

Title: Creating evil: can sadism be induced?

Running head: Creating evil

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Abstract

Sadism, as with other dark personality features, is generally considered to be a relatively stable trait. However, there has been little examination of the extent to which sadism may also be a state dependent characteristic. This research examines the extent to which sadistic interest or tendencies can be influenced through a specifically developed and very brief mood induction procedure. An anonymous online study, comprising questionnaires and a short picture-based induction procedure was completed by 323 participants. Participants were randomly assigned to an experimental or control condition by the hosting software, Qualtrics. Analysis showed that increased sadistic interest was reported by those in the experimental condition who had higher levels of baseline sadism. The findings indicate that a brief and simple procedure can be used to enhance pre-existing sadistic interest. Further research is needed to examine whether more immersive inductions produce a greater or lasting effect, and to understand the extent to which these might influence behaviour.

1. Introduction

The Big Five is the most dominant model of personality (Goldberg, 1993; Hogg & Vaughan, 2018; Jordan, 2011), however, it has been proposed that a second set of malevolent traits – the dark tetrad – also exist (Kaufman et al., 2019; Paulhus & Williams, 2002; Holt, Meloy & Strack, 1999; Pajevic et al., 2018; Plouffe, Saklofske & Smith, 2017). While there is debate about the extent to which the dark traits (psychopathy, narcissism, Machiavellianism, sadism) represent poles of existing personality facets (Furnham, Richards & Paulhus, 2013), research has indicated that each of the dark traits have distinct features. For example, psychopathy is characterised by antisocial behaviour and a lack of remorse (Patrick, Fowles & Kruger, 2009; Stone & Brucato, 2019), whereas sadism reflects enjoyment of humiliating others by intentionally inflicting physical, psychological or sexual pain (Davies & O'Meara, 2007).

Personality theory is most typically based on a trait approach, suggesting stable and enduring characteristics (Kassin, 2003). However, in the case of sadism, researchers have argued that situational factors may play an important role in facilitating or repressing sadistic expression. For example, individuals have been reported to engage in 'out of character' sadistic behaviour under set conditions (e.g. in a prison context, Haney & Zimbardo, 1998, or in war, Zimbardo, 2004). Further, those who engage in sadistic behaviour in everyday activities have been shown to be more likely to attack individuals who do not fight back and to stop if the 'victim' shows an aggressive response (Buckels, 2012). In addition, men and women with higher trait sadism have been found to be more likely to engage in more harmful dominating behaviours when threatened (Pfattheicher & Schindler, 2015).

While population based observations suggest that individuals may engage in sadistic behaviours under certain circumstances (e.g. neighbours killing and torturing former friends as seen in the Rwandan Genocide; Zimbardo, 2009), many reports suggest that these acts, whilst brutal, may not be sadistic in motivation (i.e. there is no pleasure derived from the experience). Indeed, individuals including soldiers who have engaged in 'sadistic acts' have been reported to be visibly upset during the act (e.g. Baumeister & Campbell, 1999) and to have experienced anxiety and depression (Browning, 1992; Lifton, 1986), PTSD (Baumeister & Campbell, 1999) and nightmares (Gibson & Haritos-Fatouros, 1986) or to have committed suicide rather than following the orders of mass killings (Baumeister & Campbell, 1999). Additionally, conformity experiments have shown that individuals who consider torture to be wrong and derive no enjoyment from it, may still follow orders to inflict harm on another human being (Baumeister & Campbell, 1999). However, it has been suggested that authoritarian institutions like the military, are especially prone to attracting sadistic individuals since these institutions enable them to live out their tendencies (Zimbardo, 2004). Studies of the behaviour of military personnel at Abu Graib (which included systematic torture of prisoners), suggest that the actions demonstrated were not only tolerated but ordered (Wittmann, 2007). Deployed soldiers had a lack of training and experience as prison guards, no knowledge of the Geneva Conventions and simply followed the orders of their superiors (Gourevitch & Morris, 2008; Hersh, 2004).

Evidence from the widely cited Stanford Prison Experiment (e.g. Haney, Banks & Zimbardo, 1973) provides some tentative evidence that situational factors may lead

people to act in a sadistic way. According to Haney and Zimbardo (1998), although all guards humiliated the prisoners and became more aggressive over time, only a small group seemed to enjoy it. However, they further noted that there was no indication that the guards who behaved sadistically had any predisposition for that kind of behaviour. It is important to note that subsequent reports indicate that the researchers played a role in influencing guard's actions (Griggs, 2014) with lenient guards supposedly reprimanded (e.g. Bartels, Milovich & Moussier, 2016). A subsequent study (the BBC prison experiment) did not find any 'prison' situational influences on sadistic traits (Griggs, 2007), rather the 'prisoners' formed a cohesive group and neither the 'prisoners' nor the 'guards' engaged in any submissive or abusive behaviours as described by the Stanford Prison Experiment (Bartels et al., 2016).

The relationship between gender and sadistic behaviour in everyday life has shown mixed results. While some research has found that men endorse higher levels of sadism (Sest & March 2017; Tran et al., 2018) no gender differences were found in a study of college students (Gibb & Devereux, 2014). Similarly, research examining sadistic fantasies has either found little association with gender or that women may experience more sadistic fantasies than their male counterparts (Fedoroff, 2008; Hsu et al., 1994). In relation to online behaviours, although men have been found to engage in higher levels of trolling behaviour (Buckels et al., 2014; Craker & March, 2016), gender was not identified as a predictor of trolling (March, 2019). In contrast, the relationship between age and sadistic attitudes and behaviour has received little direct attention and only scant indirect consideration. For example, cyberbullying was found to be lower in older college students (Gibb & Devereux, 2014), and

sadistic personality disorder has been found to be more prevalent in younger soldiers (Reich, 1993). However, there are many reasons why this might be the case.

From the available research it would appear that sadistic behaviours may be influenced by environmental and situational factors, however only small numbers of the population actually engage in these actions in order to derive pleasure (Baumeister & Campbell, 1999; Browning, 1992; Gibson & Haritos-Fatouros, 1986; Lifton, 1986). Further, the existing research has not been specifically designed to assess the extent to which sadism might be intentionally induced and whether some individuals may be more susceptible than others.

This study aims to examine whether sadistic behaviour can be induced using a simple and quick procedure and to determine the extent to which trait sadism influences this.

This study has three hypotheses:

- 1) Sadism can be influenced through a specifically developed brief induction procedure.
- 2) Sadism induction will depend on the level of trait sadism reported by an individual.
- 3) Sadism induction will be influenced by the age and gender of the participants.

2. Methods

2.1. Participants

Participants were recruited via social media, direct email and via the local university department 'participant pool'. Participants were required to be competent in written English and to be 18 years old or above. For the entire sample, the mean age of participants was 29 (range 18-69) with the majority female ($n = 323$; 64.7%). The vast majority of participants were white ($n = 322$; 84.2%), around a third were single ($n = 316$; 31.9%) and most were educated to either an A-Level or degree level ($n = 323$; 95.4%). The majority of participants were either in full time employment or in full time education ($n = 318$; 70%).

2.2. Design

The study was a voluntary online survey using the Qualtrics platform employing a cross-sectional design. Participants were randomly assigned either to the induction ($n = 161$) or the control ($n = 161$) group with data from one participant missing.

2.3. Materials

The study consisted of four components, a demographics questionnaire (e.g. age, gender, employment status), the Varieties of Sadistic Tendencies (used to determine self-reported baseline sadism levels), the induction/control images with associated empathy ratings and the Short Sadistic Impulses Scale (used to determine post induction self-reported sadism). The use of two separate self report sadism measures was in an effort to minimise any memory effect for items over the very short test-retest interval.

Varieties of Sadistic Tendencies (VAST) is a 16 item scale developed to assess sadistic personality traits (Boyle, Saklofske & Matthews, 2015; Paulhus et al., 2011).

It is scored on a 5-point Likert scale ranging from “1 = strongly disagree” to “5 = strongly agree” and includes statements including “In video games, I like the realistic blood spurts”, “I enjoy physically hurting people” and “I enjoy seeing people suffer”. The authors report two subscales (vicarious and direct sadism) however for this study a single total score has been used. Previous research has shown the overall scale to be reliable (Cronbach’s $\alpha = .85 - .92$; Paulhus & Jones, 2015), which was slightly lower in the current sample ($\alpha = 0.79$).

Short Sadistic Impulse Scale (SSIS) is a 10-item self-report scale developed as a general sadistic personality screening tool (O’Meara, Davies & Hammond, 2011). It is scored on a 5-point Likert scale ranging from “1 = not at all like me” to “5 = very like me”. Statements include: “Hurting people would be exciting,” “I would not intentionally hurt anyone” and “I enjoy seeing people hurt”. The authors report a Cronbach’s alpha coefficient of 0.86 (O’Meara et al., 2011), and in this study $\alpha = 0.91$, indicating high internal reliability for this scale.

Induction / control pictures were adapted from research on empathy impairments in individuals with eating disorder (Jackson, Brunet, Meltzoff, & Decety, 2006, Jackson, Meltzoff, & Decety, 2005). While Brewer et al. (2018) used 160 photographs of hand or feet either depicting a painful or a neutral stimulus this study only used 40 pictures of hands. Those in the induction condition were presented 20 images of hands depicting scenes where accidental or self-inflicted injuries through an everyday object occurred (e.g. figure 1), while the control group were presented with 20 matched neutral pictures (e.g. figure 2) (Jackson, Brunet, Meltzoff, & Decety, 2006, Jackson, Meltzoff, & Decety, 2005). For all pictures, participants were required to complete an

empathy rating (using a 5 point scale). This was designed to encourage participants to consider how the ‘other’ might feel in order to maximise their attention to the pictures and the likely effectiveness of the intervention. The order of the pictures in each condition was randomised and not timed, leaving it up to the participant how long they looked at each picture. Each picture was only presented once.

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2.4. Procedure

Ethical approval for the study was provided by a university departmental ethics committee. Participants were provided with information that included an outline of the induction component but were told that the purpose of the study was to examine personality and bullying. They were notified that they could withdraw from the study at any time by exiting the web page. In order to access the study, participants were required to give informed consent and confirm they were 18 years or older. Participants were presented with a demographics section followed by the VAST.

Participants were then randomly allocated to the induction or control condition. Following the picture set, participants were asked to complete the SSIS. At the end of the study participants were fully debriefed with information about the study focus on the possible induction of sadistic responses.

2.5. Data Analysis

In order to create groups to test for group difference, the VAST was spilt into three levels (low, scores from 1 to 2.49; medium, scores from 2.5 to 3.49 and high scores 3.5 and above). These ranges were based on ranges given by Paulhus & Jones (2015) but adapted for use with a total score rather than the subscale scores reported by Paulhus & Jones (2015). An ANCOVA was conducted to examine the effect of the experimental condition on post sadism scores whilst accounting for trait sadism. A moderation regression was subsequently used to investigate how trait sadism moderated this effect.

3. Results

As expected (given the general population sample in this study), the mean VAST score was not normally distributed. However, as the group sizes did not differ it was decided to progress with independent t-tests despite this (Salkind, 2010). Analysis revealed that there was no significant difference between the groups (induction vs control) in relation to baseline sadism (mean VAST score; $t(320) = -.371, p > .05$). In addition, no significant differences were found between the groups for age ($t(309) = 1.040, p > .05$), gender ($t(320) = .000, p > .05$), education ($t(320) = 1.621, p > .05$), relationship status ($t(313) = -.249, p > .05$), ethnicity ($t(319) = -.292, p > .001$) or

employment ($t(315) = .780, p > .05$). It was therefore concluded that the randomisation had produced two sufficiently matched groups.

Analysis (ANOVA) indicated that baseline self reported sadism (VAST total score) was significantly impacted by age ($F(38, 165) = 3.4, p < .001$; effect size 43.6%), gender ($F(1, 165) = 11.2, p < .05$; effect size 6.4%) and education ($F(5, 165) = 2.7, p < .05$; effect size 7.6%). Results revealed that younger (aged 18 to 35) participants ($M = 2.6$), males ($M = 2.9$) and participants with lower education ($M = 2.6$) had higher trait sadism scores than older ones (aged 36 to 69; $M = 2.5$), females ($M = 2.4$) and higher educated ($M = 2.5$) participants. No significant differences were found for the VAST based on employment status, relationship status or ethnicity.

To assess the extent to which the experimental condition impacted sadism, the SSIS data (by condition) was subjected to a Welch ANOVA (Brace, Kemp & Snelgar, 2016) as the SSIS data violated homogeneity of variance assumptions ($p < .05$). This revealed no significant difference between the conditions ($F(1, 316.7) = 1.83, p > .05$). This 'trait' sadism effect was further examined using a one-way between groups ANOVA on a 3-way split VAST (low, scores from 1 to 2.49; medium, scores from 2.5 to 3.49 and high scores 3.5 and above) with the mean SSIS as the dependent variable. As expected, this produced a highly significant result with a very large effect size ($F(2, 318) = 524.12, p < .001$; effect size 76.7%). Thus, baseline self-reported sadism was highly associated with post condition self-reported sadism.

Examining the effect of the condition on post induction sadism scores when controlling for baseline sadism (ANCOVA) showed the induction to have a

significant impact with a medium effect size ($F(1, 318) = 11.73, p < .001$; effect size 3.6%). Post hoc Tukey HSD test revealed that all groups differed significantly from each other at $p < .001$ levels for low vs medium and low vs high VAST scores and at $p < .05$ for high vs medium VAST scores. A subsequent moderation regression revealed a significant interaction ($b = -.212, t(318) = -2.24, p < .05$) between pre-condition sadism score and the experimental group with a confidence interval that does not include zero (see figure 3, table 1). Thus, those with the highest self reported baseline scores were most influenced by the experimental sadism induction.

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In order to examine the possible effect of gender on self-reported sadism (SSIS) when accounting for baseline self-reported sadism (VAST) in the induction group, a multiple regression analysis was undertaken. As shown in table 2, the model containing baseline self-reported sadism scores and gender was significant with regard to post induction self reported sadism ($F(2, 158) = 227.71, p < .001; R^2 =$

.742). Both trait sadism ($p < .001$) and gender ($p < .05$) contributed significantly to the model with females being impacted more than males (see figure 4).

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In order to examine the possible effect of age on self-reported sadism (SSIS) when accounting for baseline self-reported sadism (VAST) in the induction group, a multiple regression analysis was undertaken. Whilst the model containing age and baseline sadism scores was significant with respect to post condition self-reported sadism scores ($F(2, 152) = 270.69, p < .001; R^2 = .781$), as seen in table 3, only trait sadism ($p < .001$) contributed significantly to the model.

INSERT TABLE 3

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4. Discussion

This study shows that whilst general levels of sadism might be stable over time - suggesting the existence of trait sadism; a simple and brief 'sadism induction' can enhance the level of self reported sadism amongst those with higher levels of baseline sadism. This induction effect suggests the presence of a state dependent component of sadism, at least amongst some individuals. This conditional state dependent factor may be important in understanding who is most susceptible to the influence of external factors in relation to their (harmful) behaviour towards others (c.f. Haney & Zimbardo, 1998; Zimbardo et al., 2000; Zimbardo, 2009). Although the images appear to act to stimulate an existing predisposition towards enjoying others experiencing pain, the mechanism underpinning this effect needs further investigation. It is possible that the images work on an emotional level through simply provoking pleasure or enjoyment from the apparent pain viewed, however it may be that the images trigger a more elaborate process in which the viewer engages in fantasy (or recall) of other events, which increases subsequent sadistic intent (and possibly urge). It may be that utilising a form of Interpersonal Process Recall (Kagan & Kagan, 1997) could be used to examine the ways in which participants are cognisant of the process triggered by the induction.

As has been previously found, self-reported sadism was significantly higher for men in this study (March, 2019; Sest & March 2017; Tran et al., 2018), and as with previous research (e.g. March, 2019) this study contained more women than men. It is notable that women with higher baseline levels of self reported sadism showed a greater impact of the 'sadism induction'. Thus in conjunction with previously reported similarities in the frequency of sadistic fantasies (Fedoroff, 2008; Hsu et al., 1994) and cyberbullying (Gibb & Devereux, 2014) between men and women, areas of

similarity and difference could be explained by higher numbers of female participants, women having lower base sadism, and women with higher baseline scores being more susceptible to the induction.

In line with previous research (e.g. Chabrol et al., 2009; Gibb & Devereux, 2014; Myers, Burket & Husted, 2006), this study found that younger participants were more likely to show high trait sadism at baseline, although age itself did not contribute to self reported sadism scores following the induction. However, these age findings need to be considered in the context of the sample which consisted of 74.6% participants under the age of 36. Lower education was also associated with higher self reported sadism at baseline which has been indicated in some previous research examining personality disorders (e.g. Torgersen, Kringlen & Cramer, 2001).

The simple yet novel sadism induction approach reported here provides the first evidence for the experimental ‘enhancement’ of sadistic ‘interest’. However, it is important to acknowledge that it may be helpful to use the same measure at both pre and post induction despite the very short test-retest time interval or to consider other measures for baseline or post induction measurement (e.g. Dinić et al, 2020). It is also important to recognise that the small number of images used here is likely to have limited the potential impact of the induction procedure. As such, it is suggested that further work is conducted to examine the potentially differential impact of the induction procedures. While exposure to pictures alone has been used to examine in other areas e.g. mood and empathy (Brewer et al., 2018), more immersive approaches such as combining pictures with music or presenting video clips has also been used for induction (Daros et al., 2018; Guhn et al., 2018; Guhn et al., 2019). Thus

researchers could examine the impact of different genres of music alongside both sadistic and control images and the impact of specific sounds (e.g. screams with sadistic images and neutral sounds with control images). Given that video clips may be particularly effective tools to induce emotion (Fernández-Aguilar et al., 2018), showing video clips depicting others being hurt, humiliated or being subjected to violence or showing the 'victim's' face with a painful expression or a perpetrator enjoying themselves whilst hurting a victim are worthy of examination. Using video games for sadism induction could be worth investigating since everyday sadism has been found to be associated with the interest in violent video games (Greitemeyer, Weiß & Heuberger, 2018). In addition, future research should ask respondents for some form of 'pleasure' or 'enjoyment' rating for each stimulus to examine the extent to which core feature of sadism are explicitly responsible for changes noted.

The online delivery enabled easy access to the study for participants, although further research in more closely managed conditions may be important. This could help ensure that participants complete the tasks with minimal distraction and without other stimuli being present (e.g. background music), which could interfere with the induction. However, the potential importance of anonymity, which may serve to facilitate some forms of attitude expression or behaviour, should not be overlooked. Anonymity has been proven to be important in nurturing sadistic or aggressive behaviour as seen in Halloween costume wearing amongst elementary school children leading to aggressive play (Zimbardo, 2004), or the use of mirrored sunglasses by the police, military and during the Stanford Prison Experiment, which led to an increase in sadistic behaviour (Zimbardo, 2009).

Finally, it is possible that there are other important factors which might impact on reactions toward the induction process or directly interact with sadism interest (e.g. depression, aggression, other personality or dark personality factors). Thus, future research should assess other factors such as these to understand what and how other characteristics might play a role.

4.1. Conclusion

This study has demonstrated that underlying sadistic interests and tendencies can be increased, especially amongst those with higher baseline levels, through a very simple and short induction procedure. These findings are highly promising for future research on the induction of sadism and provide a platform from which to examine the impact of different induction methods and the period over which such induction might have an effect.

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Table 1: Impact of experimental condition and baseline sadism scores on post condition sadism scores.

	b	SE B	t	<i>p</i>
Constant	2.70	.023	91.25	.000
VAST	1.47	.047	31.16	.000
Experimental Group	-.204	.059	-3.45	.001
VAST x Experimental Group	-.212	.0945	-2.24	.026

Note. $R^2 = .75$

Table 2: Impact of gender and baseline sadism scores on post condition sadism scores.

	b	SE B	β	<i>p</i>
Constant	-1.705	.303		.000
VAST	1.632	.079	.887	.000
Gender	.200	.100	.086	.046

Note. $R^2 = .74$

Table 3: Impact of age and baseline sadism scores on post condition sadism scores.

	b	SE B	β	<i>p</i>
Constant	-.977	.179		.000
VAST	1.366	.059	.880	.000
Age	.003	.004	.026	.490

Note. $R^2 = .78$

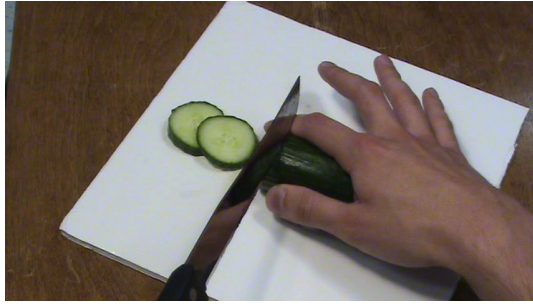


Figure 1: Example of sadism induction image

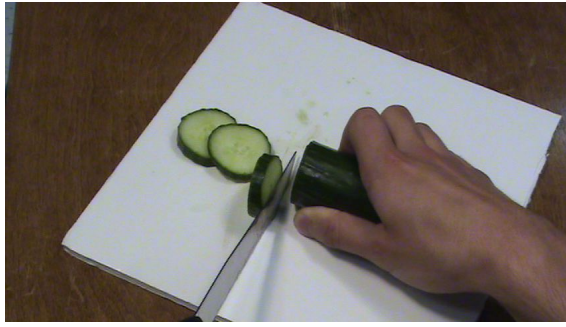


Figure 2: Example of control condition image

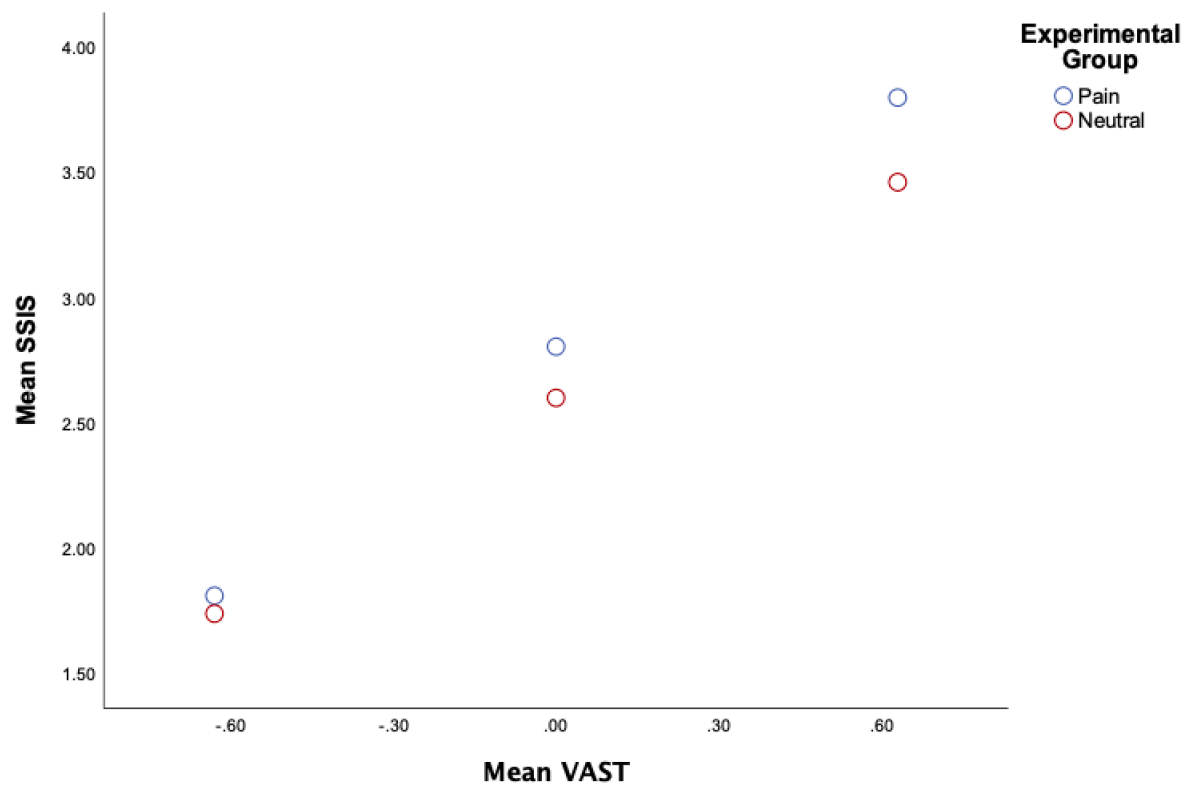


Figure 3: Impact of experimental condition and baseline sadism scores on post condition sadism scores.

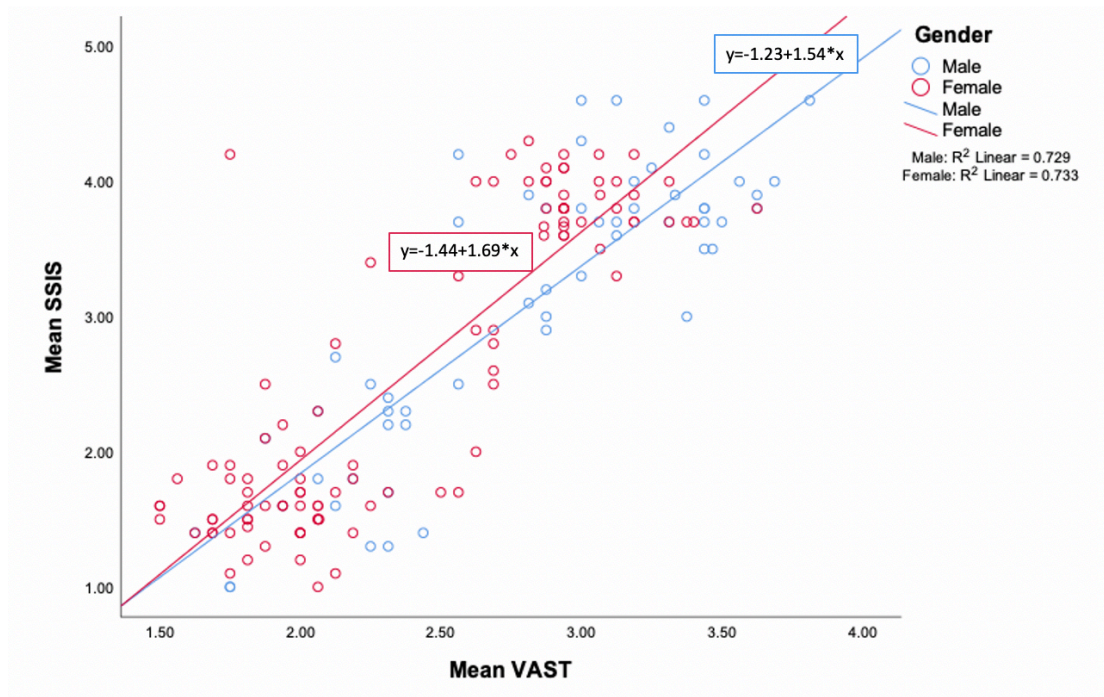


Figure 4: Impact of gender and baseline sadism scores on post condition sadism scores.