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Lyons, M, Rowe, A, Waddington, R and Brewer, G (2021) Situational and Dispositional Factors in Rape Cognitions: The Roles of Social Media and the Dark Triad Traits. Journal of Interpersonal Violence: concerned with the study and treatment of victims and perpetrators of physical and sexual

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Situational and Dispositional Factors in Rape Cognitions: The Roles of Social Media and the Dark Triad Traits

Journal of Interpersonal Violence
2022, Vol. 37(11-12) NP10345–NP10361
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DOI: 10.1177/0886260520985499
journals.sagepub.com/home/jiv



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Abstract

Previous research has established the importance of socially aversive personality traits (i.e., the Dark Triad) in rape cognitions (operationalized here as rape-supportive attitudes, rape victim empathy, and hostile masculinity). However, less is known about how sexist social media content influences attitudes toward rape cognitions depending on the personality of the individual. In an online experiment, after completing the Short Dark Triad-3 questionnaire, participants ($N = 180$) were primed with either sexist or neutral tweets, rating them for acceptability, humor, rudeness, and ignorance. Participants then completed scales for rape-supportive attitudes, victim empathy, and hostile masculinity. Sexist tweets were rated as significantly less acceptable and humorous, and more rude and ignorant than neutral tweets. However, those high in the Dark Triad found the sexist tweets as funny and acceptable. Overall, exposure to the sexist tweets did not increase rape cognitions. Moreover, the Dark Triad traits had similar significant, positive correlations with rape-supportive attitudes, victim blame, and hostile masculinity in both sexist and neutral tweet conditions. Multiple regression analyses (controlling for gender) revealed that psychopathy was the strongest positive predictor for increased rape cognitions. Findings suggest that short exposure to sexist

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social media content may not influence rape cognitions, but that dispositional factors such as psychopathy are more important.

Keywords

Dark Triad, rape cognitions, social media, twitter, priming

Introduction

Sexual violence against women represents a serious global issue, varying in severity from psychological intimidation to rape (Abrahams et al., 2014; Krug et al., 2002). Individual-level risk factors for perpetration include rape-supportive cognitions (i.e., false or maladaptive beliefs about women; Ryan, 2004), such as rape myth acceptance, victim blame, and hostile masculinity (Russell & King, 2020; Ryan, 2004; Trottier et al., 2020). These rape-supportive cognitions have been related to dispositional factors such as several socially aversive personality traits (Jonason et al., 2017; Kasowski & Anderson, 2019; LeBreton et al., 2013), with similar relationships across men and women (Jonason et al., 2017). There has, however, been much less research investigating the potential interaction between dispositional and situational factors in the context of rape cognitions. The strength of dispositional factors may depend on the environmental cues available to the individual (Diehl et al., 2018). The online social media platforms provide a new, potentially important environment for molding the users' sexual cognitions (Fox et al., 2015). In the present study, we investigate the relative contribution of social media and aversive personality traits on rape cognitions.

Sexual Violence and Social Media

One important situational factor that influences rape cognitions is exposure to sexualized or sexist media content (e.g., jokes, films, adverts, music videos; LaCroix et al., 2018; Mallett et al., 2016; Ward, 2016), possibly via the activation of harassment-related social norms (Galdi et al., 2014). Sexual violence toward women is a common feature in a variety of media contexts, including online social media (Lewis et al., 2019; Mantilla, 2013; Tileagă, 2019). Social media platforms such as Twitter distribute almost half a million tweets containing sexist slurs on a daily basis (Felmlee et al., 2019) and women are often subjected to campaigns of "gendertrolling" (i.e., insulting women in ways that are specific to their gender) involving credible death and rape threats, gender-based insults, and vicious language (Mantilla, 2013). Consequently, online sexual violence threatens both women's safety and their

opportunity to participate in public discussions (Carlson, 2018; Tileagă, 2019). More benign forms of online misogyny (e.g., sexist jokes) are also common. These are typically seen as more acceptable than overt aggressive sexism or gendertrolling (Mallett et al., 2016), and are sometimes used to defend sexist attitudes and behavior (Fox et al., 2015). Although seemingly harmless, sexist humor is also detrimental in creating social norms that reinforce gender inequality, which may function as a trigger for increased acceptance of rape (Romero-Sánchez et al., 2017; Thomae & Viki, 2013).

The impact of social media content on user attitudes and behavior is well established. For example, such influence has been observed in the context of exercise (Carpenter & Amaravadi, 2019), alcohol use (Litt & Stock, 2011), racism (Munger, 2017), and domestic violence intervention (Wong & Bostwick, 2017). It is possible that these behavioral changes occur due to individual changes in perceptions of normative behaviour. However, there is a notable gap in the literature investigating how exposure to sexism in the social media influences rape cognitions. One exception is a study that found that interaction with sexist tweets increased hostile sexism in an anonymous experimental condition (Fox et al., 2015). Interestingly, this study did not find any differences between male and female participants, suggesting that rather than group differences based on gender, individual dispositional factors may be more important (see also Durán et al., 2018; Kunst et al., 2019). Thus, it is important to take hostile personality traits into consideration when studying social media impact on the acceptance of sexual violence.

Personality and Proclivity Toward Sexual Violence

In this study, we consider the influence of a socially malevolent personality constellation, termed the Dark Triad, which comprises of three interrelated, yet distinctive personality traits (Lyons, 2019). The traits (narcissism, Machiavellianism, and psychopathy) share a common core of low agreeableness, high callousness, and a tendency to manipulate others (Jones & Figueredo, 2013; Stead & Fekken, 2014). In addition, the three traits have been associated with low levels of affective empathy (Turner et al., 2019), cynical responses to inspirational stories (Appel et al., 2019), and inappropriate responses to emotional video clips (Lyons & Brockman, 2017). It has been suggested that sexual violence and attitudes could be facilitated by empathy deficits (e.g., Wheeler et al., 2002), which underscores the importance of understanding the role of the Dark Triad in proclivity toward sexual violence.

There has been ample research into the Dark Triad and sexual violence perpetration, as well as attitudes and cognitions that increase the proclivity to engage in such behavior. In nonclinical, nonforensic samples, psychopathy

(Hoffmann & Verona, 2019; Jones & Olderbak, 2014; Khan et al., 2017; Lyons, et al., 2022; Muñoz et al., 2011) and narcissism (Blinkhorn et al., 2015; Mouilso & Calhoun, 2016) have been related to sexual coercion of varying severity. In addition, the Dark Triad has been associated with cognitions and attitudes that are connected to perpetration of sexual violence. For instance, in both men and women, higher levels of the Dark Triad link to sexual harassment proclivity (Zeigler-Hill et al., 2016) and sexism (Gluck et al., 2020). It appears that psychopathy especially is connected to rape myth acceptance and low victim empathy in both sexes (Jonason et al., 2017), as well as victim blame in a sample consisting of women only (Brewer et al., 2021). These results suggest that socially aversive personalities are of major importance when trying to understand the perpetration of sexual violence, and that rape-supportive attitudes correlate with the Dark Triad in a similar manner for both sexes.

The Present Study

Previous research has typically investigated the influence of individual or situational factors in isolation from each other. However, people might be affected by social norms around sexual violence differently depending on their personality and preexisting attitudes. For example, one study found that those who were high in hostile sexism reacted to sexist social norms with higher rape proclivity (Durán et al., 2018). Considering the close links between the Dark Triad and hostile sexism (Gluck et al., 2020), it is possible that individuals high in these traits are more prone to increase attitudes related to sexual violence after they have been exposed to sexist social media content. Therefore, in the present research, we consider whether priming people with sexist social media content influences rape cognitions depending on their personality. We would expect that exposure to sexist tweets decreases victim empathy and increases rape-supportive attitudes and hostile masculinity, especially in those who have high levels of the Dark Triad traits.

Methods

Participants

Men ($n = 47$ men) and women ($n = 133$) were recruited via social media and a university participation point scheme, where first year students could participate in research for course credits. Respondents ($M_{\text{age}} = 26.79$, $SD = 11.29$) were typically students ($n = 92$), with remaining participants employed ($n = 75$), self-employed ($n = 10$), or unemployed ($n = 3$). Most participants ($n = 176$) resided in the United Kingdom.

Materials

Participants completed the 27-item Short Dark Triad-3 questionnaire (Jones & Paulhus, 2014). The measure includes nine items per Dark Triad trait (narcissism, Machiavellianism, psychopathy), each answered on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Example items include “I have been compared to famous people” (narcissism), “Most people can be manipulated” (Machiavellianism), and “It is true that I can be mean to others” (psychopathy). Cronbach’s alphas were acceptable in the present study; narcissism $\alpha = .76$, Machiavellianism $\alpha = .79$, psychopathy; $\alpha = .73$.

In order to prime participants with either sexist or neutral tweets, we created 20 fake Twitter profiles. There were 10 neutral (e.g., “University work is taking over my life” and “Just saw a picture of sonic the hedgehog, what a major throwback”) and 10 sexist (e.g., “I bet most sexual assault charges are the result of female exaggeration” and “Women have three moods; bad mood, really bad mood and extremely bad mood”) tweets. Details of the Twitter profiles (i.e., individual posting the tweet) were blurred via Photoshop, leaving only the tweet itself visible. After viewing each tweet, participants rated them on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree) for acceptability, humor, rudeness, and ignorance.

In order to measure rape-supportive attitudes, we used 14 items from the 5-point (1 = disagree strongly, 5 = agree strongly) Rape Supportive Attitude Scale (Lonsway & Fitzgerald, 1995). Example items include “Being roughed up is sexually stimulating to many women”, and “In order to protect the males, it should be difficult to prove that a rape has occurred”. The scale demonstrated acceptable reliability in the current study, $\alpha = .92$.

For measuring victim blame, we used 11 items from the 5-point (1 = disagree strongly, 5 = agree strongly) Rape Victim Empathy Scale (Smith & Frieze, 2003). Items included “I find it easy to take the perspective of a rape victim”, and “I can imagine how a victim feels during an actual rape”. We reversed the items so that a higher score on the scale indicates a lower empathy toward a victim. The scale demonstrated acceptable reliability in the current study, $\alpha = .82$.

The 10-item Hostile Masculinity Scale (Lonsway & Fitzgerald, 1995) was employed to measure hostility toward women. Participants respond to items on a 5-point (1 = disagree strongly, 5 = agree strongly) scale. Example items include “I feel that many women flirt with men just to tease or hurt them.” Higher scores indicate higher levels of hostile masculinity. The scale demonstrated acceptable reliability in the current study, $\alpha = .77$.

Procedure

Participants were recruited for an online study entitled “Personality, opinions of social media behavior, and views on sexual coercion and consent.” After providing consent, respondents completed demographic questions and the short Dark Triad-3 measure. Participants were then randomly directed to either the sexist tweet ($n = 88$) or neutral tweet ($n = 98$) condition. They were presented with the following instructions: “In the next part of the questionnaire, you will be shown a series of 10 tweets from various twitter accounts. Please can you rate each tweet on a scale of acceptability, humor, rudeness, and ignorance. Thereafter you will be required to provide a brief description of how these tweets made you feel, or how you would potentially respond on Twitter.” All participants were presented with the tweets in the same order, and they were asked to rate each tweet after reading it. At the end of the prime, they were requested to provide open feedback outlining their opinions of the tweets. After the prime, participants filled in the Rape Supportive Attitudes, Hostile Masculinity, and Rape Victim Empathy scales. Finally, and before the debriefing page, we conducted a prime manipulation check, asking participants to state what they thought the research was about. None of the participants guessed that a prime was used, or what the purpose of the study was.

Results

Overall, participants rated the sexist tweets as significantly less acceptable ($t(179) = 20.20, p < .001$), less humorous ($t(179) = 9.47, p < .001$), more rude ($t(179) = -10.88, p < .001$), and more ignorant ($t(179) = -8.57, p < .001$) than the neutral tweets. This indicates that the sexist primes were more offensive than the neutral primes. However, there were no significant differences in outcome measures (rape-supportive attitudes, hostile masculinity, victim blame) for those exposed to the sexist or neutral tweets (all t 's -4 – $1.37, p$'s $> .18$; please contact the first author for full results). Men scored higher than women in the Dark Triad variables as well as the outcome measures (t 's 2.32 – $6.73, all p$'s $< .02$).

In the neutral tweet condition, none of the Twitter ratings (acceptability, humor, rudeness, ignorance) had significant correlations with the Dark Triad traits. In the sexist tweet condition, all three Dark Triad traits were significantly, positively correlated with acceptability and humor (see Table 1), and had negative, nonsignificant correlations with ignorance and rudeness. The Dark Triad traits were significantly, positively correlated with rape-supportive attitudes, victim blame, and hostile masculinity in both the sexist, and the neutral conditions. The only correlation that was not statistically significant

Table 1. Descriptive Statistics and Pearson's Correlation Showing the Relationship Between the Dark Triad, Perceptions of Tweets (Acceptability, Humour, Rudeness, and Ignorance), and Rape-Supportive Attitudes, Hostile Masculinity, and Victim Blame.

	Mean (±SD)	1	2	3	4	5	6	7	8	9	10
1. Mach	25.76(5.98)	—	.54**	.65**	.16	.07	.01	-.10	.45**	.46**	.27**
2. Narc	24.54(5.77)	.49**	—	.46**	-.04	.07	.10	.08	.50**	.37**	.24*
3. Psych	19.91(5.47)	.47**	.55**	—	.05	-.05	.20	.03	.59**	.49**	.40**
4. TA	39.34(19.24)	.40**	.23*	.56**	—	-.04	-.49**	-.45**	.01	-.06	-.01
5. TH	33.13(14.66)	.44**	.31**	.47**	.75**	—	.21*	.15	.07	.12	-.04
6. TR	34.71(18.16)	-.08	-.13	-.18	-.33	-.28**	—	.82**	.23*	.19	.19
7. TI	37.18(17.62)	-.04	-.20	-.20	-.35**	-.29**	.97**	—	.20	.09	.15
8. RSA	23.64(10.02)	.41**	.37**	.64**	.72**	.68**	-.22*	-.25*	—	.67**	.47**
9. HM	24.41(5.98)	.26*	.30**	.37**	.62**	.43**	-.19	-.21	.69**	—	.39**
10. VB	25.16(6.70)	.23*	.18	.39**	.54**	.49**	-.26*	-.27*	.60**	.42**	—

Note. Mach = Machiavellianism, Narc = narcissism, Psych = psychopathy, TA = tweet acceptability, TH = tweet humour, TR = tweet rudeness, TI = tweet ignorance, RSA = rape-supportive attitudes, HM = hostile masculinity, VB = victim blame. Correlations for neutral tweets above and sexist tweets below the diagonal.

* $p < .05$ ** $p < .01$ (two-tailed)

was that between narcissism and victim blame in the sexist tweet condition. However, the correlations between narcissism and victim blame were not significantly different from each other in the sexist, and in the neutral conditions (Fisher's $z = -0.42, p = .34$).

In order to investigate the relative contribution of the prime condition and Dark Triad traits (predictor variables) on rape cognitions (outcome variables), we conducted three multiple linear regressions. We added sex (1 = male, 2 = female) as a control variable in the analyses (See Table 2).

The model for rape-supportive attitudes was significant, with all the predictor variables accounting for 42% of variability in rape-supportive attitude scores. Psychopathy was a strong significant positive predictor, and narcissism a weaker, but still significant positive predictor. The model was also significant for victim blame, with all the predictor variables accounting for 18% of variability, psychopathy emerging as a significant positive predictor. For hostile masculinity, the model was significant, with all the predictor variables accounting for 19% of variability. Again, psychopathy was as a significant positive predictor.

These results indicate that those high in psychopathy were more likely to report rape-supportive attitudes, blame victims, and display hostile masculinity. Although sex (i.e., being male) also predicted two of the outcome variables, we will not discuss these findings further due to small number of male participants. Our findings further suggest that dispositional factors (i.e., personality) are more important for these outcomes than situational factors (i.e., the prime).

Table 2. Simultaneous Multiple Regression Analyses Exploring Sex, Prime, and the Dark Triad (Predictor Variables) on Rape-Supportive Attitudes, Hostile Masculinity, and Victim Blame.

Variable	Rape Supportive Attitudes			Hostile Masculinity			Victim Blame		
	B	SE B	β	B	SE B	β	B	SE B	β
Sex	-4.56	1.49	-.20**	.68	1.05	.05	-3.42	1.18	-.22**
Prime	-.09	1.16	-.01	.19	.81	.02	-1.40	.92	-.11
Machiavellianism	.04	.13	.02	.15	.09	.15	-.02	.10	-.02
Narcissism	.27	.12	.16*	.12	.09	.11	.03	.10	.03
Psychopathy	.80	.14	.43***	.34	.10	.31***	.29	.11	.29***
R^{2adj}	.42***			.19			.18		
F	26.37***			9.62***			8.97***		

Note. Sex 1 = male, 2 = female; Prime 1 = sexist, 2 = neutral; * $p < .05$. ** $p < .01$. *** $p < .001$.

Discussion

We explored the influence of exposure to sexist social media content on rape cognitions, and whether this differed depending on the presence of socially aversive personality traits. Although sexist tweets were rated as less acceptable, exposure to sexist social media did not have an effect on rape-supportive attitudes, victim blame, or hostile masculinity. While all the three Dark Triad traits correlated positively with rating the sexist tweets acceptable and humorous, the prime condition itself (exposure to sexist or neutral tweets) did not impact on the outcome variables. Psychopathy was the strongest predictor of proclivity to sexual violence.

Our results do not concur with previous research reporting that priming with other types of media (e.g., magazines, music videos, films, adverts) increases sexually hostile attitudes (e.g., LaCroix et al., 2018; Mallett et al., 2016; Ward, 2016). However, previous research has often tested media influences using the cultivation model, which explains attitude formation due to a long-term immersion with the media, leading to perceptions that social reality aligns with the media content (Fox & Potocki, 2016; Seabrook et al., 2019). Our study did not look at long-term exposure to sexist social media and the short exposure may not be enough to change attitudes.

In addition, our study only used text-based stimulus, whereas other priming studies have utilized visual stimuli (Loughnan et al., 2013) or virtual reality videogames (Driesmans et al., 2015; LaCroix et al., 2018). Visual images may have a more powerful influence on cognition and emotions over text-based primes (Domke et al., 2002), which could explain why the tweets alone did not have an effect. It is also important to note that although many studies have found that media exposure increases acceptance of sexual violence, there are many that have reported null results (e.g., Sprankle et al., 2012; Vance et al., 2015). Furthermore, some studies have found that the primes are specific to particular outcomes. For instance, Aubrey et al. (2011) reported that sexually objectifying music videos increased the acceptance of interpersonal violence, but not rape myth acceptance.

Our results are consistent with previous research, highlighting the relationship between psychopathy and sexually violent cognitions and behaviors. For example, those high in psychopathy are more likely to blame victims, less likely to display empathy for victims, less likely to blame offenders, and more likely to accept rape myths (e.g., Brewer et al., 2021; Jonason et al., 2017; Watts et al., 2017). These tendencies reflect the emotional coldness components that characterize both psychopathy (Jonason et al., 2013) and perpetrators of sexual violence (DeGue et al., 2010). It is possible that those high in psychopathy have high levels of rape cognitions, irrespective of situational factors.

The interesting additional finding in this study was the positive relationship with the Dark Triad traits and perceptions of sexist tweets as acceptable and funny. Sexist remarks that are masqueraded as jokes can increase acceptance of sexual harassment, especially in individuals who already hold hostile attitudes toward women (see Mallett et al., 2016). It is possible that perceptions of sexist humor as funny perpetuate rape cognitions in those who have higher levels of Dark Triad traits. Future research should investigate interventions that challenge sexist humor, and whether they can reduce tolerance of sexist events in those who hold hostile attitudes toward women (Ford, 2000).

Limitations and Future Research

Participants in our study were mainly university students, meaning that we cannot generalize the results beyond Western, educated, industrialized, rich, and democratic (Henrich et al., 2010) populations. This study should be replicated with a more varied pool of people, for example, recruiting participants from the Global South as well as from diverse socioeconomic backgrounds. Several cross-cultural variables (e.g., machismo, patriarchal structures and ideologies) have an impact on attitudes toward women (Barn & Powers, 2021; Fakunmoju et al., 2020). It would be interesting to explore whether these cultural variables increase rape cognitions after an exposure to online sexism, depending on the levels of the Dark Triad traits in the participants.

In addition, in the present study, participants were exposed to a series of sexist or neutral tweets. Though this is a common research protocol, it does not take into account the extent to which respondents usually engage with social media (creating or viewing material) and are exposed to such sexist content. Future research should address this and explore engagement with specific social media types (e.g., Twitter). Research using objective rather than self-report social media use measures would be especially beneficial (Junco, 2013).

Further, participants did not receive any information pertaining to the original tweeter or comments from other social media users reading the post. The greater influence of high-status individuals (in both online and offline interactions) is well established (Lu et al., 2020), and it is possible that respondents would be more affected by high status or attractive tweeters. Similarly, when viewing Twitter posts, it is normally possible to observe the responses of others. Participants' tendency to accept or reject the sexist message may be dependent on the perceived acceptability of the post. Bystanders often intervene when faced with online victimization (Henson et al., 2019) and, similar to offline bystanders, they are able to shape important social norms and impact on the behavior of individual users (Zhou, 2011). Hence,

future research may present incorporate sexist, neutral, or critical (nonsexist) responses to Twitter posts into their design.

To conclude, we investigated the influence of social media and Dark Triad traits on attitudes associated with sexual violence. Sexist tweets were rated as significantly less acceptable and humorous and more rude and ignorant than neutral tweets. However, those exposed to the sexist tweets did not report more rape-supportive attitudes, hostile masculinity, or victim blame. Despite these nonsignificant findings, our results bring a valuable contribution to the sparse literature of social media influence on rape cognitions. Our results demonstrate that dispositional factors (especially psychopathy) may be more predictive of rape cognitions than just a short exposure to online sexism.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship and/or publication of this article.

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