differences between the groups.

Cognitive empathy

A one-way between groups ANOVA was conducted to explore the differences between dominants, versatile, submissives and comparison groups on the PT-IRI. There was no statistically significant differences between the 4 groups on the PT-IRI [$F(3, 1397) = .458$, $p=.712$]. That is, there were no differences between the 4 groups on cognitive empathy.

Affective empathy

A one-way between groups ANOVA was conducted to explore the differences between dominants, versatile, submissives and comparison groups on the TEC-IRI. There was a statistically significant difference at the $p<.001$ level in mean TEC-IRI scores for the 4

groups [$F(3, 1397) = 5.60, p = .001$]. The effect size (eta squared = .01) indicated that the strength of the difference between the groups was small.

Post-hoc comparisons using Tukey HSD test indicated that the mean TEC-IRI score for the dominant group ($M = 3.18, SD = .93$) was significantly different from the comparison group ($M = 2.92, SD = .83$) and the submissive group ($M = 2.86, SD = .92$). This indicates that the dominant group was lower on affective empathy, compared to the comparison group and submissive group. The mean TEC-IRI score for the versatile group ($M = 3.13, SD = .89$) was also significantly different from the submissive group. That is, the versatile group was lower on affective empathy when compared to the submissive group.

Hypothesis 2: SM participants (dominants, versatile and submissives) will score higher than the comparison group on a measure of fantasy proneness..

A one-way between groups ANOVA was conducted to explore the differences between dominant, versatile, submissive and comparison groups on the CEQ. There was a statistically significant difference at the $p < .001$ level in CEQ scores for the 4 groups. [$F(3, 1397) = 13.02, p = .000$]. The effect size (eta squared = .02) indicated that the strength of the difference between the groups was small.

Post-hoc comparisons using Tukey HSD test indicated that the mean CEQ score for the comparison group ($M = 8.42, SD = 4.17$) was significantly different from the submissive group ($M = 10.21, SD = 4.54$). The mean CEQ score for the dominant group ($M = 8.89, SD = 4.21$) was also significantly different from the submissive group. This indicates that the dominant and comparison groups were lower on fantasy proneness when compared to the submissive group.

3.3 Results of correlation analyses

Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity prior to conducting correlation analyses. Pearson's r correlations were conducted to explore the relationships whilst controlling for the effects of age and gender. The strength and significance of relationships between a measure of sadism and measures of cognitive and affective empathy in the dominant group are displayed in Table 4.

Hypothesis 3: The degree of sadism will be positively associated with cognitive empathy and negatively associated with affective empathy in the dominant group

Partial Pearson's r correlation was used to explore the relationship between the HS and PT-IRI in the dominant group. There was a medium negative correlation between the 2 variables in this group [$r = -.340, p < .01$]. That is, the higher the dominants' score on a measure of sadism, the lower their cognitive empathy. An inspection of the zero order correlation ($r = -.335, p < .01$) suggested that controlling for gender and age had very little effect on the strength of the relationship between these two variables. Furthermore, the Hurting Scale helped to explain 11.56% of the variance in respondents' scores on the PT-IRI.

Partial Pearson's r correlation was also used to explore the relationship between the HS and TEC-IRI in the dominant group. There was a small positive correlation between the 2 variables in this group [$r = .223, p < .01$]. That is, the higher the dominants' score on a measure of sadism, the lower their affective empathy. An inspection of the zero order correlation ($r = .243, p < .01$) suggested that controlling for gender and age had very little

effect on the strength of the relationship between these two variables. Furthermore, the Hurting Scale helped to explain 4.9% of the variance in respondents' scores on the TEC-IRI.

Table 4: Partial Pearson's correlations found in the Dominant group.

	PT-IRI	TEC-IRI
Hurting scale	-.340	.223
Significance p=	.000	.010

Hypothesis 4: There will be differences between the groups on self-reported rates of sexual fantasies and rehearsal.

Table 5 displays the self-reported rates of sexual fantasies about killing others, fantasies about using force or coercion with another person, the use of fantasies during masturbation and the cognitive rehearsal of sexual activity. Significant differences were found between the groups on all of these variables at $p < .001$ level. The versatile and submissive groups showed a pattern of higher frequencies for fantasies of killing others, fantasies or force or coercion, the use of fantasy during masturbation and cognitive rehearsal of sexual activity. The dominant and comparison groups showed lower frequencies for all of these variables.

Table 5: Reported rates of fantasy and the use of cognitive rehearsal by group.

	Comparison	Dominant	Versatile	Submissive	$\chi^2(df=3)$
Fantasies of killing others	2.9%	0.8%	7.8%	6.9%	16.3 **
Fantasies of force/coercion	12.4%	11%	37.9%	37%	112.3**
Masturbatory fantasies	46.2%	43.2%	84.5%	78.6%	133.1**
Rehearsal of sexual activity	35.5%	28.8%	46.6%	49.3%	24.5**

** $p < .001$

3.4 Multiple Regression Analyses

3.4.1. Prediction of fantasy proneness

A hierarchical multiple regression analysis (MRA) was carried out to find the best predictors of fantasy proneness in the sample as a whole (see Table 6). The CEQ was the outcome variable and age and gender were entered into 'Block 1' of the analyses in order to control for the effects of these variables.

Table 6: Results from a Hierarchical MRA to predict fantasy proneness

	Standardised β coefficients	% of unique variance accounted	R Square	R Square change	F Values
Step 1					
Age	.34				
Gender	-.15 **		.021	.021	14.59 **
Step 2					
Age	-.03	< 1 %			
Gender	-.06 *	< 1%			
IRI	.39 **	12.2%			
HS	.17 **	1.9%			
HADS ANX	.16 **	2.2%			
ABUSE	.14 **	1.7%			
SM INT	.10 **	< 1%	.304	.283	113.19 **
			.304		86.84 **

*** p<.01 ** p<.001**

The model containing the variables gender and age significantly predicted the CEQ score (F(2, 1398) 14.59 p<.001). However, the amount of variance accounted for by gender and age was small (2.1%). A further 5 predictors were then entered in 'Block 2' of the analysis and these included childhood abuse, HADS anxiety score, Hurting scale, SM interest and IRI score. This model was found to significantly predict the CEQ scores over and above model 1. The increase from model 1 to model 2 was significant

($F(5, 1393) = 113.19, p < .001$) and this model accounted for an additional 28.3 % of the variance (R square change .283). The model as a whole was found to account for 30.4% of the variance of the CEQ and to significantly predict the CEQ score ($F(7, 1393) = 86.84, p < .001$).

All of the predictors entered in the MRA were found to make unique contributions towards the prediction of fantasy proneness apart from age. The IRI was found to be the best single predictor of fantasy proneness uniquely accounting for 12.2% of the variability in the CEQ.

3.4.2. Prediction of empathy

A hierarchical multiple regression analysis was carried out to find the best predictors of empathy in the sample as a whole (see Table 7). The IRI was the outcome variable and age and gender were once again entered as 'Block 1' of the MRA to control for their effects.

Table 7: Results from a Hierarchical MRA to predict empathy-the IRI.

	Standardised β coefficients	% of unique variance accounted	R Square	R Square change	F Values
Step 1					
Age	-.03				
Gender	-.27 **		.075	.075 **	56.36 **
Step 2					
Age	-.01	< 1%			
Gender	-.09**	<1%			
CEQ	.38 **	12.3%			
HS	-.24 **	4.8%			
HADS ANX	.24 **	3.6%			
T HADS DEP	-.15 **	1.4%	.321	.246 **	126.29 **
			.321		109.71 **

** $p < .001$

The model containing the demographic variables significantly predicted the IRI score ($F(2, 1398) = 56.36, p < .001$). However, the amount of variance of the IRI accounted for jointly by gender and age was small (7.5%).

A further 4 predictors were then entered in 'Block 2' of the analysis and these included CEQ score, HADS anxiety score (HADS ANX), transformed HADS depression score and the Hurting Scale score. This model was found to significantly predict the IRI scores over and above model 1. The increase from model 1 to model 2 was significant ($F(4, 1394) = 126.29, p < .001$) and this model accounted for an additional 24.6% of the variance (R square change .246). The model as a whole was found to account for 32.1% of the variance of the IRI and to significantly predict the IRI score ($F(6, 1394) = 109.71, p < .001$).

Once again the only predictor that did not make a significant unique contribution was age. The CEQ was found to be the best single predictor of empathy uniquely accounting for 12.3% of the variability in the IRI. The HS and HADS ANX accounted for 4.8% and 3.6 % of the variance respectively.

4. Discussion.

This study aimed to examine the relationship between sadism, empathy and fantasy proneness using SM and comparison populations. There were a number of important findings.

4.1 Findings relating to empathy

There was a discrepancy on between group differences on two measures of total or 'global' empathy. Dominants scored significantly lower than the comparison and submissive groups on one measure of global empathy (the IRI). However, dominants' scores did not significantly differ from the comparison or other SM groups using another measure of global empathy (the EQ). Interestingly, scores for the versatile group were significantly lower than the comparison group on the EQ.

There are a number of possible explanations for the discrepancy in these findings. As there was also only a medium correlation between the two measures, it is possible that the two measures of empathy measured slightly different constructs. The authors of the EQ raised concerns that the IRI measured processes broader than empathy (Baron-Cohen & Wheelwright, 2004), and so the lack of a strong correlation between the 2 measures is not surprising. In addition, the EQ correlated well with the cognitive and the affective empathy subscales but correlated poorly with the fantasy and personal distress subscales of the IRI. This suggested that the EQ is a good measure of cognitive and affective empathy but not personal distress and fantasy as measured by the IRI. It is also possible that global empathy as measured by the IRI reflected group differences on one or more of its subscales.

Dominants were not found to differ significantly from the comparison or other SM groups on a measure of cognitive empathy (PT-IRI). This result challenges the traditional assumption that sexual sadists lack empathy or have impairments in perspective-taking (Chan & Heide, 2009). This finding adds support to recent suggestions that cognitive empathy is essential for individuals involved in sexual sadism, as it enhances their awareness of the victim's pain and suffering, which in turn promotes sexual arousal and sadistic reinforcement (Kirsch & Becker, 2007).

Dominants were found to score significantly higher on a transformed measure of affective empathy (TEC-IRI) than the comparison and submissive groups. This indicated that dominants displayed significantly lower levels of affective empathy when compared to comparison and other SM groups. This finding adds support to recent suggestions that individuals involved in sexual sadism have specific impairments in affective empathy (Kirsch & Becker, 2007). They appear to have the capacity to perspective-take however, they may be unable to share in the emotional state of another or experience a similar emotional response (Marshall et al, 1995).

This finding may offer a further explanation for the discrepancy between the findings in relation to global empathy. As a subscale, it is possible that the affective empathy score may be influencing the overall IRI score. The IRI was found to correlate better with the affective empathy than the cognitive empathy subscale. It is therefore possible that the findings in hypothesis 1a are reflecting group differences in affective empathy but concealing the lack of group differences in cognitive empathy. This may have also affected the results of previous research in this area and added support to the assumption that sadists lack empathy. It would therefore be more useful to consider the

concepts of cognitive and affective empathy separately rather than global empathy in future research.

Both cognitive and affective empathy were found to be negatively associated with a measure of sadism (the hurting scale) in the dominant group. This indicated that an increased desire to hurt others in the dominant group was correlated with lower cognitive and affective empathy. This finding was in line with previous research that found a negative correlation between a measure of global empathy (the EQ) and the Hurting scale (O' Meara, 2006). It is possible that this result may reflect the presence of a distinct subgroup of 'extreme' dominants who display a combination of SM behaviours and Sadistic Personality Disorder traits. Powls (2006) found that only a small percentage of SM dominants met the criteria for SPD and it is possible that this group is more similar to offender populations than the rest of the SM group.

Finally, a model to predict empathy in the SM and comparison population as a whole accounted for almost a third of the variance of the IRI. Interestingly, fantasy proneness was found to be the best predictor of empathy in this sample accounting for 12.3% of the variance of the IRI. Sadism as assessed by the Hurting Scale was the next best predictor. In addition, anxiety and depression as measured by the HADS were also found to significantly predict empathy in this population. This model suggests a link between the concepts of empathy and fantasy proneness. However, it is possible that it merely reflected the medium correlation (.420, $p < .001$) between the IRI and the CEQ which indicated a shared variance of 17.64% between the 2 measures.

4.2 Findings relating to fantasy and fantasy proneness

The submissive group scored significantly higher than the comparison group on a measure of fantasy proneness. However, the hypothesis that other SM groups (dominants and versatiles) would also differ significantly from the comparison group on this measure was not supported. The submissive group were therefore more fantasy prone than other SM participants and the comparison group. Research into fantasy proneness suggests links with experiences of childhood abuse, mental health problems and dissociation (Rauschenberger & Lynn, 1995). The submissive group reported the highest rates of childhood abuse (42.4%) and mental health problems (43.1%) when compared to comparisons and other SM groups within this study. These are comparable to rates found in previous research (Powls, 2006) and may offer support to the view of masochism as a means of escape from self awareness (Baumeister, 1988).

Another finding was that versatiles and submissives had the highest rates of sexual fantasies of killing others, fantasies of force and coercion, use of masturbatory fantasies and use of cognitive rehearsal of sexual activity. Interestingly, the dominant and comparison groups reported the lowest rates on these variables. These findings do not support models of sadism which propose that fantasies are maintained and reinforced by cognitive rehearsal and masturbation in sadists (MacCulloch et al, 1983). It is possible that dominants' need to fantasise may be reduced as they are more likely to act out these fantasies in consensual SM activity. However, given their reported rates were lower than the comparison group it is also possible that there was more dishonest or socially desirable answering in this group. It has been suggested that fantasy is stronger in those who are more introverted and therefore less likely to act out these fantasies (Lauterbach & Hossier, 2007), which may offer further explanation for these findings.

The findings of this study suggest that up to 37% of SM and comparison groups have fantasies of forcing, coercing or killing others. This is line with findings of previous research on non-offending populations (Crepault & Couture, 1980; Davies & O'Meara, 2007; Gray et al, 2003) and threatens the hypothesis that the presence of deviant fantasy increases the likelihood of offending behaviour (Leitenberg & Henning, 1995).

Finally, a model to predict fantasy-proneness in the SM and comparison population as a whole accounted for 30.4% of the variance of the CEQ. Interestingly, empathy as measured by the IRI score was found to be the best predictor of fantasy-proneness in this population. Sadism as assessed by the Hurting Scale and anxiety as measured by the HADS were found to also significantly predict fantasy proneness. Childhood abuse and an interest in SM were also found to be significant predictors. However, as with the model to predict empathy, it is possible that it is a reflection of the medium correlation between the CEQ and the IRI and the shared variance between these measures.

4.3 Limitations of the study

One of the limitations of the study was the use of online methodology to recruit the sample. As a result only individuals who had access to the internet could complete the questionnaire. In addition SM participants were recruited via online SM groups and communities and it is possible these individuals may represent a particular subset of SM practitioners. However, the comparison group was also recruited via the internet from non SM sites and through a University emailing system to try and ensure a comparable sample. Despite these sampling controls the comparison group was predominately female and aged 18-25. Although these variables were controlled for in the analyses it makes the findings difficult to generalise to other populations.

The study had a good response rate, however 32.7% of individuals who started the survey did not complete it. It is possible that the length of the questionnaire may have contributed to this drop out although completion time was pointed out both in the recruitment email and in the information sheet. The questionnaire was also set up so that it was compulsory to complete all of the questions in the main measures in order to prevent problems with missing data. However, this may have also contributed to the drop out rate.

Despite using a methodology which maintained anonymity, as with all research, it is possible that some of the results may be biased by denial or socially desirable answering. In addition, in order to adhere to ethical guidelines it was not compulsory for participants to respond to sensitive questions relating to childhood abuse. As a result the actual rates of childhood abuse may be higher than those reported. The questionnaire was posted on websites worldwide however, it was only available in the English language and therefore the generalisability of its results may be affected.

The decision to group the 'exclusively' and 'mainly dominant' together to form the dominant group and to group the 'exclusively' and 'mainly submissive' together to form the submissive group may be another limitation of the study. It is possible that information was lost as a result of this grouping as extremes and differences within these groups may have been concealed. Furthermore, despite finding highly significant differences in all but one of the ANOVA's, the effect sizes for the strength of these differences were found to be small. Due to the large sample size in this study it is important to interpret between group differences with caution in order to avoid Type II errors. However, the effect size for group differences in affective empathy was comparable with many studies reviewed in a recent meta-analysis (Jolliffe &

Farrington, 2004). In addition, despite a large sample size differences between the groups on a measure of cognitive empathy were not significant. Therefore, findings suggesting that dominants have lower affective empathy but comparable cognitive empathy to other groups can be interpreted with confidence.

Finally, as no previous research into the predictors of empathy and fantasy proneness in SM and comparison populations has been carried out, the Multiple Regression Analyses were purely exploratory in nature. As such further research is required in order to validate these predictors, particularly in light of the possibility that these models are merely reflecting the medium correlation between the measures of empathy and fantasy-proneness.

4.4 Theoretical implications of the study

The theoretical literature into sadism has largely assumed that sadists do not possess empathy for their victims (Chan & Heide, 2009). The results of this study suggest that dominants do not differ on cognitive empathy when compared to comparison and other SM groups. However, the findings of this study suggest that dominants may have deficits in affective empathy. This has implications for current theories of sadism and empathy. The study adds support to suggestions of abandoning the use of 'global' or generalised empathy as a concept and further research is needed into current multi-component models of empathy (Davis, 1981; Marshall et al, 1995). Future research should pay particular attention to the cognitive and affective stages of empathy and to the 'response decision' or the decision to act or not on the basis of these stages. This may also have implications for current theoretical models of offending.

This study adds to the evidence base by investigating into the role of fantasy in an SM population. The main theoretical models of sadism emphasise the formative role of childhood trauma or abuse in the development of sadistic interests and behaviour (MacCulloch et al, 1983, Burgess et al, 1986). However, it was found that over 59% of those reporting an interest in SM and 61% of those classifying themselves as dominant reported no history of childhood abuse which was in line with previous research (Powls, 2006). Therefore, the crucial role of abuse in the development of sadism and SM interest was not fully supported in this population. In addition, dominants and comparison groups were found to be the least fantasy prone and reported the least fantasies of killing, force, masturbatory fantasies and cognitive rehearsal of sexual activity. These results do not support influential models on the role of these mechanisms in sadism (MacCulloch et al, 1983, Burgess et al, 1986).

Taken together these findings raise some concern about the utility of theories arising from research in forensic populations with SM groups. Further investigation is needed into other pathways to development of sadistic fantasies and behaviour. Finally, further investigation is warranted into whether consensual SM activities should be removed from psychiatric definitions of sadism and masochism (Reiersol & Skeid, 2006).

4.5 Clinical implications of the study

The results of this study may have implications for clinicians working in forensic services. Empathy training forms a critical component in many offender treatment programs as there is a general assumption that an increase in the ability to empathise will reduce the risk of re-offending (Joliffe & Farrington, 2004). However, current programs have been found to emphasise the acquisition of cognitive aspects of empathy (Covell & Scalora, 2002). The results of this study suggest that sadists may have

comparable cognitive empathy when compared to other SM and comparison groups. It is therefore possible that treatment programs that aim to enhance cognitive empathy skills may actually increase offending by improving the offenders' awareness of the victim's pain and suffering and promoting further arousal and sadistic reinforcement (Kirsch & Becker, 2007). The results of the study suggest that sadists may have impairments in affective empathy and so interventions with this population may need to focus on helping offenders develop affective empathy.

The findings of this study confirmed that 'deviant' fantasies of forcing, coercing or killing others were present in up to 37% of non-offending consensual SM groups and comparison groups. It is important for clinicians to consider whether such fantasies are in any way linked to deviant behaviour and to include the functions of fantasy in any formulation or risk assessment. These fantasies may serve many functions for individuals including affect regulation, escape, control and maintenance or enhancement of sexual arousal (Gee, Ward & Eccleston, 2003). Clinicians should also recognise that for some individuals deviant fantasising may have its roots in childhood trauma and may be a long-term coping strategy. Any interventions to reduce engagement in sadistic fantasising may increase feelings of anger, shame and loss of control in clients and need to be carefully planned and monitored (Kirsch & Becker, 2007).

4.6. Future research

Given the dearth of research in this area, any investigations would be considered beneficial to the development of theory and practice (Kirsch & Becker, 2007). Further research is required to investigate the links between sadism, fantasy-proneness and empathy in SM and more diverse populations and to consider group differences in these concepts. However, given the difficulties found with the construct of 'global' empathy

in this study, it may be more useful to consider cognitive and affective empathy as two separate but linked concepts. Further research is also required into the efficacy of empathy training with sadistic offenders. The multiple regression analyses in this study offered some tentative support for the links between the concepts of empathy and fantasy proneness. However, further research is needed to investigate these predictors in offending and non-offending populations.

Given the findings that dominants along with the comparison group had the lowest rates of fantasies, cognitive rehearsal and masturbatory reinforcement of fantasies, research is required to investigate the utility of current models of sadism with SM populations. The current definitions of sexual sadism (A.P.A., 2000) and sadomasochism (WHO, 1992) may require revision and there have already been calls for the removal of consensual SM activities from psychiatric definitions (Reiserol & Skeid, 2006). In light of the finding that sadistic fantasies were present in up to 37% of non-offending SM and comparison groups, more research is required into the factors that lead to the 'acting out' of sadistic or deviant fantasies. It is possible that different pathways to the translation of fantasy into action would be present in consensual SM and sadistic offenders. The impact of additional factors such as guilt and shame on this process also require investigation (Baumeister & Campbell, 1999).

Finally, further research is required to investigate the proposed links between trauma, abuse, dissociation and fantasy proneness. Alternative pathways to the development of sadistic interest or fantasy-proneness are under researched and therefore warrant investigation. This may challenge some of the traditional psychiatric and psychodynamic assumptions about SM and give further insight into the functions served by SM.

4.7 Conclusions

To conclude, the present study examined the relationship between sadism, empathy and fantasy using an internet sample of SM practitioners and a comparison sample. The main findings relating to empathy were that dominants were found to have comparable cognitive empathy but lower affective empathy when compared to other groups although effect sizes were small. A discrepancy in the findings relating to global empathy suggests that global empathy as measured by the IRI may reflect group differences on some of its subscales while concealing group differences on others. A negative relationship was found between a measure of sadism and cognitive and affective empathy in the dominant group which suggests the possibility of lower cognitive and affective empathy in more 'extreme' dominants who display a combination of SM behaviour and SPD. Finally, a model to predict empathy in the group as a whole accounted for almost a third of the variance with a measure of fantasy-proneness being identified as the single best predictor of empathy in this sample.

In relation to fantasy the findings suggested that the dominant group did not differ significantly from the comparison group on a measure of fantasy-proneness. Dominant and comparison groups had the lowest rates of sexual fantasies of killing others, fantasies of force or coercion, use of masturbatory fantasies and cognitive rehearsal of fantasies when compared to other SM groups. Submissives were found to be the most fantasy-prone and this may link with the view of masochism as a means of escape from self awareness. The study also found evidence of the presence of deviant fantasies in non-offending SM and comparison groups. Finally, a model to predict fantasy proneness accounted for 30.4% of the variance and empathy was found to be the best single predictor of fantasy proneness in this sample. These findings suggest links between the concepts of empathy and fantasy-proneness in sadism and have theoretical and clinical implications all of which require further investigation.

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APPENDIX A

- i) Journal approval letter
- ii) Instructions to Authors: *Aggression and Violent Behaviour*
- iii) Instructions to Authors: *Journal of Forensic Psychiatry and Psychology*



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26 June 2009

Angela Clancy
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Dear Angela

I am writing to indicate our approval of the journal(s) you have nominated for publishing work contained in your research thesis.

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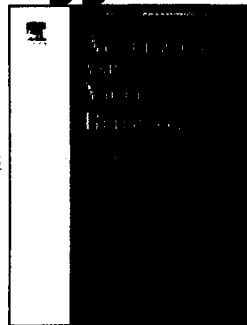
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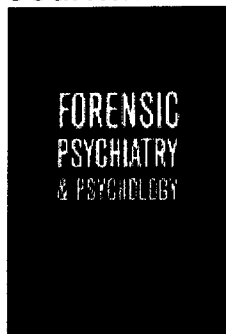
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Journal Details



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Instructions for Authors

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Electronic submissions should be produced using a standard word processing program, such as MSWORD

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APPENDIX B

- i) Confirmation of Ethical Approval: *Psychology Department Ethics Sub-Committee*
- ii) Confirmation of Governance Approval: *University of Sheffield Research Governance*

Date: Wed, 18 Jun 2008 14:30:07 +0100

From: Paschal Sheeran <p.sheeran@sheffield.ac.uk>

To: pcp06ac@sheffield.ac.uk

Cc: Jason Davies <Jason.Davies@swansea-tr.wales.nhs.uk>, Josie Levick <j.levick@sheffield.ac.uk>

Subject: Ethics of "Roles of empathy and fantasy in sadism and sadomasochism"

Dear Angela:

Thank you for your submission to the Department of Psychology Ethics Sub-Committee ("Roles of empathy and fantasy in sadism and sadomasochism"). I apologise for the delay in processing your form. This was caused, first, by my absence from the department on Parental Leave, and second, by the onset of undergraduate examination marking.

The committee has now had the opportunity to consider your proposal. We find that the research design and procedures conform to the Ethics Guidelines of the British Psychological Society.

I am therefore pleased to inform you that the ethics of your research are approved.

Sincerely,
Professor Paschal Sheeran
/Chair, Department of Psychology Ethics Sub-Committee (DESC)/

--
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Telephone: 0114 2226650
Fax: 0114 2226610
Email: c.harrison@sheffield.ac.uk
Please address any correspondence to Ms. Christie
Harrison, Research Support Officer

12/05/08

To: Research Governance Office

Dear Sir/Madam,

RE: Confirmation of Scientific Approval and Indemnity of enclosed Research Project

Project title: The roles of empathy and fantasy in sadism and sadomasochism. A quantitative internet based study.

Investigators: Angela Clancy (DClin Psy Trainee, University of Sheffield); Dr Jason Davies (Academic Supervisor).

I write to confirm that the enclosed proposal forms part of the educational requirements for the Doctoral Clinical Psychology Qualification (DClin Psy) run by the Clinical Psychology Unit, University of Sheffield.

Three independent reviewers appointed by the Clinical Psychology Unit Research Sub-committee have scientifically reviewed it.

I can confirm that all necessary amendments have been made to the satisfaction of the reviewers, who are now happy that the proposed study is of sound scientific quality. Consequently, the University will also indemnify it, and would be happy to act as research sponsor once ethical approval has been gained.

Given the above, I would remind you that the Unit already has an agreement with your office to exempt this proposal from further scientific review. However, if you require any further information, please do not hesitate to contact me.

Yours sincerely

Dr. Zaffer Iqbal
Director of Research Training

Cc. Angela Clancy, Dr Jason Davies

APPENDIX C

Online questionnaire

1. Study information

You are invited to participate in a research study. Please read the following information carefully.

What is the study about?

This questionnaire is for a doctoral research study looking at sexual interests, beliefs and lifestyle. I am interested in recruiting participants with a wide range of sexual interests and beliefs. Some of the questions are of a sensitive and sexual nature.

Do I have to take part?

There is no obligation to take part.

Will my answers be anonymous?

All answers are completely anonymous and you will not be asked for your name or contact details. Your responses will be treated with the strictest of confidence.

How long will it take me to complete?

It will take about 20-25 minutes to complete.

What age do I need to be to complete this questionnaire?

You can volunteer if you are over 18.

Can I withdraw from the study after I have started to complete the questionnaire?

You can withdraw from the study at any time by clicking the 'exit tab', and your data will be deleted.

What should I do if I become distressed completing this questionnaire?

If you require support regarding any of the issues covered by the questionnaire please contact your family doctor.

Will I be able to see the results of the study once it has been completed?

The results of the study will be made available on this website from August 2009. No individual feedback will be available as all responses are anonymous.

Thank you very much for your time. Should you wish to comment in any way on the research please contact me via email at efresearch@sheffield.ac.uk

Please tick one of the following boxes to continue

- Yes I consent to participate by completing the questionnaire and I am aged 18 years or older.
- No, I do not consent to participate in the questionnaire

2. Closing information (for those who do not consent to participate)

Thank you for your time

3.

In this section you will be asked some questions about yourself and your sexual preferences

gender

- male
- female

Age

- 18-25
- 26-35
- 36-45
- 46-55
- 56-65
- 66+

What is your occupation?

In which country do you live?

In which country were you born?

4.

How would you describe your ethnic background?

Please indicate the highest level of education that you have achieved

- No qualifications
- School leaver's qualification (e.g O Levels/GCSE's)
- Secondary level education qualification (e.g A Level)
- Professional qualification (e.g. Nursing)
- University or College degree
- Post-graduate degree (e.g PhD)

Have you ever been in trouble with the law?

- Yes
- No

if yes, please indicate the nature of the offence(s)

- Violence
- Sexual offence
- Arson
- other

Other (please specify)

5.

Have you ever been treated for mental health problems?

yes

no

If yes please indicate what problem(s) you sought help for

Depression

Anxiety

Schizophrenia/psychosis

Personality Disorder

other

Other (please specify)

How would you describe your dominant sexuality?

Heterosexual

Homosexual

Bisexual

Do you have an interest in sadomasochism?

Yes

No

6.

How often have you engaged in SM activity?

- Never
- 1-2 times
- 3-5 times
- 6-10 times
- 11-20 times
- more than 20 times

7.

What role do you take in SM encounters?

- Exclusively dominant
- Mainly dominant
- Versatile
- Mainly submissive
- Exclusively submissive

8.

PLEASE NOTE THE FOLLOWING QUESTIONS ARE VERY SENSITIVE IN NATURE

When you were a child would you say that you were

- Emotionally abused by a parent/carer
- Physically abused by a parent/carer
- Sexually abused by a parent/carer
- Neglected by a parent/carer

With the exception of your parents/carers would you say that you were

- Physically abused as a child
- Sexually abused as a child
- Emotionally abused as child

9.

In this section you will be asked some questions about experiences you may have had both as a child and as an adult

As a child, I thought that the dolls, teddy bears, and stuffed animals that I played with were living creatures

- yes
- no

As a child, I strongly believed in the existence of dwarfs, elves, and other fairy tale figures

- yes
- no

As a child, I had my own make believe friend or animal

- yes
- no

As a child, I could very easily identify with the main character of a story and/or a movie

- yes
- no

10.

As a child, I sometimes had the feeling that I was someone else (e.g a princess, an orphan etc)

yes

no

As a child, I was encouraged by adults (parents, grandparents, brothers, sisters) to fully indulge myself in my fantasies and daydreams

yes

no

As a child, I often felt lonely

yes

no

As a child, I devoted my time to playing a musical instrument, dancing, acting, and/or drawing.

yes

no

11.

I spend more than half of the day (daytime) fantasizing or daydreaming

yes

no

Many of my friends and/or relatives do not know that I have such detailed fantasies

yes

no

Many of my fantasies have a realistic intensity

yes

no

Many of my fantasies are often just as lively as a good movie

yes

no

12.

I often confuse fantasies with real memories

yes

no

I am never bored because I start fantasizing when things get boring

yes

no

Sometimes I act as if I am somebody else and I completely identify with that role

yes

no

When I recall childhood, I have very vivid and lively memories

yes

no

13.

I can recall many occurrences before the age of three

yes

no

When I perceive violence on television, I get so into it that I get really upset

yes

no

When I think of something cold I actually get cold

yes

no

When I imagine I have eaten rotten food, I really get nauseous

yes

no

14.

I often have the feeling that I can predict things that are bound to happen in the future

- yes
- no

I often have the experience of thinking of someone and soon afterwards that particular person calls or shows up

- yes
- no

I sometimes feel that I have had an out of body experience

- yes
- no

When I sing or write about something, I sometimes have the feeling that someone or something outside myself directs me

- yes
- no

During my life, I have had intense religious experiences which influenced me in a very strong manner

- yes
- no

15.

I sometimes have sexual fantasies about killing other people

- yes
- no

I often fantasize about coercing or forcing another person into doing things

- yes
- no

I rehearse sexual activity in my mind before carrying it out

- yes
- no

I have fantasies that I regularly masturbate to

- yes
- no

16.

The following statements inquire about your thought and feelings in a variety of situations.

Read each item carefully and tick to what extent you feel the statement is NOT AT LIKE ME or EXTREMELY LIKE ME

	Not at all like me	A little bit like me	Moderately like me	Quite a bit like me	Extremely like me
I daydream and fantasize, with some regularity, about things that might happen to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often have tender, concerned feelings for people less fortunate than me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sometimes find it difficult to see things from the "other guy's" point of view.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sometimes I don't feel very sorry for other people when they are having problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I really get involved with the feelings of the characters in a novel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Read each item carefully and tick to what extent you feel the statement is NOT AT LIKE ME or EXTREMELY LIKE ME

	Not at all like me	A little bit like me	Moderately like me	Quite a bit like me	Extremely like me
In emergency situations, I feel apprehensive and ill-at-ease.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to look at everybody's side of a disagreement before I make a decision.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I see someone being taken advantage of, I feel kind of protective towards them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sometimes feel helpless when I am in the middle of a very emotional situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Read each item carefully and tick to what extent you feel the statement is NOT AT LIKE ME or EXTREMELY LIKE ME

	Not at all like me	A little bit like me	Moderately like me	Quite a bit like me	Extremely like me
I sometimes try to understand my friends better by imagining how things look from their perspective.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming extremely involved in a good book or movie is somewhat rare for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I see someone get hurt, I tend to remain calm.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other people's misfortunes do not usually disturb me a great deal.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Read each item carefully and tick to what extent you feel the statement is NOT AT LIKE ME or EXTREMELY LIKE ME

	Not at all like me	A little bit like me	Moderately like me	Quite a bit like me	Extremely like me
After seeing a play or movie, I have felt as though I were one of the characters.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being in a tense emotional situation scares me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I see someone being treated unfairly, I sometimes don't feel very much pity for them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am usually pretty effective in dealing with emergencies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am often quite touched by things that I see happen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Read each item carefully and tick to what extent you feel the statement is NOT AT LIKE ME or EXTREMELY LIKE ME

	Not at all like me	A little bit like me	Moderately like me	Quite a bit like me	Extremely like me
I believe that there are two sides to every question and try to look at them both.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would describe myself as a pretty soft-hearted person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I watch a good movie, I can very easily put myself in the place of a leading character.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tend to lose control during emergencies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I'm upset at someone, I usually try to "put myself in his shoes" for a while.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Read each item carefully and tick to what extent you feel the statement is NOT AT LIKE ME or EXTREMELY LIKE ME

	Not at all like me	A little bit like me	Moderately like me	Quite a bit like me	Extremely like me
When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I see someone who badly needs help in an emergency, I go to pieces.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Before criticizing somebody, I try to imagine how I would feel if I were in their place.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22.

Please read each of the following statements very carefully and rate how strongly you agree or disagree with them by selecting your answer. There are no right or wrong answers, or trick questions

Please select one answer for each statement

	Definitely agree	Slightly agree	Slightly disagree	Definitely disagree
I can easily tell if someone else wants to enter a conversation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prefer animals to humans.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to keep up with the current trends and fashions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find it difficult to explain to others things that I understand easily, when they don't understand it first time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I dream most nights.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23.

Please select one answer for each statement

	Definitely agree	Slightly agree	Slightly disagree	Definitely disagree
I really enjoy caring for other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to solve my own problems rather than discussing them with others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find it hard to know what to do in a social situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am at my best first thing in the morning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People often tell me that I went too far in driving my point home in a discussion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24.

Please select one answer for each statement

	Definitely agree	Slightly agree	Slightly disagree	Definitely disagree
It doesn't bother me too much if I am late meeting a friend.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friendships and relationships are just too difficult, so I tend not to bother with them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would never break a law, no matter how minor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often find it difficult to judge if something is rude or polite.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In a conversation, I tend to focus on my own thoughts rather than on what my listener might be thinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

25.

Please select one answer for each statement

	Definitely agree	Slightly agree	Slightly disagree	Definitely disagree
I prefer practical jokes to verbal humour.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I live life for today rather than the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I was a child, I enjoyed cutting up worms to see what would happen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can pick up quickly if someone says one thing but means another.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tend to have very strong opinions about morality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26.

Please select one answer for each statement

	Definitely agree	Slightly agree	Slightly disagree	Definitely disagree
It is hard for me to see why some things upset people so much.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find it easy to put myself in somebody else's shoes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that good manners are the most important thing a parent can teach their child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to do things on the spur of the moment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am good at predicting how someone will feel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

27.

Please select one answer for each statement

	Definitely agree	Slightly agree	Slightly disagree	Definitely disagree
I am quick to spot when someone in a group is feeling awkward or uncomfortable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I say something that someone else is offended by, I think that that's their problem, not mine.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If anyone asked me if I liked their haircut, I would reply truthfully, even if I didn't like it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can't always see why someone should have felt offended by a remark.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People often tell me that I am very unpredictable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

28.

Please select one answer for each statement

	Definitely agree	Slightly agree	Slightly disagree	Definitely disagree
I enjoy being the centre of attention at any social gathering.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seeing people cry doesn't really upset me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoy having discussions about politics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am very blunt, which some people take to be rudeness, even though this is unintentional.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't tend to find social situations confusing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please select one answer for each statement

	Definitely agree	Slightly agree	Slightly disagree	Definitely disagree
Other people tell me I am good at understanding how they are feeling and what they are thinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I talk to people, I tend to talk about their experiences rather than my own.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It upsets me to see an animal in pain.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to make decisions without being influenced by people's feelings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can't relax until I have done everything I had planned to do that day.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

30.

Please select one answer for each statement

	Definitely agree	Slightly agree	Slightly disagree	Definitely disagree
I can easily tell if someone else is interested or bored with what I am saying.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I get upset if I see people suffering on news programmes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends usually talk to me about their problems as they say that I am very understanding.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can sense if I am intruding, even if the other person doesn't tell me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often start new hobbies but quickly become bored with them and move on to something else.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

31.

Please select one answer for each statement

	Definitely agree	Slightly agree	Slightly disagree	Definitely disagree
People sometimes tell me that I have gone too far with teasing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be too nervous to go on a big roller coaster.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other people often say that I am insensitive, though I don't always see why.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I see a stranger in a group, I think that it is up to them to make an effort to join in.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually stay emotionally detached when watching a film.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

32.

Please select one answer for each statement

	Definitely agree	Slightly agree	Slightly disagree	Definitely disagree
I like to be very organized in day-to-day life and often make lists of the chores I have to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can tune in to how someone else feels rapidly and intuitively.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't like to take risks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can easily work out what another person might want to talk about.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can tell if someone is masking their true emotion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

33.

Please select one answer for each statement

	Definitely agree	Slightly agree	Slightly disagree	Definitely disagree
Before making a decision I always weigh up the pros and cons.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't consciously work out the rules of social situations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am good at predicting what someone will do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tend to get emotionally involved with a friend's problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can usually appreciate the other person's viewpoint, even if I don't agree with it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

34.

For each of the following items, please use the rating scale to indicate how well the statement describes you as a person

	strongly agree	agree	disagree	strongly disagree
I am fascinated by violence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hurting people would be exciting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People would enjoy hurting others if they gave it a go	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have hurt people because I could	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wouldn't intentionally hurt anyone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have hurt people for my own enjoyment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

35.

For each of the following items, please use the rating scale to indicate how well the statement describes you as a person

	strongly agree	agree	disagree	strongly disagree
I have humiliated others to keep them in line	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would enjoy hurting someone physically, sexually or emotionally	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoy seeing people hurt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have fantasies which involve hurting people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sometimes I get so angry I want to hurt people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

36.

I feel tense or 'wound up'

- most of the time
- a lot of the time
- from time to time, occasionally
- not at all

I still enjoy the things I used to enjoy

- definitely as much
- Not quite so much
- Only a little
- Hardly at all

I get a sort of frightened feeling as if something awful is about to happen

- Very definitely and quite badly
- Yes, but not too badly
- A little, but it doesn't worry me
- Not at all

I can laugh and see the funny side of things

- As much as I always could
- Not quite so much now
- Definitely not so much now
- Not at all

37.

Worrying thoughts go through my mind

- A great deal of the time
- A lot of the time
- From time to time, but not too often
- Only occasionally

I feel cheerful

- Not at all
- Not often
- Sometimes
- Most of the time

I can sit at ease and feel relaxed:

- Definitely
- Usually
- Not Often
- Not at all

I feel as if I am slowed down:

- Nearly all the time
- Very often
- Sometimes
- Not at all

I get a sort of frightened feeling like 'butterflies' in the stomach

- Not at all
- Occasionally
- Quite Often
- Very Often

I have lost interest in my appearance

- Definitely
- I don't take as much care as I should
- I may not take quite as much care
- I take just as much care as ever

I feel restless as I have to be on the move:

- Very much indeed
- Quite a lot
- Not very much
- Not at all

I look forward with enjoyment to things

- As much as I ever did
- Rather less than I used to
- Definitely less than I used to
- Hardly at all

39.

I get sudden feelings of panic

- Very often indeed
- Quite often
- Not very often
- Not at all

I can enjoy a good book or radio or TV program

- Often
- Sometimes
- Not often
- Very seldom

40. Closing information

Thank you for taking the time to complete this questionnaire. The results of the study will be made available on this website from August 2009.

If any of the issues discussed have caused you distress, and you need to talk to somebody, please be advised to contact your G.P./family doctor for advice. If you wish to make any comments or complaints about the study these may be addressed via email to (efresearch@sheffield.ac.uk).

Please submit the questionnaire by selecting the 'submit'. If you wish to withdraw your questionnaire click the 'exit' button. Once the data is submitted it will no longer be possible to withdraw from the study

APPENDIX D

Recruitment email to moderators of SM/sexual interest websites and forums

Hello

I am a Trainee Clinical Psychologist at the University of Sheffield and I am conducting research into sexuality and interests as part of my doctoral research thesis.

I am looking for volunteers to take part in an on-line questionnaire about sexual behaviour, interests, and lifestyle and I am interested in recruiting participants with a wide range of sexual interests. I wondered whether it might be possible to place a link to this questionnaire on your website.

The questionnaire is completely anonymous, and will take about 20-25 minutes to complete. The results of the research will be made available on the same website from August 2009. If you would like to see the questionnaire prior to making a decision it is accessible via the web address below. Please feel free to contact me via this email address for further information (efresearch@sheffield.ac.uk)

I look forward to hearing from you

Link to website and questionnaire:

http://www.surveymonkey.com/s.aspx?sm=Ek_2fMOUNjzSNNUyYF8pwzDg_3d_3d

(efresearch@sheffield.ac.uk)

APPENDIX E

Recruitment email to University students/non SM sites.

Hello

I am a Trainee Clinical Psychologist at the University of Sheffield, UK and I am conducting research into sexuality and interests as part of my doctoral research thesis.

I am looking for volunteers to take part in an on-line questionnaire about sexual behaviour, interests and lifestyle and I am interested in recruiting a wide range of participants.

The questionnaire will take 20-25 minutes to complete and it is completely anonymous.

The questionnaire can be accessed by clicking on the link below.

The results of the study will be made available on the same website from August 2009.

I would be very grateful to anyone who takes the time to participate.

Efresearcher

Link to website and questionnaire:

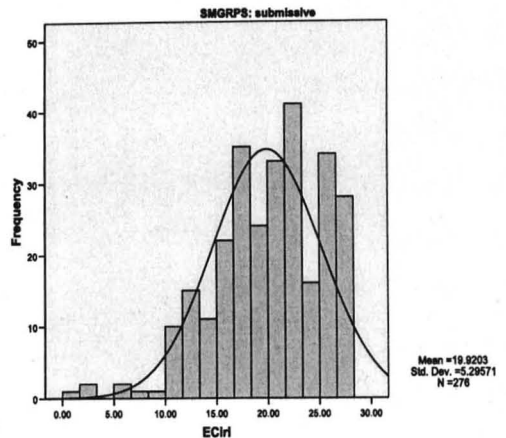
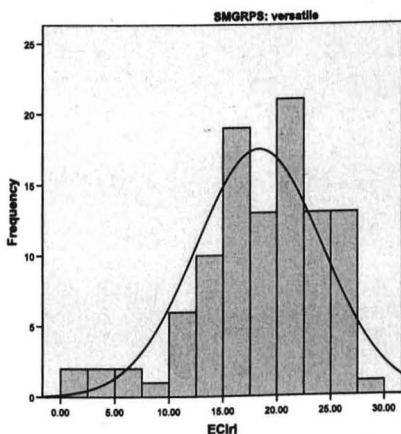
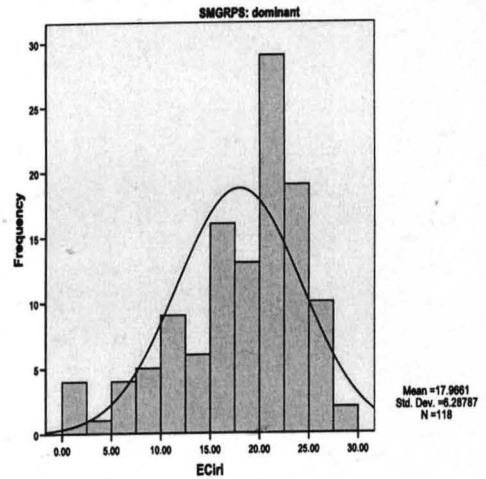
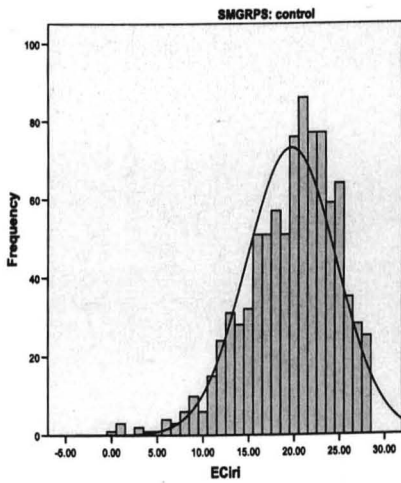
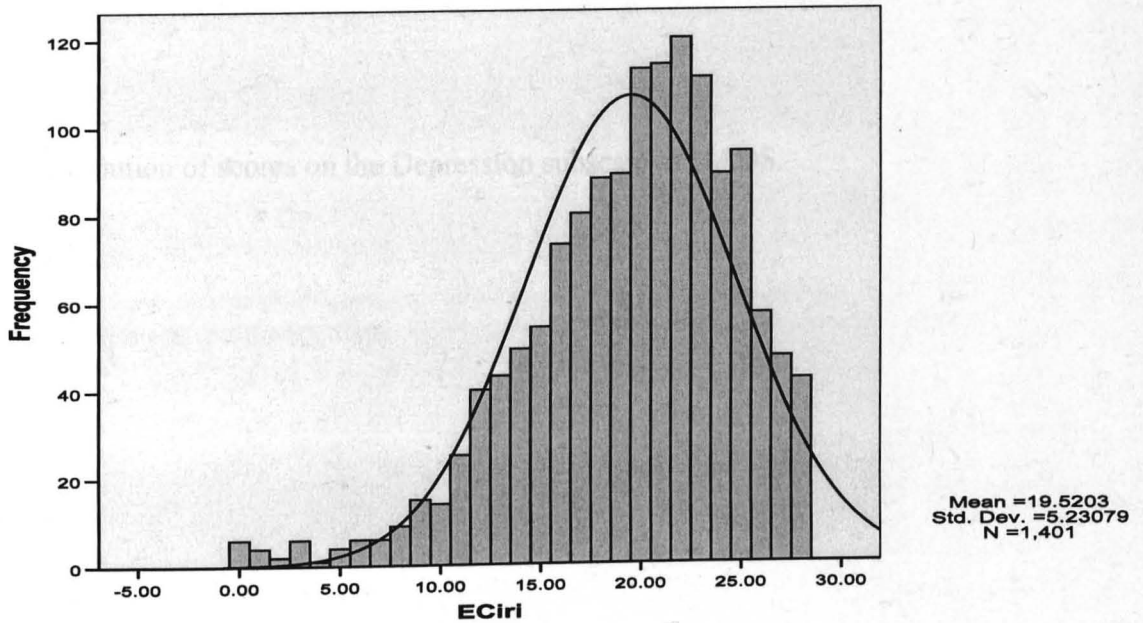
http://www.surveymonkey.com/s.aspx?sm=Ek_2fMOUNjzSNNUyYF8pwzDg_3d_3d

(efresearch@sheffield.ac.uk)

APPENDIX F

Distribution of scores on the Empathic Concern subscale of the IRI (EC-IRI)

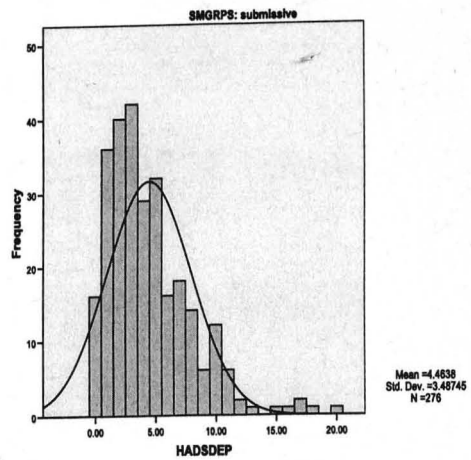
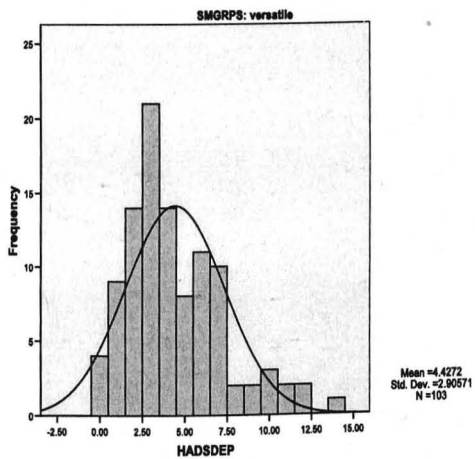
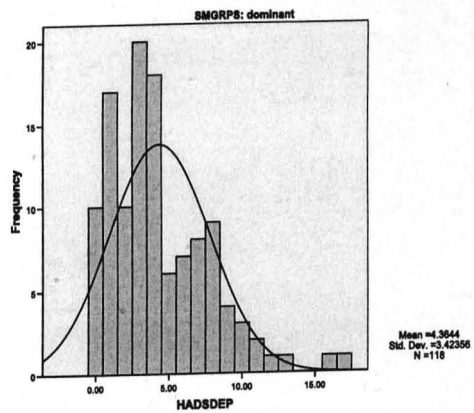
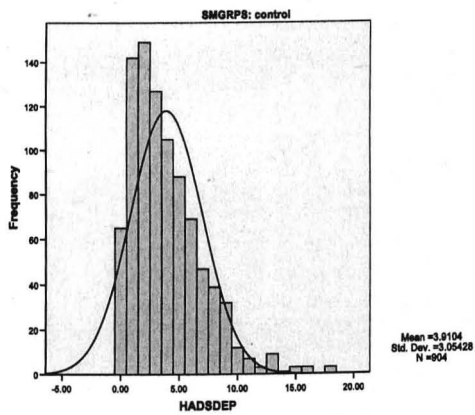
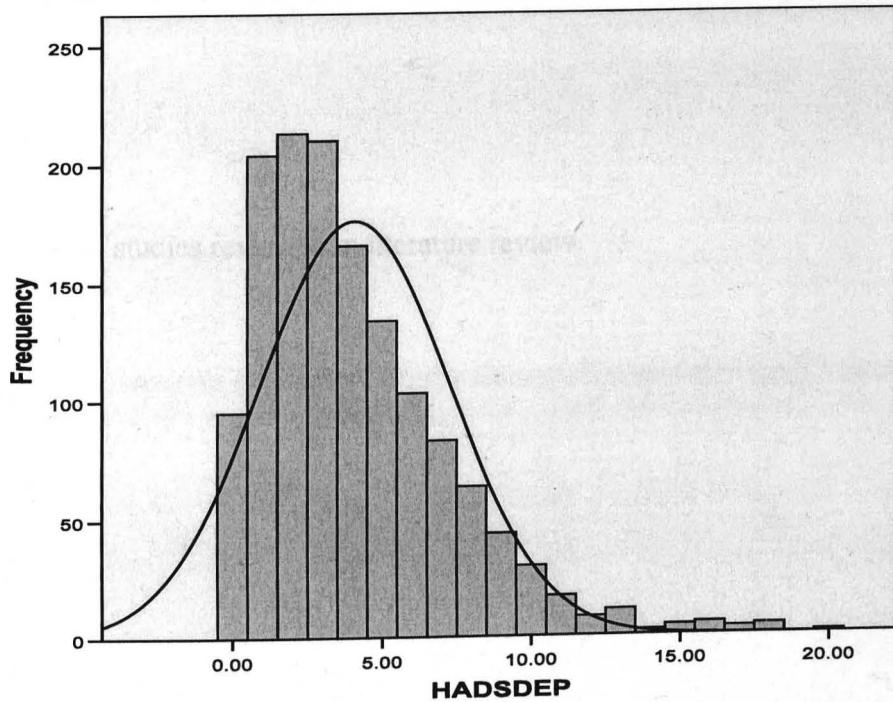
Whole group and 4 subgroup distribution on the Empathic concern subscale of the IRI (EC-IRI)



APPENDIX G

Distribution of scores on the Depression subscale of HADS.

Whole group and 4 subgroup distribution on the HADS Depression.



APPENDIX H

List of studies reviewed in literature review

Study (year)	Country	No of participants	Gender	Control used	Definition of sadism	Measurement of fantasy	Methodology Used
Brittain (1970)	U.K	None specified	Male	None	No definition	None	Case study/descriptive account
MacCulloch et al (1983)	U.K	16 special hospital patients	Male	None	'the repeated practice of behaviour and fantasy, which is characterised by a wish to control another person by domination, denigration or inflicting pain, for the purpose of producing mental pleasure and sexual arousal (whether or not accompanied by orgasm) in the sadist'	Retrospective self-report	Descriptive account of archival files and patient self report
Burgess et al (1986)	U.S.A	36 sexual murderers	Male	None	'The infliction of physical or psychological suffering on another person in order to achieve sexual excitement'	Retrospective self-reported 'daydreaming'	Official records reviews and interviews with offenders
Prentky et al (1989)	U.S.A	25 serial sexual murderers	Male	17 single sexual murderers	None given- authors equate sexual homicide with sadism	Retrospective coding of data	Official record review
Grubin (1994)	U.K.	21 sexual murderers	Male	121 rapists	None given- authors used Brittain (1970) as a starting point	Self report and inferred from pornography use	Semi structured interview, Psychometric assessment and file review
Warren (1996)	U.S.A	20 sexually sadistic serial murderers	Male	None	'Enduring pattern of sexual arousal to images of suffering and humiliation'	Inferred from sketches and pornography	Reports, interviews and/or biographies
Deu & Edelmann (1997)	U.K	12 predatory sex offenders 12 opportunistic sex offenders	Male	12 non sexual offenders 12 non-offenders	None given	Criminal fantasy technique projective test of fantasy	<i>Psychometric assessment and projective test</i>

Study (year)	Country	No of participants	Gender	Control used	Definition of sadism	Measurement of fantasy	Methodology Used
Langevin et al (1998)	Canada	129 sexual offenders	Male	50 nonsexual offenders 22 community controls	None given	Clarke Sexual History Questionnaire and self report	Clinical interview and psychometric assessment
Donnelly & Fraser (1998)	U.S.A	320 undergraduate students	72% female 28% male	None	'The use of mild pain, restraint, bondage, and discipline, and humiliation for sexual arousal'	Self report measure	Self-report questionnaire originally designed to assess masochism
Marshall et al (2002)	Canada	41 sadistic sexual offenders	Male	18 sexual offenders without a diagnosis of sexual sadism	DSM-IV definition	Retrospective coding from archival files. Original assessment by self-report questionnaire or interview	Retrospective file review
Gray et al (2003)	U.K.	50 undergraduate students	18 males 32 females	Used as a comparison group for Burgess et al (1986) study	DSM-IV definition	Sexual fantasy questionnaire and Burgess checklist	Psychometric measures NART and measure of demand characteristics
Gee et al (2003)	Australia	24 sex offenders	Male	None	None given	Semi structured interview with offenders	Qualitative semi structured interviews and grounded theory
Hill et al (2006)	Germany	61 sadistic sexual offenders	Male	105 non sadistic sexual offenders	DSM-IV definition	Retrospective from archival files and court reports	<i>Retrospective file review</i>