

**Perceptions of the Freezing Response of Male and Female Rape Victims, and an
examination of the Moderating Role of Rape Myth Beliefs**

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Abstract

Purpose

We investigated whether indicating victims of sexual attacks actively resisted their attacker or froze during their assault affected perceptions of victim blame, perpetrator blame, and seriousness of the crime. We also tested whether victim and perpetrator gender or participants' rape myth endorsement moderated our outcomes.

Design

This study was a cross-sectional, vignette survey study with a 2x2 between-participants experimental design. Participants read a mock police report describing an alleged rape with a female or male victim who either resisted or froze, while perpetrator gender was adjusted heteronormatively.

Findings

Freezing and male victims were blamed more than resisting and female victims. Perpetrators were blamed more when the victim resisted, but male and female perpetrators were blamed equally. Seriousness of the crime was higher for male perpetrators and when the victim resisted. Female, but not male, rape myth acceptance moderated the relationship between victim behaviour and outcome variables.

Originality

This study highlights the influence of expectations about victim behaviour on perceptions of rape victims, and the pervasive influence of rape myths when evaluating female rape victims. Our data drawn from the German border region of the Netherlands is an especially valuable population given the evolving legal definitions of rape in both countries.

Keywords: Sexual assault; Rape; Freezing; Tonic immobility; Victim blame; Perpetrator blame; Seriousness of the crime; Rape myth acceptance; Female perpetrators; Male victims

Classification: Research Paper

Perceptions of the Freezing Response of Male and Female Rape Victims

Legally, rape is typically defined either within a “coercion-based” model or “consent based” model, where the consent based models define rape as the absence of positive consent, and the latter define rape with regard to whether there was clear dissent on the part of the victim and may require actual or threatened violence (Dowds, 2020). In the Netherlands, the current legal definition of sexual assault requires a perpetrator to compel a victim with violence, threat of violence or other coercive means to engage in penetrative sexual acts. This definition has been criticised for being too ambiguous with regard to what kinds of behaviours would qualify as coercion, and for insufficiently capturing that victim behaviours such as freezing or holding back should also indicate non-consent (Horii & Bouland, 2023). New legislation has been developed to modify the definition of rape as being based on non-consent rather than coercion, but at the time of writing this has not yet been signed into law. Similarly, the German legal definition of rape which was implemented in 2016 takes a “no-means-no” model, which requires victims to explicitly express a lack of consent. Exceptions are made only where the victim is considered to be entirely unable to express their will, for example those in a coma or anaesthetised (Hörnle, 2017). Therefore, the current legislation in both countries is likely to offer insufficient protection to victims of rape that froze during their attack, and thereof may be unable to express explicitly their lack of consent. This is problematic given that such freezing responses occur in between 48-70% of rape cases (Möller et al., 2017). In this context, this research examines perceptions of freezing responses in descriptions of rape cases involving both male and female victims in a region on the Dutch-German border.

In the Netherlands, approximately 22% of women and 6% of men aged 18-24 experience physical sexual violence per year (Akkermans et al., 2020), and overall victimisation rates are approximately 8% of people per year in the Netherlands and 5% in

Germany (Akkermans et al., 2020; Hellmann et al., 2018). The majority of the victims are female, with approximately 0.6% of German men and 0.7% of Dutch men being sexually assaulted per year (Dworkin et al., 2021). These rates of female and male victimization are similar to other European countries (Dworkin et al., 2021). Sexual assault victims are the largest group of people with post-traumatic stress disorder (PTSD) and are most likely to experience mental health issues and to attempting or performing suicide (Campbell & Wasco, 2016; Debowaska et al., 2023; Ullman & Brecklin, 2002; Thornton et al., 2023).

Sexual assault is commonly regarded as a male-perpetrated crime. The majority of all documented sex offenders are male, with female offenders accounting for only 1% of sexual assaults in the Netherlands and 5% globally (Cortoni et al., 2010; Wijkman et al., 2010). This apparent gender imbalance is one reason why female offending of male victims has received lesser attention societally and within research (Clemens et al., 2013; Moore & Miller-Perrin, 2021). However, it is likely that rates of female offending against males are higher than identified in prevalence studies because male victims face even stronger barriers to disclosure than those already faced by female victims with regard to fear of disbelief, ostracism, and stigma (Catton & Dorahy, 2022; Clements et al., 2013; Weare, 2018b).

While female-perpetrated sexual assault is less prevalent, it can be as traumatic for victims as male-perpetrated assaults (Fisher & Pina, 2013; Gambardella et al., 2020; Munroe & Shumway, 2020; (Scurich, 2023). Female-to-male sexual assaults often include forced penetration, with victims most frequently reporting that they experienced a severe negative emotional impact from it, for instance anxiety, depression, PTSD, impaired sexual functioning, or sexual aversion (Fisher & Pina, 2013; Weare & Hulley, 2017; Weare, 2018a).

For many, it remains difficult to acknowledge that men can be sexually victimised at the hands of women, which is reinforced by several factors. First, gender stereotypes tend to present women as friendly and submissive and men as dominant and physically

overpowering. The media often portrays female-perpetrated sexual assault as acceptable or even comedic (Oliver, 2007). Consequently, that women can be sexually aggressive and that men can be vulnerable to female-perpetrated rape is not widely accepted (Stemple et al., 2017; de Motte & Mutale, 2019), and this may help to explain why female sexual offenders may be treated more leniently than male sexual offenders (Lewandowicz-Machnikowska et al., 2023). Second, for many, forced penetration prompts disbelief (Stemple et al., 2017). Third, there are prevalent negative attitudes, beliefs, and biases towards male rape victims in society that stem from rape myths (Fisher & Pina, 2013; (Widanaralalage et al., 2023).

Rape Myths

Rape myths are pervasive societal assumptions about rape that influence the view of what rape is, how victims and perpetrators behave, why rape happens, who to blame for it, and what its consequences are (van der Bruggen & Grubb, 2014). They often contribute to a vindication of the perpetrator's actions by placing blame onto the victim (Fisher & Pina, 2013). Rape myths were originally researched in relation to female victims of male rapists and address typical victim-blaming beliefs such as that female victims acted provocatively towards the male perpetrator, for example, by dressing revealingly (Fisher & Pina, 2013).

Male rape myths are similar, and often centre around masculinity stereotypes (Widanaralalage et al., 2022). People perceive men as initiators of sexual contact and so assume that men cannot be raped by females (Catton & Dorahy, 2022), and these rape myths are typically endorsed to an even greater extent by men than women (Willmott & Widanaralalage, 2024). Moreover, men are perceived as too physically strong to be raped. They are seen as physically capable of resisting and preventing a rape, especially when the perpetrator is female (Sleath & Bull, 2009; van der Bruggen & Grubb, 2014). Another myth concerns the belief that forced sexual contact, asserted by a woman, is still enjoyable for men and does not lead to suffering (Catton & Dorahy, 2022; Stemple et al., 2017; Turchik &

Edwards, 2012; van der Bruggen & Grubb, 2014). Therefore, female-perpetrated rape is perceived as less serious compared to male-perpetrated rape, and female rapists are blamed less relative to male rapists (Clements et al., 2013; Oliver, 2007). The influence of rape myths extends beyond shaping societal assumptions about what rape is and who it involves; it is also closely linked to victim-blaming tendencies (Dawtry et al., 2019).

Victim-Blaming

Victim-blaming is the tendency to declare victims of a criminal act as at least partially responsible for their victimisation (Hayes et al., 2013). Male rape victims are blamed more when the perpetrator is depicted as female rather than an unspecified gender (Catton & Dorahy, 2022). Moreover, male victims are blamed more when they display stereotypically unmasculine behaviours during a sexual assault (Davies et al., 2009; Reitz-Krueger et al., 2017; van der Bruggen & Grubb, 2014; Widanaralalage et al., 2022). For example, freezing (i.e., being tonically immobile during the assault) or failing to resist. Male victims are expected to defend themselves against a rapist to maintain their status of manhood (Widanaralalage et al., 2022). Nevertheless, female victims are also expected to resist a rapist. Thus, there are prevalent cultural scripts for how rape victims are expected to behave during an offence, regardless of gender. Reality, however, deviates from these expectations, as victims commonly respond contrary to such expectations during sexual assaults.

The Freeze Response

The fight or flight response is a widely known response to threatening stimuli. However, a third common response is tonic immobility (Schiewe, 2019). Tonic immobility, refers to a state in which an individual becomes mentally and physically paralysed due to their fear response (de la Torre Laso, 2023). Common experiences of tonic immobility are some degree of physical immobility, muscular rigidity, an inability to speak verbally, as well as feelings of cold numbness, all while remaining mentally conscious (Schiewe, 2019).

Fusé et al. (2007), found that 44% of rape victims reported that they froze during the assault, with other studies indicating an even higher prevalence (Möller et al., 2017; Schiewe, 2019). Freezing is likely a defence mechanism to prevent additional physical harm, and this response is most common in those who perceive their assailant as a threat to their personal safety or believe that they cannot escape a dangerous situation (Schiewe, 2019). Freezing may be adaptive, with freezing victims shown to be exposed to less violent attacks and a reduced risk of physical injury (de Heer & Jones, 2017). Nonetheless, the freeze response can be a harmful and traumatic event in and of itself for victims (Coxell & King, 2010). Notably, freezing has been associated with enhanced victim memories compared to non-freezing victims, which can result in recurrent vivid memories of the rape (Laso, 2023; Möller et al., 2017; Rubin & Bell, 2023; Schiewe, 2019).

Despite freezing being a common response, it has been shown that female freezing victims are blamed more for their victimisation than resisting victims (Laso, 2023; Möller et al., 2017; Rubin & Bell, 2023). People expect that a rape victim should actively resist the attacker in the form of fight or flight. This expectation perpetuates the idea that freezing victims responded inappropriately to the threat of rape, which leads to victim-blaming (Schiewe, 2019). While it is known that male victims of rape also experience tonic immobility, possibly at even higher rates than female victims in approximately 60% of cases (Coxell & King, 2010), whether there is a difference in victim blame for freezing male victims of female offenders compared to freezing female victims of male offenders is unknown.

Study Purpose and Hypotheses

We tested whether people engage in more victim blame and less perpetrator blame when victims of rape freeze rather than resist their attacker. We also tested whether the effect of freezing is different with male victims of female rapists rather than female victim of male

rapists. We also tested whether rapes are considered more or less serious depending on victim/perpetrator gender, and victim behaviour.

Our specific hypotheses were:

H1: Victim blame will be higher for male victims compared to female victims, and higher for victims who freeze compared to victims who physically and verbally resist.

H2: Victim blame will be higher for a freezing male victim compared to a freezing female victim.

H3: Perpetrator blame will be higher for male perpetrators compared to female perpetrators, and higher for perpetrators with a resisting victim compared to those with a freezing victim.

H4: Seriousness of the crime will be higher for male-perpetrated rape compared to female-perpetrated rape, and higher for rapes involving a resisting victim compared to a freezing victim.

Exploratorily, we also tested whether any of our observed effects differed depending on the extent to which participants endorsed male or female rape myths.

Methods

Design

This study was a cross-sectional, vignette survey study. We used a 2 (victim gender: male vs female) x2 (victim behaviour: freezing vs resisting) between-participant design with the dependent variables victim blame, perpetrator blame, and seriousness of the crime. The victim gender variable compared a male-to-female rape with a female-to-male rape. In the resisting condition, the victim is described as explicitly defending themselves against the attacker by saying “no”, shouting at them to stop, and attempting to push them off. In the freezing condition, the victim is described as freezing, and showing no physical or verbal resistance.

Participants

Based on a G*Power analysis (v3.1.9.6; Faul et al., 2009), a minimum of 125 participants were required in order to observe a η_p^2 of .06, the smallest effect size of interest, with an alpha of .05 and a power level of .80. The analysis was powered for the interaction effect between the independent variables. Participants were recruited using a convenience and snowball sampling method, via the participant recruitment system of a University in the Dutch border region with Germany, and via the personal network of the first author. We quickly exceeded this number, and choose not to exclude any participants, in part because this would allow better power for our exploratory moderation analyses, but also because there were no ethical reasons to exclude participants that had already taken part.

Overall, 376 participants started the experiment. From those, 103 participants were excluded: 73 did not finish the survey, 12 did not give informed consent, two were underage, and seven wished to delete their data after participating. The remaining sample comprised 273 participants; 161 females, 108 males, two identifying as “other”, and two who preferred not to indicate their gender. The mean age of the participants was 23.6 ($SD = 5.83$, $Min = 18$, $Max = 63$). The sample was predominantly German ($n = 181$) or Dutch ($n = 19$). There were 76 participants who received the female victim/freeze experimental condition, 64 the female/refusal, 64 the male/freeze, and 69 received the male/refusal conditions.

Materials

All materials were provided in English and scored on 5-point Likert scales, (1 = strongly disagree; 5 = strongly agree), with higher scores indicating greater alignment with the measured construct.

Police Report

Participants were presented with a police report of an alleged rape. The victim had dinner with a friend (the perpetrator). After eating, they watched TV sitting next to each other

on the sofa. Then, the perpetrator tried to touch and kiss the victim, undressed them, and started to have sex with them. Victim gender, perpetrator gender, and the victim's behavioural response to the rape were described differently depending on the research condition. The victim was either described as male or female, while the perpetrator's gender was adjusted heteronormatively. Furthermore, the victim was either described as physically and verbally resisting (by saying "no", shouting at the perpetrator to stop, and attempting to push them off) or as not physically or verbally resisting the offender (by freezing). All materials are available via our OSF page: <https://osf.io/674wp/>.

Measures

Victim Blame. Victim blame was measured using seven items based on the *Items Assessing General Victim Blame* (Eigenberg and Policastro, 2015). Example items were "The victim deserved what happened to them because of their behaviour prior to the offence" and "The victim could have stopped the incident if they wished". The Cronbach's alpha for the victim blame scale was .87.

Perpetrator Blame. Perpetrator blame was measured using eight items based on the *Revised Gudjonsson Blame Attribution Inventory* (Gudjonsson & Singh, 1989). Items were altered in order to measure how much participants consider the perpetrator at fault. For example, "The perpetrator is responsible for the act" and "The perpetrator was in full control of their actions during the act". The Cronbach's alpha for the perpetrator blame scale was .81.

Seriousness of the Crime. According to Stylianou (2003), the perceived seriousness of a situation comprises two dimensions. First perceived consequences, with crimes resulting in physical and/or psychological suffering judged as most serious (Stylianou, 2003). Based on this we developed three items: "I think the actions of the perpetrator were violent", "I think the victim was physically harmed by the perpetrator's actions" and "I think the victim was psychologically disturbed after the assault". Second, perceived seriousness is also determined

by how morally wrongful the crime is (Stylianou, 2003). Three items captured this second dimension: “I think the perpetrator acted immorally”, “I think the victim was not given a chance to have a say in the situation”, and “I think the perpetrator’s actions were inherently wrong”. One additional item was developed to measure the concept of crime seriousness more fully¹: “I think the perpetrator should be sentenced with the maximum penalty for rape”. The Cronbach’s alpha for the seriousness of the crime scale was .87.

Rape myth acceptance (RMA). Male RMA was measured using the *Male Rape Myth Scale* (Melanson, 1998). The scale comprises 22 items. The items were statements such as “A man can enjoy sex even if it is being forced upon him”. The Cronbach’s alpha for the male RMA scale was .89. Female RMA was measured with the 22 item *Updated Illinois Rape Myth Acceptance Scale* (McMahon & Farmer, 2011; Payne et al., 1999). Example items were “When girls get raped, it’s often because the way they said ‘no’ was unclear”. The Cronbach’s alpha for the female RMA scale was .87.

Procedure

Before data collection, the Ethics Committee of the host university provided ethical approval for this study (reference number: 230197). Given the sensitive nature of the study, we made sure to warn participants that participation would require reading fictional descriptions of rape and answering potentially offensive questions about their beliefs about rape. As additional protections, participants were given the option to delete their data after they had received the study debrief, and links to websites and helplines for sexual abuse support were provided in German, Dutch and English² both within the study information given prior to consent and within the study debrief.

¹ We originally included a second item, “Compared to other rapes, I think the rape was equally serious”. However, it would be ambiguous what disagreement indicated for this item because disagreement could indicate that this rape was considered more *or* less serious, and so we discard this item for analysis.

² All participants are expected to be fluent in either German or Dutch, or else sufficiently fluent in English to take part in the study.

The study was hosted via *Qualtrics*. Participants received a link to the experiment. They first received information outlining the study's scope, duration, and content including rape and sexual assault and information about sexual abuse support. Subsequently, participants were asked to give consent. Then, participants indicated demographics such as gender, age, education³, and nationality. Participants then received a short questionnaire measuring male and female RMA. Participants were then randomly allocated into one of the four research conditions and were presented with one version of the police reports. In the report, the rape was either described as male-to-female or female-to-male rape, with the victim either physically and verbally resisting or freezing. After reading the police report, participants completed the dependent variable questionnaires. Finally, participants were debriefed, again directed to resources which provide sexual abuse support and given the option to delete their data after reading the debrief.

Data Analysis

Data was analysed using R 4.2.3. Three 2x2 ANOVAs were used to test for main and interaction effects of victim gender and victim behaviour on victim blame, perpetrator blame, and seriousness of the crime. An exploratory analysis in the form of a moderator analysis was performed which investigated whether rape myth acceptance moderated the relationship between the freezing vs resisting victims on outcome variables separately per gender⁴. That is, the male RMA scale was tested as a moderator for the male victim conditions, and female RMA for the female victim conditions.

The anonymised data and analysis code are available on the project OSF page.

Results

³ For concision, we do not report the education demographics, but they are available in our anonymised open data hosted on the project OSF page.

⁴ Following the suggestions of an anonymous reviewer, we also performed an exploratory analysis which incorporated participant gender into our analysis model. Participant gender had no significant main or interaction effects. We include the code to perform these analyses in our OSF R code file.

Descriptive Statistics

The mean scores for all scales are represented in Table 1. Responses on the perpetrator blame and seriousness of the crime scales were negatively skewed, while responses on the victim blame, male RMA and female RMA scales were positively skewed⁵.

Pearson's correlations across all variables were all statistically significant at $p < .001$. For the correlation coefficients, see Table 1. Victim blame was positively associated with both male and female RMA, but negatively associated with victim blame and seriousness of the crime. Similarly, perpetrator blame was positively associated with perceived seriousness of the crime, but negatively related to scores on the RMA scales.

Table I

Correlation Coefficients for the Correlations Between the Dependent and Moderator Variables

	<i>M</i>	<i>SD</i>	Perpetrator Blame	Seriousness of the Crime	Male RMA	Female RMA
Victim Blame	1.48	0.66	-.74	-.74	.65	.60
Perpetrator Blame	4.27	0.65	-	.80	-.50	-.46
Seriousness of the Crime	4.07	0.84	-	-	-.46	-.51
Male RMA	1.53	0.50	-	-	-	.72
Female RMA	1.62	0.47				

Note. All correlations were statistically significant at $p < .001$ with $df = 271$

⁵ To account for this skew, we log transformed all variables prior to analysis. The log transformation did not change the results of any significance tests, and so for ease of interpretation we report the non-logged values.

Hypothesis Tests

We present the means, standard deviations, and F test outcomes for all comparisons in Table II. A narrative summary of the results is also presented per hypothesis.

H1: Victim blame will be higher for male victims compared to female victims and higher for victims who freeze compared to victims who physically and verbally resist

Victim blame was higher for male victims ($M = 1.52$, $SD = 0.68$) than for female victims ($M = 1.44$, $SD = 0.64$) and this difference was small but statistically significant, $p = .047$, $\eta_p^2 = .01$. Victim blame was more clearly higher for freezing victims ($M = 1.65$, $SD = 0.74$) than for resisting victims ($M = 1.30$, $SD = 0.50$), $p < .001$, $\eta_p^2 = .07$.

H2: Victim blame will be higher for a freezing male victim compared to a freezing female victim

Contrary to this hypothesis, the interaction effect of victim gender and victim behaviour on victim blame was not significant, $p = .145$.

H3: Perpetrator blame will be higher for male perpetrators compared to female perpetrators and higher for perpetrators with a resisting victim compared to those with a freezing victim

Perpetrator blame did not differ between male-to-female rapes ($M = 4.30$, $SD = 0.64$) and female-to-male rape ($M = 4.23$, $SD = 0.66$), $p = .305$. However, perpetrator blame for offenders with a freezing victim ($M = 4.00$, $SD = 0.63$) was lower than for those with a resisting victim ($M = 4.55$, $SD = 0.54$), $p < .001$, $\eta_p^2 = .18$. There was no significant interaction between victim gender and victim behaviour on perpetrator blame, $p = .935$.

H4: Seriousness of the crime will be higher for male-perpetrated rape compared to female-perpetrated rape and higher for rapes involving a resisting victim compared to a freezing victim

Seriousness of the crime was higher for male-perpetrated rape ($M = 4.20$, $SD = 0.79$) than for female-perpetrated rape ($M = 3.92$, $SD = 0.88$), $p < .008$, $\eta_p^2 = .04$. Rapes involving a resisting victim ($M = 4.37$, $SD = 0.69$) were also perceived as more serious than rapes with a freezing victim ($M = 3.77$, $SD = 0.87$), $p < .001$, $\eta_p^2 = .14$. There was no significant interaction between victim gender and victim behaviour on seriousness of the crime, $p = .655$.

Table II

Group Means per Experimental Condition for the Dependent Variables and Raw and Transformed Scores Resulting from an ANOVA

Independent Variable	Dependent Variables					
	VB		PB		SoC	
Victim Gender	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Male	1.52	0.68	4.23	0.66	3.92	0.88
Female	1.44	0.64	4.30	0.64	4.20	0.79
Hypothesis tests	$F = 4.00$, $df = 1$ (269), $p = .047$		$F = 1.06$, $df = 1$ (269), $p = .305$		$F = 7.23$, $df = 1$ (269), $p = .008$	
Victim Behaviour	VB		PB		SoC	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Freezing	1.65	0.74	4.00	0.63	3.77	0.87
Refusal	1.30	0.50	4.55	0.54	4.37	0.69
Hypothesis tests						

$$F = 18.58, df = 1 \quad F = 29.83, df = 1 \quad F = 25.34, df = 1$$

$$(269), p < .001 \quad (269), p < .001 \quad (269), p < .001$$

Interaction Term	VB		PB		SoC	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Male / Refusal	1.41	0.58	4.49	0.56	4.20	0.79
Male / Freezing	1.65	0.77	3.94	0.63	3.62	0.87
Female / Refusal	1.19	0.39	4.60	0.51	4.56	0.52
Female / Freezing	1.65	0.73	4.05	0.64	3.90	0.85
Hypothesis tests	$F = 2.14, df = 1$		$F = 0.01, df = 1$		$F = 0.20, df = 1$	
	$(269), p = .145$		$(269), p = .935$		$(269), p = .655$	

Note. VB=Victim Blame, PB=Perpetrator Blame, SoC=Seriousness of the Crime

Moderation of Male and Female Rape Myth Acceptance

Two moderation analyses tested the effect of male and female victim behaviour (freezing vs refusal) on victim blame, perpetrator blame, and seriousness of the crime, as moderated by male or female RMA. In the following, the main effects of male and female RMA on the dependent variables as well as their moderating effects are reported.

Male RMA

Male RMA significantly predicted victim blame ($b = 0.87, SE = 0.11, t(129) = 7.90, p < .001$), perpetrator blame ($b = -0.62, SE = 0.12, t(129) = -5.07, p < .001$), and seriousness of the crime ($b = -0.86, SE = 0.17, t(129) = -5.07, p < .001$). These findings indicated that higher levels of male RMA were associated with higher levels of victim blame, and lower levels of perpetrator blame and perceived seriousness of the crime. Once rape myths were included in

the model, victim behaviour was no longer significant for any outcomes with male participants. There was also no evidence of a moderation effect of male RMA, as it did not significantly moderate the relationship between male victim behaviour and victim blame ($b = 0.29$, $SE = 0.16$, $t(129) = 1.80$, $p = .074$), male victim behaviour and perpetrator blame, ($b = -0.12$, $SE = 0.18$, $t(129) = -0.70$, $p = .484$), and male victim behaviour and seriousness of the crime ($b = -0.12$, $SE = 0.25$, $t(129) = -0.48$, $p = .630$). These results showed that people's level of male RMA did not affect their judgments on victim or perpetrator blame, or seriousness of the crime when exposed to a male freezing vs male resisting victim.

Female RMA

Female RMA significantly predicted victim blame ($b = 0.37$, $SE = 0.11$, $t(136) = 3.50$, $p < .001$), perpetrator blame ($b = -0.39$, $SE = 0.12$, $t(136) = 3.22$, $p = .002$), and seriousness of the crime ($b = -0.49$, $SE = 0.15$, $t(136) = -3.38$, $p < .001$). This finding implied that higher levels of female RMA were generally associated with higher levels of victim blame and lower levels of perpetrator blame and seriousness of the crime. Victim behaviour also maintained a statistically significant main effect for predicting victim blame, but no longer predicted perpetrator blame or perceived seriousness of the crime when RMA was included in the model. However, female RMA significantly moderated the relationship between female victim behaviour and victim blame, ($b = 0.76$, $SE = 0.14$, $t(136) = 5.30$, $p < .001$), perpetrator blame, ($b = -0.53$, $SE = 0.16$, $t(136) = -3.32$, $p = .001$), and seriousness of the crime, ($b = -0.68$, $SE = 0.20$, $t(136) = -3.47$, $p < .001$).

These statistically significant moderation effects were further analysed by testing the relationship between female RMA and the dependent variables at the different levels of the independent variable (freezing vs refusal). Table III shows that in all cases, the relationship between RMA and the outcome variables was stronger when victims froze compared to resisted.

Table III

The Effect of Female RMA on Victim Blame, Perpetrator Blame, and Seriousness of the Crime in the Case of Female Victims

Outcome	Condition	Simple slopes				Slope comparisons			
		<i>B</i>	<i>SE</i>	<i>LowerCI</i>	<i>UpperCI</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
VB	Freezing	1.13	0.11	0.95	1.32	-0.76	0.14	5.30	< .001
	Refusal	0.37	0.10	0.16	0.59				
PB	Freezing	-0.92	0.10	-1.13	-0.71	0.53	0.16	3.32	.001
	Refusal	-0.39	0.12	-0.62	-0.15				
SoC	Freezing	-1.17	0.15	-1.43	-0.91	0.68	0.20	3.47	.001
	Refusal	-0.49	0.12	-0.78	-0.20				

Note. VB=Victim Blame, PB=Perpetrator Blame, SoC=Seriousness of the Crime, *df* for slope comparisons are all 136

We also tested whether mean scores on our dependent variables varied depending on the level of RMA endorsement. These results are presented in Table IV. These analyses show that when victims resist, the crime is perceived as more serious, and perpetrators are blamed more regardless of the level of RMA endorsement. However, when RMA endorsement is low, freezing victims are not blamed more.

Table IV

The Effect of Female Victim Behaviour on Victim Blame, Perpetrator Blame, and Seriousness of The Crime at Different Levels of Female RMA

Variable	RMA	Victim Behaviour	<i>EMM</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
VB	Low	Freezing	1.13	0.06	-0.11	0.09	1.19	.238
		Refusal	1.02	0.07				
	Medium	Freezing	1.54	0.05	-0.39	0.07	5.44	< .001
		Refusal	1.16	0.05				
	High	Freezing	2.29	0.07	-0.89	0.12	8.23	< .001
		Refusal	1.40	0.08				
PB	Low	Freezing	4.47	0.07	0.30	0.11	2.80	.006
		Refusal	4.77	0.08				
	Medium	Freezing	4.14	0.05	0.49	0.08	6.16	< .001
		Refusal	4.63	0.06				
	High	Freezing	3.54	0.08	0.84	0.12	6.97	< .001
		Refusal	4.38	0.09				
SoC	Low	Freezing	4.43	0.09	0.35	0.13	2.68	.008
		Refusal	4.78	0.10				
	Medium	Freezing	4.01	0.07	0.59	0.10	6.10	< .001
		Refusal	4.60	0.07				
	High	Freezing	3.24	0.10	1.04	0.15	7.06	< .001
		Refusal	4.28	0.11				

Note. *EMM* = Estimated Marginal Means, *df* = 136; Low=16th percentile – 1.14,

Medium=50th percentile – 1.50, High=84th percentile – 2.16; VB=Victim Blame,

PB=Perpetrator Blame, SoC=Seriousness of the Crime

Discussion

We tested the effects of a rape victim's gender and behaviour on perceptions of victim blame, perpetrator blame, and seriousness of the crime. Additionally, we investigated the

impact of rape myth acceptance (RMA) on the relationship between victim behaviour and these perceptions. We found that male victims, freezing victims, and perpetrators with a resisting victim were blamed more, and rapes involving a resisting and female victim were perceived as more serious. Moreover, while both male and female RMA were associated with higher levels of victim blame and lower levels of perpetrator blame and seriousness of the crime, only female RMA specifically influenced perceptions of female freezing victims (hence, male RMA did not moderate perceptions of male freezing victims). All participants exposed to female victims, no matter their level of RMA, showed higher levels of victim blame, and lower levels of perpetrator blame and seriousness of the crime when the female victim froze. However, this difference was particularly large for those with high levels of female RMA.

Perceptions of Male and Female Victims and Offenders

We found that there was no difference in how much people blamed a perpetrator depending on their gender. This aligns with research indicating that those that hold attitudes supportive of male perpetrated intimate partner violence also tend to endorse female perpetrated intimate partner violence (Conroy et al., 2023), and that similar beliefs and demographic factors are associated with both male and female rape myth endorsement (Walfield, 2021). Nevertheless, while people hold male and female rapists equally responsible, we also found that participants thought that female offending against males was a less serious crime than male assaults against female victims. This adds to a growing literature indicating that people believe that female-perpetrated rape is less severe and less harmful than male-perpetrated rape (Catton & Dorahy, 2022; Stemple et al., 2017; Turchik & Edwards, 2012; van der Bruggen & Grubb, 2014). Similarly, our finding that male victims are blamed more than female victims also aligns with previous research indicating that people believe men should be able to protect themselves against a rape, especially when the offender

is female (Sleath & Bull, 2009; van der Bruggen & Grubb, 2014; (Willmott & Widanaralalage, 2024). Overall, we found that people do not differentiate in how much they blame a perpetrator of a rape based on their gender, but our findings reinforce prior work showing that male victims are more likely to be blamed than female victims, and that offences against them are perceived as less serious than those including female victims.

The Role of Victim Behaviour

We also found that freezing victims (no matter which gender) were blamed more, their assault was perceived as less serious, and their perpetrators were blamed less compared to victims who resisted their attackers. This aligns with existing literature indicating that people expect “ideal” rape victims to defend themselves with explicit physical and/or verbal refusal (Davies et al., 2009; Ricciardelli et al., 2021). Given that freezing is a very common victim response, there is a clear mismatch between people’s perceptions of victim and perpetrator responsibility and reality (Coxell & King, 2010). Most concerning, the perceptions of our participants are reflected in legal frameworks. For example, our sample was predominantly German, with Dutch as the next most common nationality. Current Dutch sexual assault legislation permits a perpetrator’s sentence to be reduced when the victim did not or was unable to physically resist, which presents rape of non-resisting victims as less deserving of punishment and less serious overall (Overheid.nl, 2023). Similarly, German law states that only those who reject the victim's expressed will are subject to prosecution (Strafgesetzbuch, 2016). Thereby, a sexual assault is only committed when the victim explicitly showed that they do not consent to the act (e.g., by saying “no” or crying) or when the perpetrator actively misused a victim’s inability to give consent (e.g., when drugged or mentally/physically disabled). Here, freezing is not considered an inability to give consent (Strafgesetzbuch, 2016). Thus, while current legislation does align with the attitudes of their population, or at least as so far as this is imperfectly reflected in our sample, we argue that the

role of law is not only to reflect morality but to shape it (Tyler & Darley, 1999). Legislation that reflected freezing as a common response, and that rapes of freezing victims are not lesser, nor the fault of the victim, could thereby be one mechanism to better protect rape victims (Dowds, 2020).

Rape Myth Acceptance and Rape Perceptions

We performed additional analyses exploring the role of rape myth acceptance. In line with prior research, we observed main effects of RMA whereby higher levels of RMA were associated with higher levels of victim blame and lower levels of perpetrator blame and seriousness of the crime (Fisher & Pina, 2013; van der Bruggen & Grubb, 2014). However, we also observed that while male RMA specifically did not affect perceptions of male freezing victims, female RMA affected perceptions of female freezing victims. Specifically, the more participants endorsed rape myths, the greater the observed differences between victim and perpetrator blame and perceived crime seriousness were. Similarly, the relationship between RMA and all outcomes were stronger when female victims froze compared to when they did not. This finding adds to existing literature and raises the question of why the effects were only observed for female but not male victims. Plausibly, because male victims are expected to be able to physically resist female attackers, whether a victim freezes or fails to resist are seen as more or less equally inadequate responses. However, this proposal requires future empirical testing.

Implications

Gender Inclusive Understanding of Rape Myths

An important implication of our findings is that efforts must be made to raise awareness about victims of female-to-male rape. Education should emphasise that rape is a gender-neutral crime that can affect anyone, regardless of their gender. It is crucial to explore whether media rape depictions exert a direct impact on individual attitudes about rape and its

victims (Edwards et al., 2011). Also, there is a clear societal problem whereby male victims are less likely to report a rape due to the fear of disbelief or stigmatisation (Catton & Dorahy, 2022; Clements et al., 2013). Research indicates that some male victims perceive institutional treatment after the rape as traumatising or even more detrimental to their wellbeing than the sexual assault itself due to a lack of empathy from professionals (Bateman & Wathen, 2015). Sadly, our research indicates that these may be legitimate concerns, albeit in a lay participant sample. According to Capers (2011), it is possible to reduce the risk of “secondary victimisation” through education and training of professionals.

However, increased consideration of male victims of female offenders addresses only part of a need for more gender inclusive research and policy. There is also a developing literature examining rape and rape myths outside of heteronormative relationship configurations (Canan et al., 2021; Widanaralalage et al., 2022), and which considers rape myths beyond gender binaries (Reinhart, 2023; Urban & Porras Pyland, 2022). The necessity of supporting these research endeavours to inform policy and legislation development is reinforced by findings that rates of victimisation for sexual offending are higher in non-heteronormative relationships, with bisexual women experiencing the highest victimisation (Akkermans et al., 2020; Coxell & King, 2010).

Debunking Rape Myths

Our findings underscore the importance of addressing prevalent misconceptions about rape. In particular, our finding that the only occasion whereby (female) rape victims were not blamed more when freezing compared to resisting was when RMA was low. Therefore, reducing the extent to which rape myths are endorsed is an important objective. This is particularly relevant within legal sectors. Notably, it was found that beliefs based on rape myths influence jurors’ evaluations of evidence, and also their guilt determinations (Lilley et al., 2023). Specifically, Lilley et al., 2023 found a direct relationship between rape myths and

juror verdicts, whereby jurors with lesser rape myth endorsement were more likely to return a guilty verdict than their counterparts with greater rape myth endorsement.

Relatedly, police officers have a unique responsibility in the investigation of rape cases because they are often the first person the victim interacts with after the assault. According to Sleath and Bull (2017), police officers generally demonstrate low levels of rape myth acceptance, and only a small minority of officers significantly subscribe to rape myths, nonetheless where they are present, they can and do affect investigative decision making (Murphy & Hine, 2018; Sleath & Bull, 2017; Shechory Bitton & Jaeger, 2020). Parratt and Pina (2017) suggest that the high numbers of victim withdrawals in rape complaints can be attributed to a “secondary victimisation” by police officers, taking the form of unfavourable beliefs about the victim’s credibility and stigma. Oostinga et al. (2024) also show that when officers express views that align with rape myths in interviews, this can substantially harm victims’ willingness to share information. These experimental findings corroborate the qualitative accounts of victims of sexual assaults taken from genuine police interviews (Webster & Oxburgh, 2022). Therefore, police officers who endorse rape myths may represent a significant risk of secondary victimisation (Calton et al., 2016; Murphy & Hine, 2018). Similarly, an evaluation of police performance within sexual assault investigations has shown that more knowledge about sexual offences was associated with improved victim experiences, investigative outcomes and investigator wellbeing (Stanko, 2022). Therefore, it is important to develop interventions to challenge rape myths.

A recent meta-analysis of rape myth interventions has indicated that interventions can be effective, especially when they include multiple sessions and are embedded within attitude change theory (Hudspith et al., 2023). However, this same review has indicated that even much simpler interventions can be effective in the short term, which may be sufficient for debiasing jury decisions within the context of a trial.

Limitations and Future Recommendations

We provided minimal information within the police reports. We made this choice to create deliberate ambiguity over the details of the described rapes so that we would not mention behaviours aligned with specific rape myths that could bias our results. In reality, people may have access to more information about a rape allegation, particularly those in a position to directly impact legal proceedings. Nonetheless, this limitation does not impact our general conclusions about how lay people make assumptions about rape depending upon how victim behaviour is described. Nonetheless, we would not recommend any direct generalisation from our studies to policy development in practice without new supporting research that emphasises greater ecological validity (Willmott et al., 2021).

Moreover, most participants were German and Dutch young adults. Consequently, the generalizability of the findings to other age and national groups is limited. For example, including older participants may have produced even stronger effects than we observed because individuals from older generations may have received less education about rape, its victims, and its consequences (Beshers & DiVita, 2021). Similarly, rape myth endorsement may vary based on cultural beliefs and religiosity (Prina & Schatz-Stevens, 2020), especially for male rape myths (Willmott & Widanaralalage, 2024), and our sample does not allow us to analyse the influences of these demographic variables. Similarly, we used Melanson's Rape Myth Scale as our measure of rape myths. This scale has recently been criticised for having items too strongly based on female rather than uniquely male rape myths, some out of date terminology, and questions over whether the scale is reliably shown to have a unidimensional factor structure (Hogge & Wang, 2022). Given these concerns, we would also recommend replication of our results with alternative measures of rape myth acceptance.

Finally, given that the topic of rape and sexual assault is sensitive and stigmatised in society, participants may have been more likely to give socially desirable responses. People

who are asked about sensitive topics in surveys tend to overreport socially desirable and underreport socially undesirable characteristics (Krumpal, 2013; Fleming, 2012). This bias could have led to an overestimation of the seriousness of the crime perceptions, and an underestimation of the rape myth acceptance prevalence and victim and perpetrator blame perceptions in this study. Nonetheless despite this bias we were still able to identify most of our hypothesised effects.

Conclusion

We found that victims that are male or freeze are blamed more than female and resisting victims, and such rapes are also considered less serious. Perpetrators with a resisting victim were blamed more. Moreover, higher levels of rape myth acceptance were associated with more victim blame, with female rape myth acceptance particularly strengthening the effects of freezing compared to resisting on perceptions of victim and perpetrator blame, and crime seriousness. The findings illustrate persistent societal misconceptions of male and freezing victims as well as the persistence of rape myths in general. In light of these results, it is important to educate the public about the gender-neutral nature of rape crimes, the diversity of victim responses, and the detrimental consequences any victim can experience after a rape. Moreover, providing training and education to professionals involved with victims is recommended to help prevent a “secondary victimisation” of rape victims.

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