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# Childhood abuse and sadomasochism: New insights

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## KEYWORDS

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Childhood physical abuse;  
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Sadism;  
Masochism;  
Sadomasochism;  
Paraphilia

## Summary

**Objective.** – The development of sexuality begins in early childhood and is vital to a normative sexual development over the lifespan. Unfortunately, this developmental process can be disrupted by many traumatic events. Of these, childhood abuse may be the most damaging: it has been shown to disrupt the natural development of sexuality, one of the manifestations being increased tendencies towards sexual paraphilias, especially sexual masochism and sadism, which can be particularly harmful in their more extreme forms. The current study sought to investigate links between three types of childhood abuse: psychological, physical, and sexual—and the genesis of adult sadomasochistic sexual tendencies, and how the relationship between child abuse and sadomasochism differs by gender.

**Method.** – An online survey was conducted on a sample of 1219 participants who were queried regarding childhood psychological, sexual, and physical abuse. Based on the results of life history items, the participants were separated into the categories “abused” and “non-abused”. Both groups were then given a Masochism and Sadism survey with items adapted from Fisher et al. (2011). For analysis, sadistic and masochistic orientations were partitioned into severity levels of light and heavy masochism, and light, heavy, and passive sadism.

**Results.** – The results confirmed that childhood abuse, especially sexual, increases sadomasochistic tendencies. These increases varied by gender such that abused males exhibited more sadistic preferences and females more masochistic. Levels of sadism and masochism varied with history of abuse and gender. The analyses also resulted in triple interactions for both masochism and sadism, as well as in several simple effects. There were no gender differences for heavy masochism and passive sadism, however, light masochism was more prominent in females, and heavy and light sadism was found more commonly in males. Additionally, the presence of any form of abuse was connected with significantly higher heavy, light and passive masochism and sadism.

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*Conclusion.* – Differing types of childhood abuse, as well as gender, affect sadomasochistic preferences in adulthood, and the magnitude of these preferences.

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## Introduction

Although one's sexuality is cultivated throughout the lifespan, it is during early childhood when its most defining features take shape (Li, 2020). The gender that one identifies with, prefers to be intimate with, and the way related characteristics are communicated to others takes form (Steensma et al., 2013). Sexuality commences in the genome but is powerfully guided by a complex succession of environmental events (Cornwallis and Uller, 2010; McCarthy and Arnold, 2011). These include gestational hormones, post-natal nurturing, parental, sibling, and peer gender demeanor, attachment stability, social status and many more. This process typically leads to the emergence of one of many sexual identities, which then matures over the lifespan. And although an individual's sexuality is a work in progress throughout life, it tends to coalesce around a few common themes that originate early on. These include the sexual orientation and gender identity. The sexuality that emerges out of childhood not only shapes an individual's sexual thoughts and behaviors but their self-image and worldview. It is this critical role of sexuality in every person's life that makes disruptions in its development so uniquely noxious. And the disruption that has the most adverse impact is childhood abuse (Hoier et al., 2013; Kendall-Tackett et al., 1993).

The sexual desires, perceptions and identity that emerge during childhood tend to be both enduring and central to every aspect of a person's life. Although it remains an open question as to what the specific forces that construct sexual identity are, it is evident that the formation of this identity is particularly vulnerable to traumas in early life. Such traumas are associated with a range of sexual pathologies and emotional dysfunctions. Traumatic effects can include impaired sexual functioning in men along with dysfunctions in the identification of erotic targets as seen in some paraphilias (Fuss et al., 2019; Kort, 2018; Pedneault et al., 2020). Childhood sexual abuse appears to be related to unsatisfactory sexual histories, antisocial tendencies in males, and even to sexually coercive behavior, albeit this relationship is mediated through a range of life variables such as the number of sexual partners and the degree of interest in sadomasochism (Pedneault et al., 2020). Early traumatic injuries have been related to disturbances in body image in adult female survivors (Pulverman et al., 2018), as well as the occurrence of posttraumatic stress disorder (Abrams et al., 2019) and sexual impulsivity (Boroughs et al., 2015). Childhood sexual abuse also seems to increase the severity of acute personality disorders such as borderline (Turniansky et al., 2019).

Of particular concern, and the main focus of this study, is the fact that childhood abuse tends to increase paraphilic sexuality – fetishes, sexual sadism, masochism, etc. It is important to note that in most cases, paraphilic sexuality is not pathological but just another of the many expressions

of human intimacy. However, as with all paraphilias, when these sexual desires dominate a person's sexuality identity and behavior, they can become a barrier to love and bonding. Just as the genesis of hetero and homosexuality is not fully understood, paraphilic sexuality is similarly an enigma, although there is no dearth of potential explanations of the origins of paraphilias. Perhaps the most relevant of these is the suggestion that sadomasochistic paraphilias are extensions of a drive for dominance or submission (Abrams, 2016). Evidence from other animals suggests that the tendency to seek dominance or feel compelled to submit is adaptive and innate. It is common to find many female animals like the lion and the hyena (East et al., 1993) to be aggressive and effective predators, yet they become quite submissive when sexually aroused. They will assume the passive lordosis sexual position and yield to the male for intromission, a behavior that is best explained by what can be called a submission circuit in the mammalian brain (Pfaff et al., 1994). This theory would explain the high prevalence of sadomasochistic fantasies as they are extensions of intrinsic sexual factors.

Although sadomasochism and other paraphilic sexualities can be a consequence of early abuse, this does not necessarily indicate they are pathological. In fact, there are kink rights advocates (Moser, 2016; Sprott and Benoit Hadcock, 2018) who argue that paraphilic or kink sexuality is as distinct a sexual variation as are heterosexuality and homosexuality. This may be the case for the majority of people with paraphilic sexualities, but not all paraphilias have the same etiologies, nor do they have equivalent impacts on relationships. This is one facet of the current study, to find associations between paraphilic sexuality and pathology. More specifically, are paraphilias related to abuse, which is a known precipitator to pathology. Making this distinction is particularly relevant in light of the prevalence of paraphilias in individuals who experience none of the subjective distress or impairment found in the criteria of DSM-V (APA, 2013). In fact, most studies of the prevalence of paraphilias exceed the prevalence of the paraphilic disorders set forth in DSM-V. It seems that the preponderance of paraphilic sexuality is not pathological. Studies indicate that as many as 80% of people are aroused by or practice paraphilic acts (Joyal and Carpentier, 2017; Moser and Levitt, 1987). The modal finding of prevalence studies is approximately 50% of men and 40% women regularly engage in or are aroused by one or more paraphilias (Castellini et al., 2018; Dawson et al., 2016; Pocknell and King, 2020). The prevalence of sadomasochism, the sexual theme examined in this report, is 61% (Donnelly and Fraser, 1998) reported being aroused by it and 46.8% have practiced it at least once (Holvoet et al., 2017).

Paraphilic sexuality, irrespective of origin, differs from other sexualities in that they all tend to become pathological in the extreme. In contrast, if one is at either extreme on a Kinsey-type scale of sexuality, they will not be subject to

disruptions in affectionate connections to another person. Extreme paraphilic interests can create a lifelong impediment to bonding, emotional intimacy, and sexual fulfillment (Roche et al., 1999), and in their most extreme forms can lead to grievous harm to oneself or others as the paraphilic theme becomes the imperative in the sex act (American Psychiatric Association, 2013; Porter and Kaplan, 2011) and is associated with significant risks (Abel et al., 1988; Jenkins, 2000). The disruption of normative intimate relationships is particularly significant with sadomasochism in that stimuli that are commonly aversive become sources of sexual delight. Unless both partners are highly compatible in this preference, it is likely to create a barrier to an affectionate and durable pairing (Lawrence, 2009).

Since sexual identity and preference arise early in development it is not surprising that childhood abuse, especially sexual, has been linked to a wide range of disturbances including both traumatic and paraphilic sexual disorders (Levenson and Grady, 2016; Maniglio, 2011), as well as sadomasochistic tendencies (Nordling et al., 2000; Pedneault et al., 2020). Although childhood abuse is just one etiology of a paraphilic sexuality, it is of particular concern as it typically results in an individual who is also suffering from a complex of traumatic symptoms. The observation that abuse leads to an enduring recapitulation of the very events that disrupted a child's sexuality is not a novel concept. Money et al. (1990) have suggested that children integrate the traumatic events into their emerging sexuality, a theory that forms a strong intuitive appeal.

The "Exotic Becomes Erotic" or EBE model of sexual orientation (Bem, 1996, 2000) dovetails quite well with the theory of masochism, set forth by sex researcher John Money (Money, 1991; Money et al., 1990; Money and Lamacz, 1989). Money formulated the concept of a "lovemap" that refers to a cognitive representation of the erotic ideal and sexual union with that ideal. In the case of a heterosexual man, the lovemap would contain the representation of a maximally attractive woman and a representation of intercourse with this ideal lover (Money, 1988). In the case of paraphilias, Money and Lamacz (1989) proposed that distressing events during key developmental phases can create a lovemap of sexual symbols. So, rather than being aroused by another person, the paraphile is aroused by some aspect, sometimes extraneous, of a person. It follows that if a child is exposed to abuse during a period of sexual identity formation their lovemap will integrate harm or shame into their sexual identity. So rather than being aroused by another individual, their arousal cues will include receiving or inflicting pain and humiliation.

Bem and Money's models provide an explanation for the greater prevalence of sexual sadism and masochism in men. Specifically, male arousal cues (i.e., their lovemap) are far more malleable due their greater inclination to develop visual arousal cues which can be external or imaginal. In contrast, most females are not essentially visually aroused, their process of learning arousal cues, including masochistic ones is different. In short, male sexuality is predicated upon learning how to be appropriately aroused and female sexuality is predicated upon learning to select the appropriate aroused male. It follows that the gender difference in the development of arousal is the basis for the

marked difference in the prevalence in paraphilias in men and women. Among the latter, a paraphilia like masochism would require far greater or prolonged disturbance during the development of sexual identity (Bem, 1996, 2000; Money, 1988).

A study based on clinical cases of women who were sexually abused as children (Abrams and Stefan, 2012) hypothesized that early life sexual abuse led to masochistic behaviors. In addition, it was noted that these women often suffered from borderline personality features. This relationship was examined in a subsequent study that investigated relationships between childhood abuse, paraphilias, personality and disorders (Abrams et al., 2019). This study found that early life abuse tended to lead to masochistic paraphilias in males while female survivors of abuse suffered more trauma-related and personality pathologies. It also provides evidence that the type of abuse (i.e., sexual, psychological or physical) mediates sadomasochistic preferences. This is seconded by additional findings that non-sexual physical abuse is related to later paraphilic sexual interests in males (Pedneault et al., 2020). The association between abuse and subsequent sadomasochism varied by gender and increased with childhood abuse—especially sexual.

Women who have experienced early life sexual abuse have a high rate of revictimization in adulthood. In addition, they tend to suffer from symptoms such as anxiety, fearfulness and suicidality (Beitchman et al., 1992; Messman-Moore et al., 2000). Both men and women abused as children also seem to experience more psychopathologies such as PTSD and personality disorders (Rind et al., 1998). The relationship was registered in females between the sexual masochism and borderline personality disorder (Frías et al., 2017). However, many of the women had experienced childhood sexual abuse, perhaps serving as an underlying factor of both conditions. The combination of borderline personality disorder and sexual masochism also correlated significantly with disinhibition. In males, childhood abuse seems to be related with adult sexual dysfunction and paraphilias (Seibel et al., 2009). In a prior study (Abrams et al., 2019), the relationship between childhood abuse and both adulthood paraphilias and emotional pathologies was studied. The results strongly suggested that personality pathology, traumatic symptoms and atypical sexual fantasies were elevated in adults who were abused during childhood. Interestingly, men reported a significantly higher interest than women in sadomasochistic sex, while women reported more symptoms of personality pathology.

There are many open questions about the origin and nature of paraphilias like sadism and masochism, one of which is the role of childhood abuse. Another is the severity that separates paraphilias as sexual variations from those judged to be pathological. Since many prior studies have explored the relationship between childhood abuse and several pathologies, the premise that sadomasochistic sexual interests are linked to childhood abuse is both novel and worthy of further exploration. Therefore, the current study seeks to investigate the relationship between three different types of childhood abuse—psychological, physical, and sexual—the degree of sadomasochistic sexual tendencies in adulthood, and their variation between the genders.

**Table 1** Participants' Gender and Sexual Orientation.

	Heterosexual		Gay\Lesbian		Bisexual		Total
	Nr.	%	Nr.	%	Nr.	%	
Male Participants	575	90.8	26	4.1	32	5.1	633
Female Participants	492	84.0	21	3.6	73	12.5	586
Total Participants	1067	87.5	47	3.9	105	8.6	1219

## Methods

### Participants

A total of 1219 participants remained after those who identified as transgender, intersex, asexual and other sexual orientations were removed. Their removal from the final sample was necessary as the participants in those groups were too few for a meaningful analysis. There were slightly more male (51.9%) than female participants (48.1%) and most of the participants were heterosexual (87.5%), followed by bisexual (8.6%), and gay/lesbian (3.9%) participants (see [Table 1](#)). The participants ages ranged from 18 to 86 years old ( $M = 39.2$ ,  $SD = 12.24$ ).

### Data collection

The participants were recruited via MTurk. The data collection was performed in two segments approximately one month apart. The first segment included 489 participants who were recruited from the full population of MTurk participants. The second segment included 730 participants, who were recruited from MTurk participants who were assessed by MTurk to be the most reliable based on evaluations of their prior work. Importantly, preliminary analyses were performed on each group separately and on the entire sample, which revealed no meaningful differences between the groups. Because of the homogeneity of the two groups, they were merged into the single 1219 participant sample.

### Survey items

The participants were given a survey to determine if they ever experienced childhood abuse including sexual, physical or psychological maltreatment (see Appendix 1). Sexual abuse items included "When I was a child, a family member would abuse me in ways that seem to be sexually motivated"; physical abuse items included "I was physically abused by a close family member as child"; and psychological abuse included "I was frequently made to feel ashamed or worthless as a young child." If a participant answered "never or once" to a question, they were marked as if they did not suffer that type of abuse. If the participant marked experiencing a particular type of abuse "frequently" or "always", they were assigned to the abused group.

The participants were then provided items from validated masochism and sadism scales ([Blanchard, 2009](#); [Fisher et al., 2011](#); [Freund et al., 1982](#); see Appendix 2). It is important to note that most of the questions inquired whether

imagining the described sexual behaviors increased the participants' sexual arousal, and did not inquire about the real-life practices of these behaviors. The sexual masochism scale included 11 items, while the sexual sadism scale consisted of 20 items, the majority of which were "yes" or "no" questions. For each of the items, participants could either receive 1 point (if they were excited by described masochistic or sadistic behavior) or 0 points (if they were not excited by it). Consequently, the scores ranged from 0 to 11 for the sexual masochism scale, and from 0 to 20 on the sexual sadism scale.

## Results

### Overview of analyses

Preliminary analyses were conducted to determine if the prevalence of sadomasochism differed in abused vs. non-abused participants and if abuse had a differential effect on sexuality based on gender and age. Correlational analyses between the masochism and sadism scales were also conducted, as was a factor analysis of the scales.

A factor analysis was performed on the masochism scale using Varimax rotation that produced two factors explaining 52% of the total variance. The resulting factor scores were saved into two new variables: heavy masochism and light masochism. These factors were so named as the largest contribution to the heavy masochism factor came from the items indicating preferences for particularly violent acts such as death threats, injury to the point of bleeding, use of knife and other sharp objects. In comparison, the light masochism factor was associated with preferences for more benign acts such as primarily bondage and inflicting some (undefined level) of pain.

A factor analysis was also conducted on the sadism scale resulting in three factors that accounted for 51.5% of the total variance. The first two factors were designated heavy sadism and light-sadism. The heavy sadism factor was derived from items associated with inflicting potentially physically damaging acts or extreme humiliation. In contrast, the light sadism factor was based on items denoting a preference for domination or inflicting mild pain. The third factor was passive sadism and it was derived from three items indicating interest in reading descriptions of torture.

The derived variables more precisely portray the nature of sadism and masochism, considering that both types of sexualities comprise a wide range of arousal cues and behaviors. Heavy sadism or masochism involved those interests centered on physical harm or death, while light sadism or masochism referred to those interests limited to

control, humiliation, or subjugation. This distinction is particularly significant because more extreme manifestations of sadomasochism tend to present barriers to normative relationships and even risks to one's health (Williams, 2006). For example, the deaths from masochistic acts like erotic asphyxia or the sadistic killings of serial killers illustrate the consequences of the more extreme form of this paraphilia.

The new factor scores of masochism and sadism were saved as new variables, and future analyses were conducted with them as dependent variables. Firstly, the impact of demographic variables—gender and age were explored for each of the variables. Sexual orientation was not included in the analyses as there were insufficient participants in the homosexual group, particularly when it was crossed with gender and age.

Finally, analyses of variance were performed to determine the relationship between the type of abuse, and levels of sadomasochistic sexuality with age and gender covariates. Due to some manifestations of masochism and sadism being relatively common and considered non-pathological (bondage, discipline, etc.), and that a number of participants in the current study did not report an attraction to any of the masochism and sadism manifestations, additional analyses were conducted contrasting participants who had null scores on masochism or sadism, with those who belonged to the top 25% on the masochism or sadism scale, which in both cases were participants who had scores of 3 or higher.

## Preliminary analyses

The results of a one-way ANOVA demonstrated that the presence of abuse, independently of its nature, was connected to an increase in heavy masochism,  $F(1, 1218)=17.391$ ,  $P=.000$ ; light masochism,  $F(1,1218)=34.151$ ,  $P=.000$ ; heavy sadism,  $F(1, 1218)=11.655$ ,  $P=.001$ ; light sadism,  $F(1, 1218)=18.824$ ,  $P=.000$ ; and passive sadism,  $F(1, 1218)=10.710$ ,  $P=.001$ . This finding is of particular significance as sexual abuse has often been closely linked to sexual dysfunction (Davis and Knight, 2019; Pulverman et al., 2018). In contrast, it appears that childhood abuse of any kind is associated with increases in both sexual masochism and sexual sadism.

Psychological abuse was present in 58.8% of participants, physical abuse in 20.9%, and sexual abuse in 10.6% of participants. The analysis of psychological abuse by gender approached significance, suggesting that psychological abuse was more common in females,  $\chi^2(1, 1218)=3.615$ ,  $P=.057$ , as was physical abuse,  $\chi^2(1, 1218)=9.111$ ,  $P=.003$ , and sexual abuse  $\chi^2(1, 1218)=16.789$ ,  $P=.000$ . All three types of abuse were mutually connected, with psychological abuse being very rarely absent in cases of physical and sexual abuse, and physical abuse being more commonly present than absent if there was sexual abuse.

The mean scores were relatively low for both masochism ( $M=1.58$ ) and sadism ( $M=2.34$ ). As would be expected, the responses on the masochism and sadism scales did not have a normal distribution, nor was the homogeneity of variance condition satisfied. However, this is expected in studies of this type, and the large sample size is expected to compensate.

## Analyses of Sadism/Masochism Scales

The sadism and masochism scales were highly correlated ( $r=.677$ ,  $P=.000$ ), which is consistent with both the speculations of Freud (2020) and the research of Havelock Ellis (Oosterhuis, 2012) who both viewed sadomasochism as a unitary construct. Freud viewed sadism as the active form, and masochism as the passive form, of the sexualization of pain. Similarly, Havelock Ellis asserted that there is no meaningful distinction between sadism and masochism, rather they are complementary sexualities. This linking of sadism and masochism as different expressions of one paraphilia was supported by much of the research that is presented here.

To further explore the nature of the sadomasochism that may ensue from childhood abuse, factor analyses were conducted on the responses to the masochism and sadism scales using varimax rotation. This resulted in two factors from the masochism scale that we referred to as heavy masochism and light masochism, which explained 52% of the total variance (Table 2). The factor analysis conducted on the sadism scale produced three factors that we refer to as "heavy sadism, light sadism, and passive sadism", which accounted for 51.5% of the total variance (Table 3). The terms light applied to both masochism and sadism referred to sexual acts that involved arousal submission or mild pain but did not include extreme humiliation, harm, or potentially fatal sexual acts. And as the term implied, passive sadism referred to satisfaction from social subjection or degradation of others.

Correlations were performed on each pair of the newly created variables. The highest correlation was between heavy masochism and heavy sadism ( $r=.645$ ,  $P=.000$ ), which was consistent with the link between sadism and masochism discussed earlier. Heavy masochism was not correlated with light masochism, but had low, yet significant correlations with light and passive sadism. Light masochism and light sadism also correlated significantly ( $r=0.459$ ,  $P=0.000$ ), and light sadism also had a small but significant correlation with passive sadism. Heavy sadism did not correlate with other types of sadism, neither the remaining two types of sadism correlated mutually. These correlations indicate that participants who are attracted to more extreme forms of sadomasochistic behaviors can be aroused by both imparting or receiving abasing or painful actions. This further supports the premise of early sex theorists that sadism and masochism are closely related sexual expressions. Passive sadism had small correlations with both types of masochism, suggesting that perhaps the arousal elicited by the descriptions of torment does not necessarily mean that the reader of the sadomasochistic depictions identifies with the dominant individual, but may instead take the perspective of the subjugated one.

## Masochism and childhood abuse

### Heavy masochism

Heavy masochism had a significant connection with age,  $F(2, 1213)=7.02$ ,  $P=.001$ ,  $\eta^2=.011$ , such that it declined with increasing age, while there were no differences between genders (see Table 4). When ANOVAs were conducted for each type of abuse separately,

**Table 2** Component Matrix Based on Masochism Scale.

Masochism Scale Item	Factor Loading	
	1	2
If you were insulted or humiliated by a person to whom you felt sexually attracted, did this ever increase their attractiveness?	.588	.227
Has imagining that you were being humiliated or poorly treated by someone ever excited you sexually?	.373	.583
Has imagining that you had been injured by someone to the point of bleeding ever excited you sexually?	.713	.205
Has imagining that someone was causing you pain ever aroused you sexually?	.347	.701
Has imagining that someone was choking you ever excited you sexually?	.218	.751
Has imagining that you have become dirty or soiled ever excited you sexually?	.661	.117
Has imagining that your life was being threatened ever excited you sexually?	.605	.368
Has imagining that someone was imposing on you heavy physical labor or strain ever excited you sexually?	.706	.112
Has imagining a situation in which you were having trouble breathing ever excited you sexually?	.468	.441
Has imagining that you were being threatened with a knife or other sharp instrument ever excited you sexually?	.665	.347
Has imagining that you were being tied up by somebody ever excited you sexually?	.047	.793

*n* = 1219. The extraction method was principal component analysis with an orthogonal (Varimax with Kaiser Normalization) rotation.

the presence of abuse was connected with significantly higher heavy masochism, most highly for sexual abuse,  $F(1, 1209) = 50.122, P = .000, \eta^2 = .040$ ; followed by physical abuse,  $F(1, 1209) = 33.435, P = .000, \eta^2 = .027$ ; and psychological abuse,  $F(1, 1209) = 5.546, P = .019, \eta^2 = .0005$ .

However, when all three types of abuse were entered simultaneously in a  $2 \times 2 \times 2$  ANOVA, with gender and age entered as covariates<sup>1</sup>, results showed a significant main effect of Childhood Psychological Abuse,  $F(1, 1209) = 5.547, P = .019, \eta^2 = .005$ , and Childhood Sexual Abuse,  $F(1, 1209) = 10.242, P = .001, \eta^2 = .008$ , while there are no significant main effects of Childhood Physical Abuse. The results also became somewhat more complex, registering a three-way interaction. Namely, when psychological abuse was absent (see Fig. 1), participants who were not abused at all, or who experienced both physical and sexual abuse had lower scores on heavy masochism, compared to the participants who experienced either sexual or physical abuse alone,  $F(1, 1209) = 11.138, P = .001, \eta^2 = .009$ . When psychological abuse was present, the combination of sexual and psychological abuse was related to an increase in heavy masochism, while physical abuse had less prominent effects (see Fig. 2).

In addition to the triple interaction, an interaction of physical and sexual abuse was also significant,  $F(1, 1209) = 21.960, P = .000, \eta^2 = .018$ . Findings showed that heavy masochism seemed to be particularly high when there was sexual, but no physical abuse, while heavy masochism was not particularly affected by sexual abuse, when the physical abuse was present (see Fig. 3). Interestingly, when all three types of abuse were entered, sexual abuse had a main effect of increasing heavy masochism, but psychological abuse decreased it. This could suggest that, since among

the psychologically abused participants there are a significant number who experienced other kinds of abuse, this actually affected the increase in heavy masochism, while the psychological abuse alone would decrease it. Overall, the highest scores in heavy masochism belonged to participants who reported having experienced sexual abuse alone.

### Light masochism

Light masochism was found to be more prevalent among females, suggesting that women are more open to the more conventional acts associated with sadomasochism (light bondage, sexual submission, etc.) (See Table 5). There was also a main effect of age for light masochism, matching the trend for age in heavy masochism. Supporting this notion further, the interaction between age and gender,  $F(2, 1213) = 7.2, P = .001, \eta^2 = .012$ , indicated that the difference between male and female participants declines with age largely due to the disinterest of older females in masochism.

When analyzing the effects of abuse on light masochistic tendencies, there were clear and significant effects of all three types of abuse when assessed separately, most extremely for psychological abuse,  $F(1, 1209) = 32.424, P = .000, \eta^2 = .026$ ; followed by physical abuse,  $F(1, 1209) = 15.636, P = .000, \eta^2 = .013$ ; and sexual abuse,  $F(1, 1209) = 11.385, P = .001, \eta^2 = .009$ . However, when analyzed together in a three-way ANOVA, there was a significant main effect of psychological abuse,  $F(1, 1209) = 5.907, P = .015, \eta^2 = .005$ , in so that participants who had experienced psychological abuse scored more highly in light masochism. There were no main effects of Childhood Sexual Abuse or Childhood Physical Abuse. There were no significant two- or three-way interactions (Figs. 4 and 5).

<sup>1</sup> Age and gender were entered as covariates in all analyses examining the relationship of sadism/masochism and abuse.

**Table 3** Component Matrix Based on Sadism Scale.

Sadism Scale Item	Component		
	1	2	3
Did you ever like to read stories about or descriptions of torture?	.128	.264	.713
Did you usually re-read a description of torture several times?	.218	.091	.813
Were you: a) very interested in descriptions of torture; b) a little interested; c) not at all interested; d) never read such descriptions?	.108	.032	.778
Between the ages of 13 and 16, did you find the sight of blood: a) exciting; b) only pleasant; c) unpleasant; d) did not affect you in any way?	.568	.038	.220
Has beating somebody or imagining that you are doing so ever excited you sexually?	.530	.436	.181
Have you ever tried to tie the hands or legs of a person who attracted you sexually?	.065	.693	.003
Has cutting or imagining to cut someone’s hair ever excited you sexually?	.684	.089	.034
Has imagining that you saw someone bleeding ever excited you sexually?	.720	.110	.120
Has imagining someone being choked by yourself or somebody else ever excited you sexually?	.233	.649	.034
Has imagining yourself or someone else imposing heavy physical labor or strain on somebody ever excited you sexually?	.573	.295	.180
Has imagining that someone was being ill-treated in some way by yourself or somebody else ever excited you sexually?	.297	.609	.138
Has imagining that you or someone else were causing pain to somebody ever excited you sexually?	.299	.597	.306
Has imagining that you or somebody else were threatening someone’s life ever excited you sexually?	.605	.335	.170
Has imagining that someone other than yourself was crying painfully ever excited you sexually?	.466	.347	.264
Has imagining that someone other than yourself was dying ever excited you sexually?	.787	.137	.070
Has imagining that you or someone else were making it difficult for somebody to breathe ever excited you sexually?	.441	.525	.174
Has imagining that you or someone else were tying up somebody ever excited you sexually?	-.045	.793	.088
Has imagining that you or somebody else were threatening someone with a knife or other sharp instrument ever excited you sexually?	.170	.670	.077
Has imagining that someone was unconscious or unable to move ever excited you sexually?	.368	.433	.143
Has imagining that someone had a very pale and still face ever excited you sexually?	.638	.165	.016

*n* = 1219. The extraction method was principal component analysis with an orthogonal (Varimax with Kaiser Normalization) rotation.

## Sadism and abuse

### Heavy sadism

Analyses for heavy sadism resulted in a large number of significant effects (See Table 6). Findings confirmed that heavy sadism was more common in abused males than in females,  $F(1, 1213) = 5.4, P = .020, \eta^2 = .004$ , and it was the highest in the youngest age group,  $F(1, 1213) = 14.7, P = .000, \eta^2 = .024$ , compared to the remaining two age groups.

Heavy sadism was not related with a history of psychological abuse but was connected with physical abuse,  $F(1, 1209) = 35.143, P = .000, \eta^2 = .028$ , and sexual abuse,  $F(1, 1209) = 78.169, P = .000, \eta^2 = .060$ . However, when all three types of abuse were explored together, a triple interaction similar to that of heavy masochism was observed (Figs. 6 and 7),  $F(1, 1209) = 12.080, P = .001, \eta^2 = .010$ . When examined alone, sexual abuse particularly increased heavy sadism. When people experienced a combination of psychological and sexual abuse, there was a high increase in heavy

sadism. The psychological abuse increased heavy sadism, but less so than sexual or physical abuse. This finding is consistent with exotic becomes erotic origin of sexuality. Specifically, the potentially severe trauma of sexual or physical abuse most likely leads to enduring sexualization of these traumas.

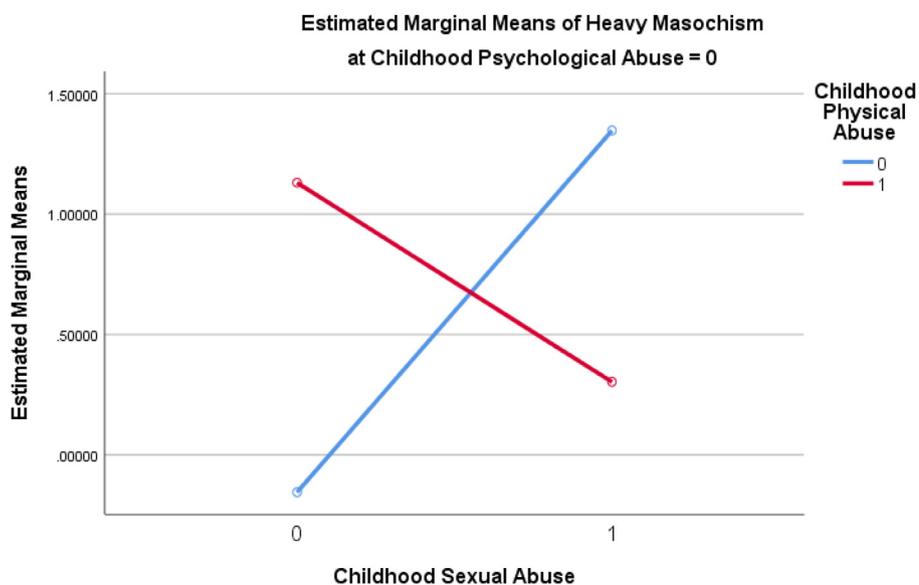
There was also an interaction of physical and sexual abuse (Fig. 8),  $F(1, 1209) = 12.080, P = .001, \eta^2 = .010$ , showing clearly what was suggested in the triple interaction—that sexual abuse without physical abuse leads to a particularly high heavy sadism. Akin to heavy masochism, there were simple effects of sexual abuse (increasing heavy sadism) and psychological abuse (decreasing heavy sadism).

### Light sadism

Females reported a lower interest in light sadism than males,  $F(1, 1213) = 8.7, P = .003, \eta^2 = .007$  (See Table 7). There was no effect of age on light sadism. When analyzed individually, there was a significantly higher light sadism in the

**Table 4** Heavy masochism.

Age and gender covariates	F	P	Partial Eta Squared
Age and gender			
Gender	1.305	.253	.001
Age	7.018	.001	.011
Gender × Age	2.213	.120	.003
Types of abuse separately			
Psychological abuse	5.546	.019	.005
Physical abuse	33.435	.000	.027
Sexual abuse	50.122	.000	.040
Psychological Abuse × Physical Abuse × Sexual Abuse			
Psychological abuse	5.547	.019	.005
Physical abuse	.138	.710	.000
Sexual abuse	10.242	.001	.008
Psychological × Physical	.212	.645	.000
Psychological × Sexual	.767	.381	.001
Physical × Sexual	21.960	.000	.018
Psychological × Physical × Sexual	11.138	.001	.009



Covariates appearing in the model are evaluated at the following values: Age\_groups = 1.99, What is your gender? = 1.48

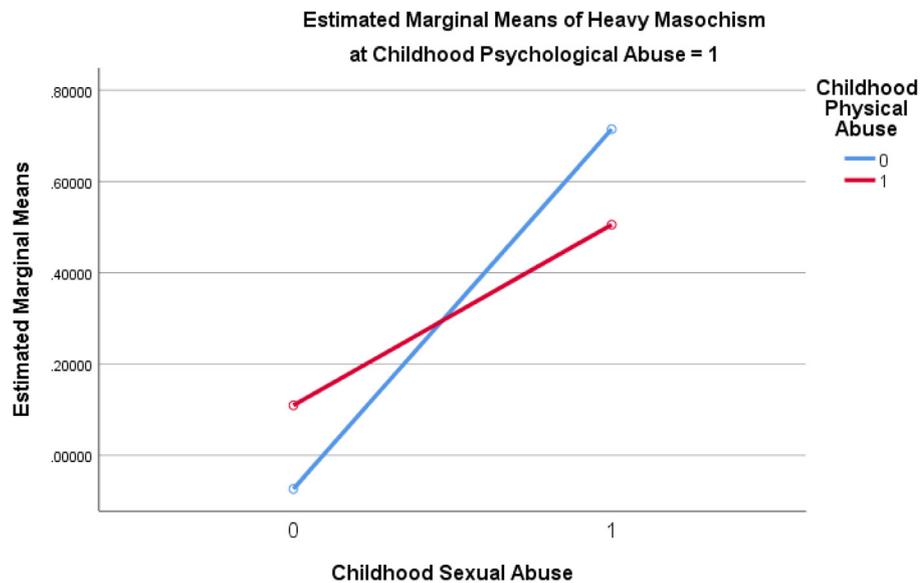
**Figure 1** Heavy masochism scores for physically and/or sexually abused vs. non-abused.

abused groups for all three types of abuse, most strongly for psychological abuse,  $F(1, 1209) = 24.704, P = .000, \eta^2 = .020$ ; followed by physical abuse,  $F(1, 1209) = 12.194, P = .000, \eta^2 = .010$ ; and sexual abuse,  $F(1, 1209) = 6.180, P = .013, \eta^2 = .005$ . It would appear that the less intense forms of sexual sadism are more closely related to childhood emotional and physical abuse than sexual abuse. This has an intuitive appeal in that emotional or physical violence from a caretaker is likely to lead to adults aroused by sadistic cues. In contrast, sexual abuse and the powerlessness it entails is more likely to produce adults aroused by submissive or masochistic cues. However, when the types of abuse were assessed together, there was only a significant main effect of psychological abuse,  $F(1, 1209) = 8.501, P = .004, \eta^2 = .007$ , which expressed that light sadism was, yet again, higher in

the abused group. The three-way interaction was not significant (Figs. 9 and 10).

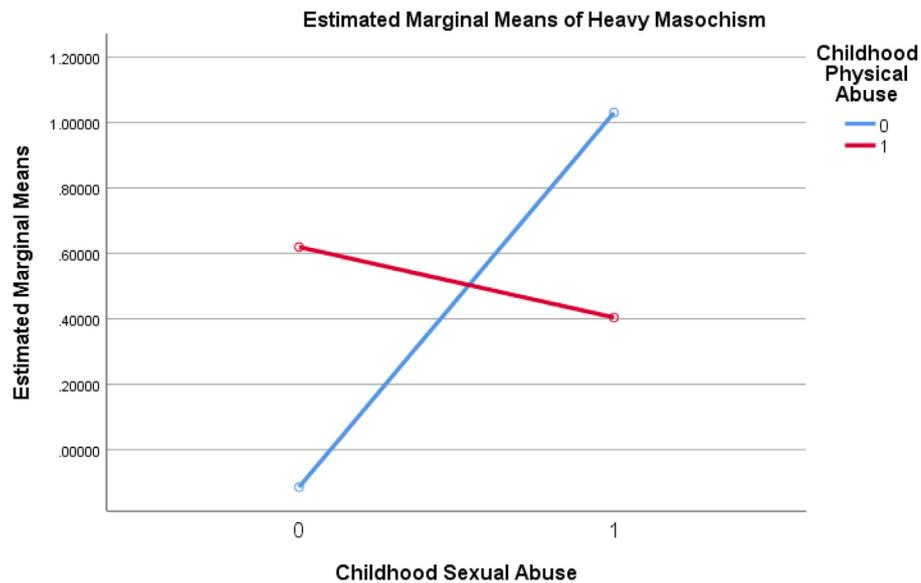
### Passive sadism

Passive sadism was not significantly related to gender or age (See Table 8). ANOVAs conducted for each type of abuse separately revealed that the presence of abuse was connected with significantly higher passive sadism, most extremely for psychological abuse,  $F(1, 1209) = 10.172, P = .001, \eta^2 = .008$ ; followed by sexual abuse,  $F(1, 1209) = 5.960, P = .015, \eta^2 = .005$ ; and physical abuse,  $F(1, 1209) = 5.154, P = .023, \eta^2 = 0.004$ . A  $2 \times 2 \times 2$  ANOVA on types of abuse for passive



Covariates appearing in the model are evaluated at the following values: Age\_groups = 1.99, What is your gender? = 1.48

**Figure 2** Heavy masochism scores for physically and/or sexually abused vs. non-abused participants when psychological abuse is present.



Covariates appearing in the model are evaluated at the following values: Age\_groups = 1.99, What is your gender? = 1.48

**Figure 3** Heavy masochism scores for physically and/or sexually abused vs. non-abused participants.

sadism did not reveal any significant main effects of abuse, nor of any interaction (Figs. 11 and 12).

## Polarities of masochism and sadism

### Polarities of masochism

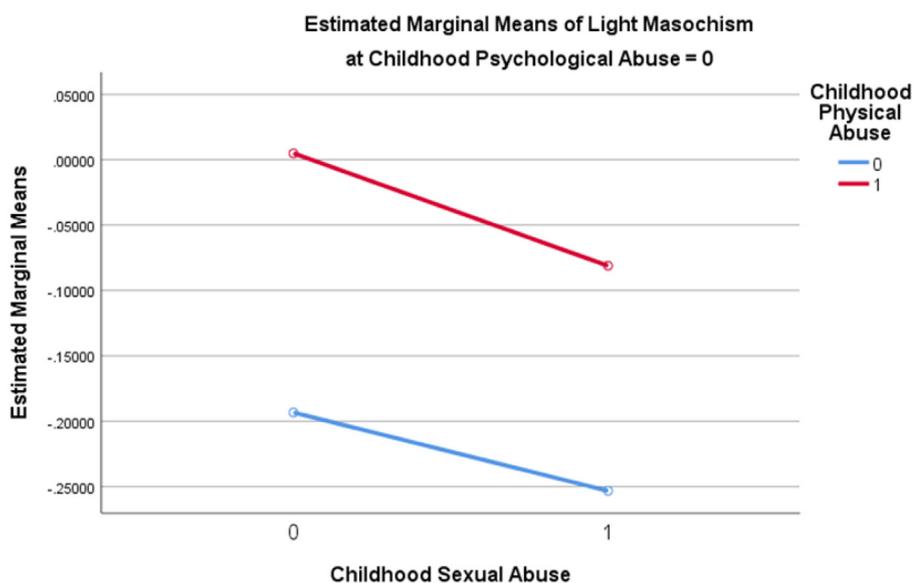
There were 597 participants who had null scores on the masochism scale and 203 of those who had scores 3 or higher, with a total of 800 participants included in these analyses. When high scores on the masochism scale were compared to

null masochism, there were significant differences by gender  $\chi^2(1, 799) = 31.453, P < .01$  and age  $\chi^2(2, 798) = 31.453, P < .01$ . Extreme masochism was more common in females than males (34.8% of females had scores of 3 or higher, compared to 17.5% of males), and in younger participants (36.1% of participants aged 18–30, 25.8% aged 31–45, and 13.6% aged 46 or older).

All three types of abuse were related to extreme masochism scores: extreme masochism was present in 32.4% of psychologically abused participants compared to 16.8% non-abused,  $\chi^2(1, 799) = 25.398, P < .01$ ; present in 44.1% of physically abused participants compared to 20.7% non-

**Table 5** Light masochism.

Age and gender covariates	F	P	Partial Eta Squared
Age and gender			
Gender	66.450	.000	.052
Age	17.509	.000	.028
Gender × Age	7.204	.001	.012
Types of abuse separately			
Psychological abuse	32.424	.000	.026
Physical abuse	15.636	.000	.013
Sexual abuse	11.385	.001	.009
Psychological Abuse × Physical Abuse × Sexual Abuse			
Psychological abuse	5.907	.015	.005
Physical abuse	.854	.536	.001
Sexual abuse	.217	.641	.000
Psychological × Physical	.134	.714	.000
Psychological × Sexual	.949	.330	.001
Physical × Sexual	.006	.939	.000
Psychological × Physical × Sexual	.000	.988	.000



Covariates appearing in the model are evaluated at the following values: Age\_groups = 1.99, What is your gender? = 1.48

**Figure 4** Light masochism scores for physically and/or sexually abused vs. non-abused participants when psychological abuse is absent.

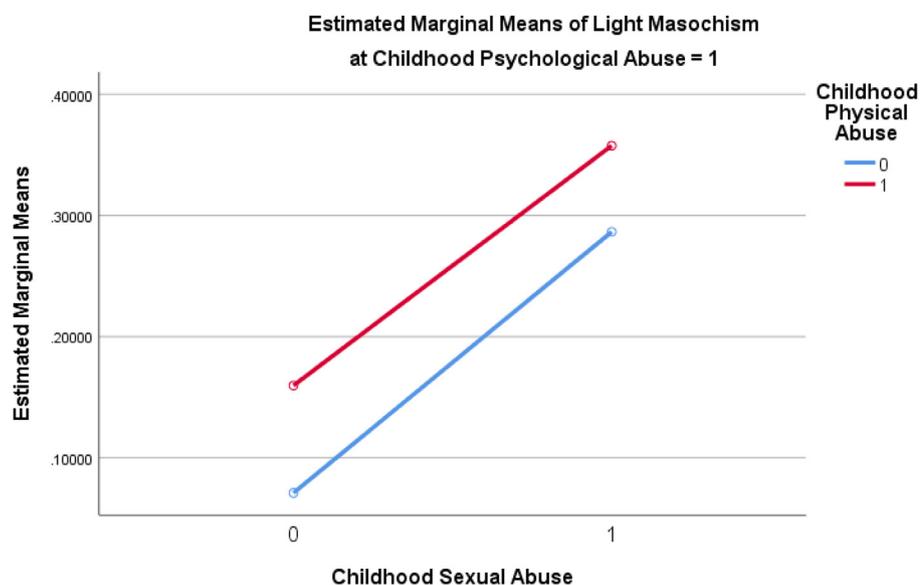
abused,  $\chi^2(1, 799) = 37.320, P < .01$ ; and present in 56% of sexually abused participants compared to 21.8% non-abused,  $\chi^2(1, 799) = 46.341, P < .01$ .

**Polarities of sadism**

There were 562 participants who had zero score on sadism scale and 294 of those who had scores 3 or higher, resulting in 856 participants included in the analyses. When extreme scores on sadism scale were compared to null sadism, there were significant differences by gender  $\chi^2(1, 856) = 9.234, P = .002$  and age  $\chi^2(2, 855) = 11.162, P = .004$ . Extreme sadism was more common in males (39% of males had scores 3 or higher, compared to 29.1% of females), and

in younger participants (40.1% of participants aged 18–30, 35.7% aged 31–45, and 25.9% aged 46 or older).

All three types of childhood abuse were related to extreme sadism scores: extreme sadism present in 43.1% of psychologically abused participants, compared to 22.7% non-abused,  $\chi^2(1, 856) = 38.604, P < .01$ ; present in 52.8% of physically abused participants, compared to 29.6% non-abused,  $\chi^2(1, 799) = 33.609, P < .01$ ; and present in 60.8% of sexually abused participants compared to 31% non-abused,  $\chi^2(1, 799) = 34.015, P < .01$ . As discussed earlier, sexuality most likely arises from the identification of arousal cues during a critical developmental stage. If caretakers related to the child with violence or sexual abuse, there is a substantial probability that these will orient the individual to associate sexual arousal with violence and degradation.



Covariates appearing in the model are evaluated at the following values: Age\_groups = 1.99, What is your gender? = 1.48

**Figure 5** Light masochism scores for physically and/or sexually abused vs. non-abused participants when psychological abuse is present.

**Table 6** Heavy sadism.

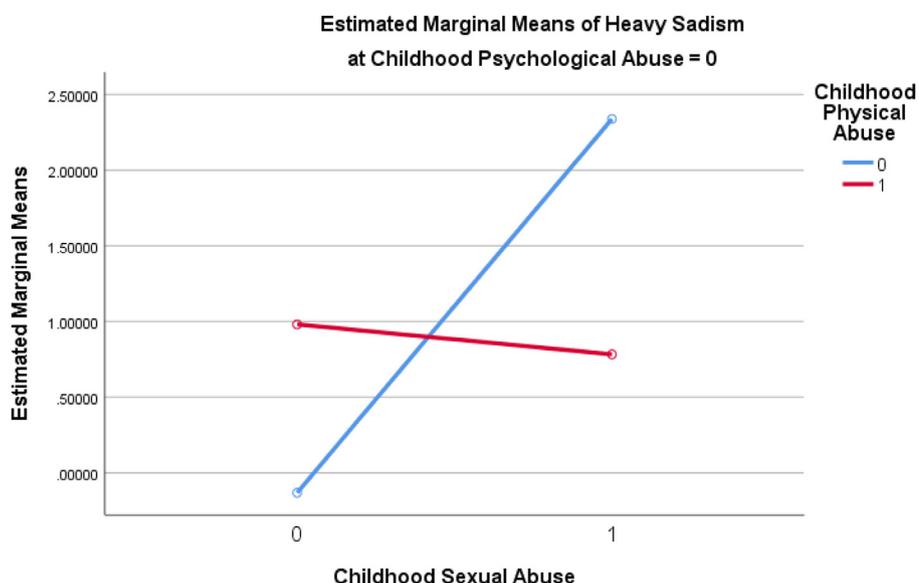
Age and gender covariates	F	P	Partial Eta Squared
Age and gender			
Gender	5.387	.020	.004
Age	14.744	.000	.024
Gender × Age	.726	.484	.001
Types of abuse separately			
Psychological abuse	1.169	.280	.001
Physical abuse	35.143	.000	.028
Sexual abuse	78.169	.000	.060
Psychological Abuse × Physical Abuse × Sexual Abuse			
Psychological abuse	19.955	.000	.016
Physical abuse	1.363	.243	.001
Sexual abuse	43.541	.000	.035
Psychological × Physical	.157	.692	.000
Psychological × Sexual	2.013	.156	.002
Physical × Sexual	35.343	.000	.028
Psychological × Physical × Sexual	12.080	.001	.010

## Discussion

The fundamental finding of this study is that childhood abuse is strongly associated with several forms of sadomasochism. This finding is consistent with previous studies that indicated that abuse endured during childhood may lead to deviations in the development of sexuality and even result in a paraphilic sexuality in adulthood. The current study parsed this relationship to show that psychological, physical, and sexual childhood abuse all contribute in distinct ways to the development of sadomasochistic sexual tendencies in men and women. By utilizing questionnaires along with masochism and sadism scale (Fisher et al., 2011) results were obtained that indicated that the presence of abuse was linked to

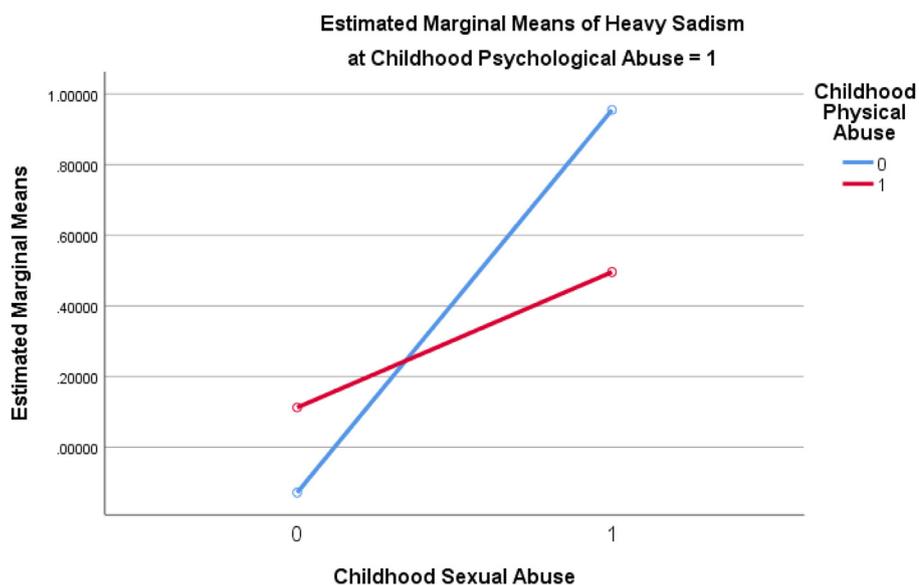
increases in several measures of masochism and sadism. The highlights of these findings are set forth below:

- the presence of abuse was connected with significantly higher heavy masochism, most highly for sexual abuse, followed by physical abuse, and psychological abuse;
- heavy sadism was not related with a history of psychological abuse but was connected with physical and sexual abuse when assessed separately;
- additionally, when analyzed individually, there was a significantly higher light sadism in the abused groups for all three types of abuse, most extremely for psychological abuse;



Covariates appearing in the model are evaluated at the following values: Age\_groups = 1.99, What is your gender? = 1.48

**Figure 6** Heavy sadism scores for physically and/or sexually abused vs. non-abused participants when psychological abuse is absent.



Covariates appearing in the model are evaluated at the following values: Age\_groups = 1.99, What is your gender? = 1.48

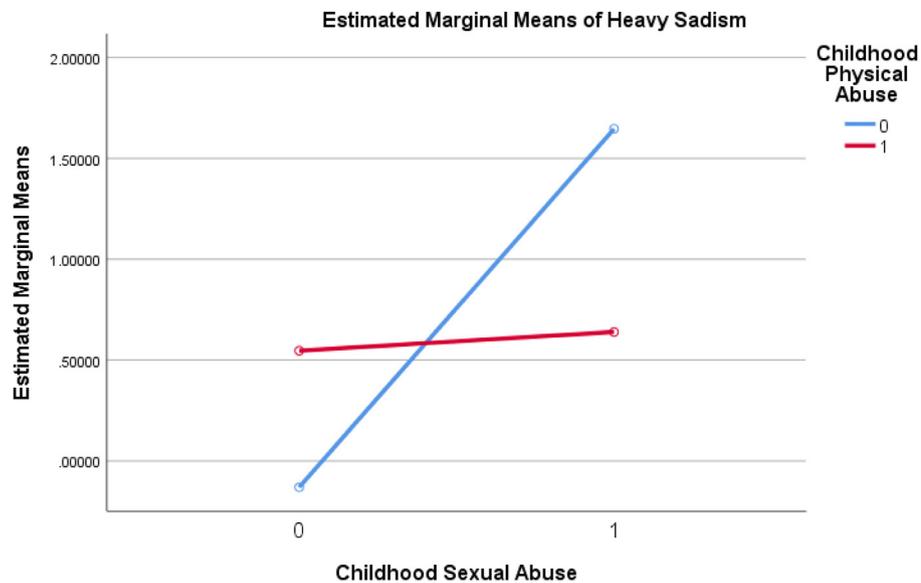
**Figure 7** Heavy sadism scores for physically and/or sexually abused vs. non-abused participants when psychological abuse is present.

- extreme masochism was more common in females than males, and in younger participants;
- light masochism was found to be more prevalent among females.

As previous studies have found that childhood abuse is a key predictor of paraphilias (Levenson and Grady, 2016; Maniglio, 2011), it is not surprising to find a significant link between abuse and the common paraphilia of sadomasochism. The current study successfully expanded upon previous studies to reveal that adult sadomasochistic

sexualities are linked to childhood physical, sexual or psychological abuse. And the specific type of abuse is associated with several levels of sadism and masochism examined in the study: heavy masochism, light masochism, heavy sadism, light sadism, and passive sadism.

This relationship was found to vary by age in that heavy masochism, light masochism, and heavy sadism were all more common in the youngest age group (18–30-year-olds) and least common in the oldest (46 and older). The same trend could be observed in passive sadism as well, although it was not significant in this case. Light sadism was the



Covariates appearing in the model are evaluated at the following values: Age\_groups = 1.99, What is your gender? = 1.48

**Figure 8** Heavy sadism scores for physically and/or sexually abused vs. non-abused participants.

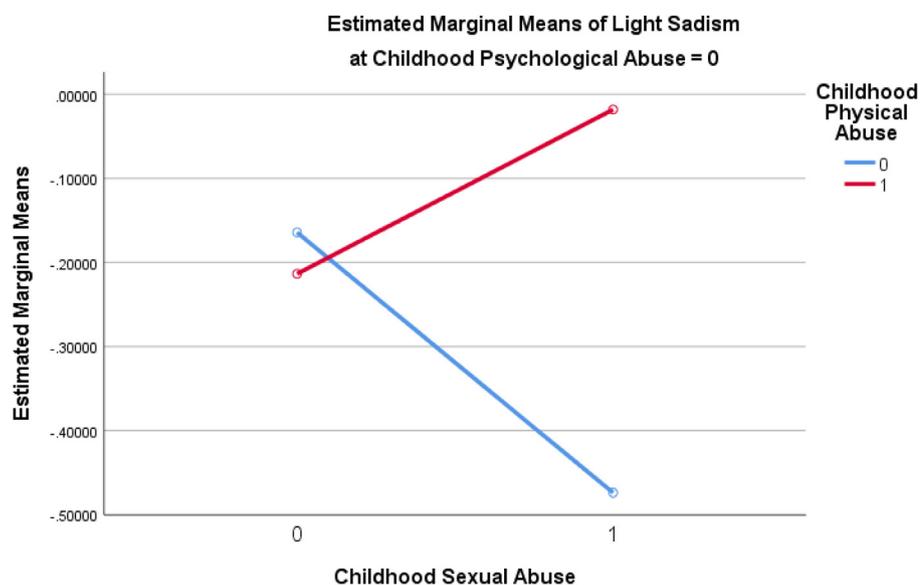
**Table 7** Light sadism.

Age and gender covariates	F	P	Partial Eta Squared
Age and gender			
Gender	8.676	.003	.007
Age	2.384	.093	.004
Gender × Age	.647	.524	.001
Types of abuse separately			
Psychological abuse	24.704	.000	.020
Physical abuse	12.194	.000	.010
Sexual abuse	6.180	.013	.005
Psychological Abuse × Physical Abuse × Sexual Abuse			
Psychological abuse	8.501	.004	.007
Physical abuse	.665	.415	.001
Sexual abuse	.165	.684	.000
Psychological × Physical	.303	.582	.000
Psychological × Sexual	.624	.430	.001
Physical × Sexual	.232	.630	.000
Psychological × Physical × Sexual	1.475	.225	.001

exception, being most prevalent in 31-45-year-olds and least so with the oldest age group. The finding that each sadomasochistic preference was uncommon with the oldest group is not surprising—a meta-analysis found that most sadomasochism practitioners fall within the youngest age group of the current study (Brown et al., 2020). The prevalence of knowledge of and exposure to sadomasochistic practices in modern times (Holvoet et al., 2017), and the fact that libido tends to decrease with age (Lehmiller, 2018) may have also played a hand in these findings.

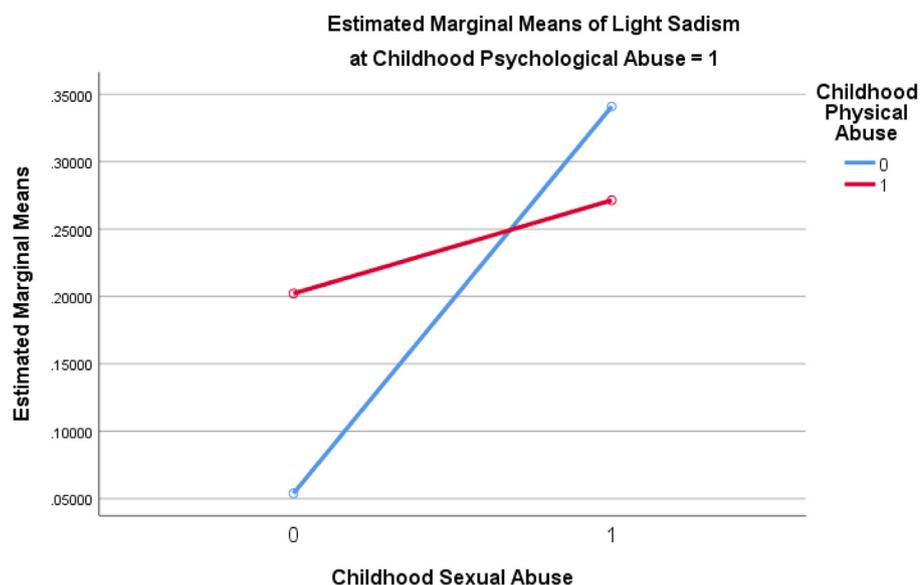
Concordant with some previous studies (Abrams and Stefan, 2012) women tended to experience greater degrees of masochism with sexual abuse. However, this gender difference was not uniform with the several measures of abuse and sadomasochism. For example, there was no significant

link between gender and heavy masochism, this was perhaps due to the small number of participants who scored highly on heavy masochism altogether (16.7% of the sample). Further exploratory analyses conducted only on the 16.7% of the sample that were classified as heavy masochists found that the majority (60%) were women, denoting that although heavy masochism was not a popular preference amongst the entire sample, women were the predominant demographic of heavy masochism. Light masochism was also found to be more prevalent amongst females, supporting previous demographic findings (Brown et al., 2020; Dawson et al., 2016; Joyal and Carpentier, 2017), as well as the notion that childhood abuse more often materializes into adult masochistic preferences in women (Abrams and Stefan, 2012). The opposite was true of both heavy sadism



Covariates appearing in the model are evaluated at the following values: Age\_groups = 1.99, What is your gender? = 1.48

Figure 9 Light sadism scores for physically and/or sexually abused vs. non-abused participants when psychological abuse is absent.



Covariates appearing in the model are evaluated at the following values: Age\_groups = 1.99, What is your gender? = 1.48

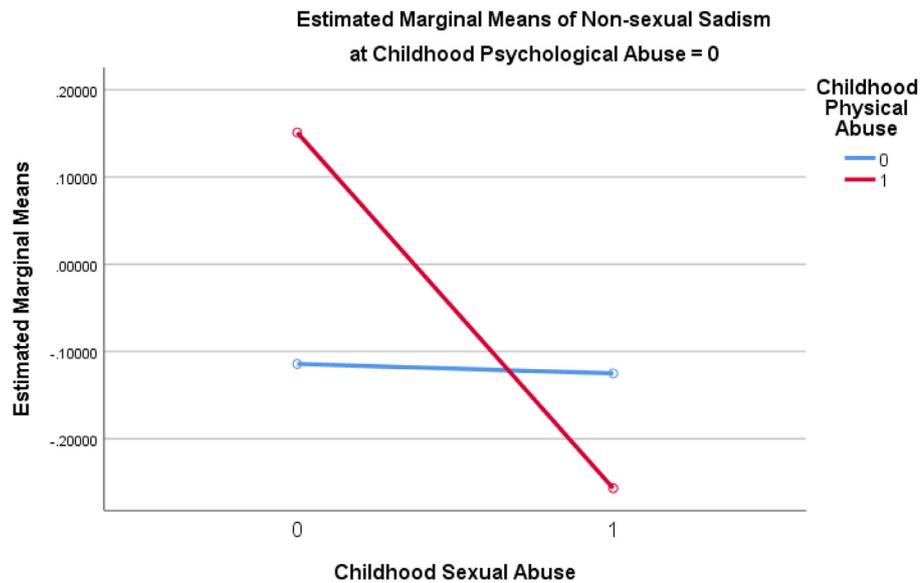
Figure 10 Light sadism scores for physically and/or sexually abused vs. non-abused participants when psychological abuse is present.

and light sadism, however. As has been demonstrated in previous research (Brown et al., 2020; Dawson et al., 2016; Joyal and Carpentier, 2017), male participants far outsourced their female counterparts when reporting interest in sadistic activities, drawing a sharp contrast in the ways that men and women develop and express their sexuality, particularly in the presence of abuse. Drawing an opposite effect to heavy masochism, men comprised 60% of the participants classified as “heavy sadists”.

The current study supports Abrams and Stefan’s (2012) findings that the type of childhood abuse has an effect on sexual preferences in adulthood, and demonstrated that a history of several types of abuse combined can impact preferences as well. Heavy masochism was highest when sexual abuse alone was present, as was heavy sadism, suggesting that sexual abuse is a strong predictor of the extreme forms of these paraphilias. This is supported by findings that the presence of sexual abuse alone was

**Table 8** Passive sadism.

Age and gender covariates	F	P	Partial Eta Squared
Age and gender			
Gender	2.721	.099	.002
Age	.618	.539	.001
Gender × Age	2.905	.055	.005
Types of abuse separately			
Psychological abuse	10.172	.001	.008
Physical abuse	5.154	.023	.004
Sexual abuse	5.960	.015	.005
Psychological Abuse × Physical Abuse × Sexual Abuse			
Psychological abuse	1.848	.174	.002
Physical abuse	.318	.573	.000
Sexual abuse	.027	.870	.000
Psychological × Physical	.014	.906	.000
Psychological × Sexual	1.515	.219	.001
Physical × Sexual	.078	.781	.000
Psychological × Physical × Sexual	1.091	.296	.001

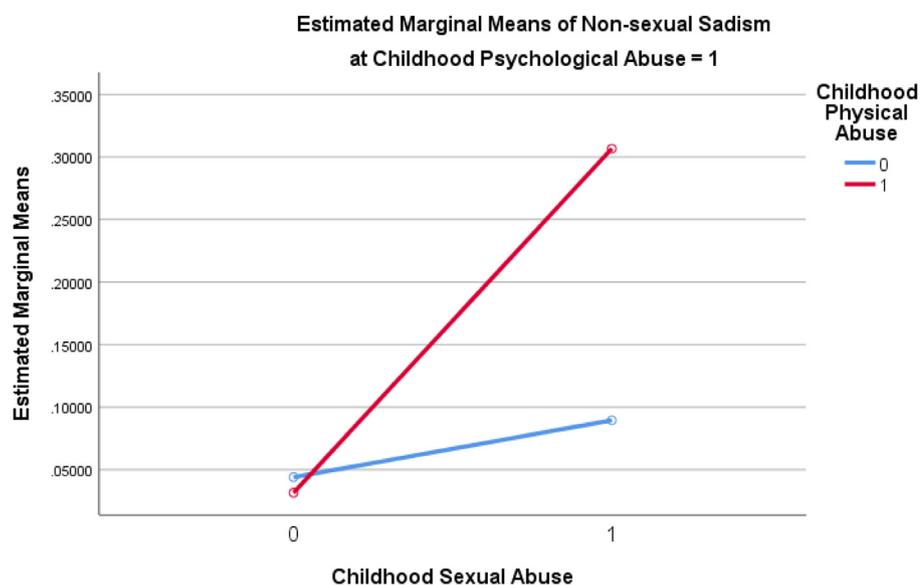


Covariates appearing in the model are evaluated at the following values: Age\_groups = 1.99, What is your gender? = 1.48

**Figure 11** Passive sadism scores for physically and/or sexually abused vs. non-abused participants when psychological abuse is absent.

associated with the lowest scores in light masochism and light sadism. However, for light sadism, psychological abuse seemed to reverse this effect and, in the presence of sexual abuse and absence of physical abuse, led to the highest scores whereas heavy sadism was at its lowest in the presence of psychological abuse alone. Furthermore, the current study found that the presence of all three types of abuse contributed to the highest scores for both light masochism and passive sadism, raising the question how can the same abuse conditions result in different paraphilic

preferences? This may be due to passive sadism being the only variable resulting from the EFA, which was not of a sexual nature, and may have additional predictors not featured in the current study. On the other hand, passive sadism was lowest as a result of the combination between sexual abuse and physical abuse in the absence of psychological abuse, indicating that the presence of psychological abuse is a strong factor driving passive sadism, and that the nature and gravity of psychological abuse requires further investigation.



Covariates appearing in the model are evaluated at the following values: Age\_groups = 1.99, What is your gender? = 1.48

**Figure 12** Passive sadism scores for physically and/or sexually abused vs. non-abused participants when psychological abuse is present.

### Limitations

The limitations of the current study are those found in most studies using opportunity samples for surveys. That is, participants are self-selected and there is no way to determine if there are any biases among those who choose to report their sexual history and those who decline to do so. In addition, the confidentiality provided to participants minimizes the ability to perform validity checks and other measures of response consistency.

### Future directions

Future research should aim to investigate the roles of other potential variables (such as sexual orientation or age at which the abuse occurred) in the relationship between childhood abuse and sadomasochism. It would be of interest to find whether abuse in early or late childhood would predict a heavier or lighter sadomasochism. In late childhood and even adolescence, there is an enhanced understanding of abuse and its meaning which, intuitively, would seem likely to result in repressed anger or aggression which would presumably manifest itself through sadistic tendencies. Whereas in early childhood, the lack of understanding may classify the abuse as something that occurs as a result of their own actions, which, in turn, may lead to a low self-esteem and masochistic tendencies. Additionally, considering the effects of gender in the current study, it would be worth investigating the potential effect of the gender of the abuser on sadomasochism.

### Conclusion

Substantial research has suggested that childhood abuse perturbs healthy development and may lead to disturbances

in sexuality including paraphilias. However, this research has not resolved or quantified the connection between childhood abuse and paraphilic sexual preferences such as sadomasochism. In fact, some recent studies have even challenged that such a relationship even exists (Casalheira et al., 2021). The current study supports and clarifies prior research on paraphilias that suggest that such sexual orientations have origins in childhood traumas such as abuse. It builds on this research by revealing that different types of childhood abuse can result in variations in adult sexual preferences. These variations include differences in both the degree and type of preference. Sexual abuse was most associated with a preference for heavy masochism and heavy sadism. And psychological abuse was linked to an increase in preferences for light masochism and light sadism. Physical abuse was the least common precursor for both sadistic and masochistic preferences. Additionally, masochism of all degrees was more prevalent amongst females while heavy and light sadism were both more prevalent amongst male participants.

This study provides cogent evidence that childhood abuse and sadomasochistic preferences are linked. Most importantly, it provides evidence that the types of abuse - sexual, physical or psychological—play differential and interacting roles in the origin of these paraphilias. These findings are consistent with models of sexual orientation that hold that lifelong preferences such as homosexuality, heterosexuality, and paraphilic sexuality are crystalized during critical periods in early development.

### Ethical Declaration

My co-authors for this manuscript are Dr. Mike Abrams, PhD (first author) and Marija Milisavljevic Grdinic, M.A. (third author), with myself as second author. I assure that all authors agree with the content of the manuscript as well

as the order of authorship, and I take responsibility for informing my co-authors of editorial decisions, reviews and any revisions. We declare that participants were treated in accordance with established ethical standards. Due to the nature of participation (online survey) participants' identities remain anonymous and participants were provided informed consent and acknowledged that they may rescind their participation at any moment. Participants were required to agree with the informed consent in order to continue.

## Disclosure of interest

The authors declare that they have no competing interest.

## Appendix A. Types of Abuse Questionnaire

1. What is your age?
2. What is your gender?
  - a. Male
  - b. Female
  - c. Transgender
  - d. Intersex
  - e. Other
3. What is your sexual orientation?
  - a. Heterosexual
  - b. Gay/Lesbian
  - c. Bisexual
  - d. Asexual
  - e. Other
4. If you chose "other", please briefly describe your sexuality.
5. I was frequently made to feel ashamed or worthless as a young child.
  - a. Never
  - b. Once
  - c. Frequently
  - d. Always
6. I was often ridiculed or by others when growing up.
  - a. Never
  - b. Once
  - c. Frequently
  - d. Always
7. As a youth I would be very assertive with people who got out of line.
  - a. Never
  - b. Once
  - c. Frequently
  - d. Always
8. In my youth I had no problem being harsh with people who did wrong.
  - a. Never
  - b. Once
  - c. Frequently
  - d. Always
9. When I was a child, I often witnessed violence or cruelty.
  - a. Never
  - b. Once
  - c. Frequently
  - d. Always

10. I was physically abused by a close family member as child.
  - a. Never
  - b. Once
  - c. Frequently
  - d. Always
11. When I was a child, a family member would abuse me in ways that seemed to be sexually motivated.
  - a. Never
  - b. Once
  - c. Frequently
  - d. Always

## Appendix B. Masochism and Sadism Survey Items adapted from Fisher et al. (2011)

Masochism Items ("L" denotes light masochism, "H" denotes heavy masochism):

1. If you were insulted or humiliated by a person to whom you felt sexually attracted, did this ever increase their attractiveness? (L)
  - a. Yes
  - b. No
  - c. Unsure
2. Has imagining that you were being humiliated or poorly treated by someone ever excited you sexually? (L)
  - a. Yes
  - b. No
3. Has imagining that you had been injured by someone to the point of bleeding ever excited you sexually? (H)
  - a. Yes
  - b. No
4. Has imagining that someone was causing you pain ever aroused you sexually? (H)
  - a. Yes
  - b. No
5. Has imagining that someone was choking you ever excited you sexually? (H)
  - a. Yes
  - b. No
6. Has imagining that you have become dirty or soiled ever excited you sexually? (L)
  - a. Yes
  - b. No
7. Has imagining that your life was being threatened ever excited you sexually? (H)
  - a. Yes
  - b. No
8. Has imagining that someone was imposing on you heavy physical labor or strain ever excited you sexually? (L)
  - a. Yes
  - b. No
9. Has imagining a situation in which you were having trouble breathing ever excited you sexually? (H)
  - a. Yes
  - b. No
10. Has imagining that you were being threatened with a knife or other sharp instrument ever excited you sexually? (H)
  - a. Yes

- b. No
11. Has imagining that you were being tied up by somebody ever excited you sexually? (L)
- a. Yes
- b. No

Sadism Items ("L" denotes light sadism, "H" denotes heavy sadism, "P" denotes passive sadism):

12. Did you ever like to read stories about or descriptions of torture? (P)
- a. Yes
- b. No
13. Do you usually re-read a description of torture several times? (P)
- a. Yes
- b. No
14. Were you: (P)
- a. Very interested in descriptions of torture
- b. A little interested
- c. Not at all interested
- d. Never read such descriptions
15. Between the ages of 13 and 16, did you find the sight of blood: (L)
- a. Exciting
- b. Only pleasant
- c. Unpleasant
- d. Did not affect you in any way
16. Has beating somebody or imagining that you are doing so ever excited you sexually? (H)
- a. Yes
- b. No
17. Have you ever tried to tie the hands or legs of a person who attracted you sexually? (L)
- a. Yes
- b. No
18. Has cutting or imagining to cut someone's hair ever excited you sexually? (L)
- a. Yes
- b. No
19. Has imagining that you saw someone bleeding ever excited you sexually? (H)
- a. Yes
- b. No
20. Has imagining someone being choked by yourself or somebody else ever excited you sexually? (H)
- a. Yes
- b. No
21. Has imagining yourself or someone else imposing heavy physical labor or strain on somebody ever excited you sexually? (L)
- a. Yes
- b. No
22. Has imagining that someone was being ill-treated in some way by yourself or somebody else ever excited you sexually? (L)
- a. Yes
- b. No
23. Has imagining that you or someone else were causing pain to somebody ever excited you sexually? (H)
- a. Yes
- b. No

24. Has imagining that you or somebody else were threatening someone's life ever excited you sexually? (H)
- a. Yes
- b. No
25. Has imagining that someone other than yourself was crying painfully ever excited you sexually? (L)
- a. Yes
- b. No
26. Has imagining that someone other than yourself was dying ever excited you sexually? (H)
- a. Yes
- b. No
27. Has imagining that you or someone else were making it difficult for somebody to breathe ever excited you sexually? (H)
- a. Yes
- b. No
28. Has imagining that you or someone else were tying up somebody ever excited you sexually? (L)
- a. Yes
- b. No
29. Has imagining that you or somebody else were threatening someone with a knife or other sharp instrument ever excited you sexually? (H)
- a. Yes
- b. No
30. Has imagining that someone was unconscious or unable to move ever excited you sexually? (H)
- a. Yes
- b. No
31. Has imagining that someone had a very pale and still face ever excited you sexually? (L)
- a. Yes
- b. No

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