

# Perceptions of the freezing response of male and female rape victims, and the moderating role of rape myth beliefs

Judith Christiane Ostermann and Steven James Watson

## Abstract

**Purpose** – *The purpose of this study was to investigate 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 the outcomes.*

**Design/methodology/approach** – *This study was a cross-sectional, vignette survey study with a 2 × 2 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/value** – *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. The data is drawn from the German border region of the Netherlands, which 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*

**Paper type** *Research paper*

Judith Christiane Ostermann and Steven James Watson are both based at the Section of Conflict, Risk and Safety, University of Twente, Enschede, The Netherlands.

## 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 (Hori and 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

Received 12 January 2024  
Revised 15 March 2024  
Accepted 15 March 2024

The authors thank Annemiek Fokkens for providing feedback on an earlier draft of this manuscript. The authors also thank two anonymous reviewers for very helpful and constructive comments that have improved the quality of this paper.

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 may have been unable to express explicitly their lack of consent. This is problematic given that such freezing responses occur in between 48 and 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 those in 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 attempt or perform suicide (Campbell and Wasco, 2016; Debowska *et al.*, 2023; Ullman and 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 (Clements *et al.*, 2013; Moore and 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 and 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 and Pina, 2013; Gambardella *et al.*, 2020; Munroe and 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 and Pina, 2013; Weare, 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 and 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 and 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 and Grubb, 2014). They often contribute to a vindication of the perpetrator's actions by placing blame on the victim (Fisher and 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 and 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 and Dorahy, 2022), and these rape myths are typically endorsed to an even greater extent by men than women (Willmott and 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 and Bull, 2009; van der Bruggen and 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 and Dorahy, 2022; Stemple *et al.*, 2017; Turchik and Edwards, 2012; van der Bruggen and 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 and 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 and 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 and Jones, 2017). Nonetheless, the freeze response can be a harmful and traumatic event in and of itself for victims (Coxell and 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 and 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 and 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 and 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 for male victims of female rapists than for female victims 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) × 2 (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 to observe a  $\eta_p^2$  of 0.06, the smallest effect size of interest, with an alpha of 0.05 and a power level of 0.80. 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 comprises 273 participants: 161 females, 108 males, 2 identifying as “other” and 2 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 five-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 while 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 Open Science Framework 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 0.87;
- *Perpetrator blame.* Perpetrator blame was measured using eight items based on the *Revised Gudjonsson Blame Attribution Inventory* (Gudjonsson and 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 0.81;
- *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 fully [1]: “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 0.87; and

- *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 0.89. Female RMA was measured with the 22-item *Updated Illinois Rape Myth Acceptance Scale* (McMahon and 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 0.87.

### *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 English [2] both within the study information given prior to consent and within the study debrief.

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, education [3] and nationality. Participants then received a short questionnaire measuring male and female RMA. Participants were then randomly allocated to one of the four research conditions and 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 that 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 2×2 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 gender [4]. 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**

### *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 skewed [5].



Pearson's correlations across all variables were all statistically significant at  $p < 0.001$ . 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.

### Hypothesis tests

We present the means, standard deviations and F test outcomes for all comparisons in Table 2. 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,  $p = 0.047$ ,  $\eta_p^2 = 0.01$ . Victim blame was more clearly higher for freezing victims ( $M = 1.65$ ,  $SD = 0.74$ ) than for resisting victims ( $M = 1.30$ ,  $SD = 0.50$ ),  $p < 0.001$ ,  $\eta_p^2 = 0.07$ .

*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,  $p = 0.145$ .

**Table 1** Correlation coefficients for the correlations Between the dependent and moderator variables

Variable	M	SD	Perpetrator blame	Seriousness of the crime	Male RMA	Female RMA
Victim blame	1.48	0.66	-0.74	-0.74	0.65	0.60
Perpetrator blame	4.27	0.65	-	0.80	-0.50	-0.46
Seriousness of the crime	4.07	0.84	-	-	-0.46	-0.51
Male RMA	1.53	0.50	-	-	-	0.72
Female RMA	1.62	0.47	-	-	-	-

Note: All correlations were statistically significant at  $p < 0.001$  with  $df = 271$

Source: Created by authors

**Table 2** Group means per experimental condition for the dependent variables and raw and transformed scores resulting from an ANOVA

Independent variable	M	VB	SD	Dependent variables		M	SoC	SD
				PB	SD			
<i>Victim gender</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), $p = 0.047$			$F = 1.06$ , $df = 1$ (269), $p = 0.305$		$F = 7.23$ , $df = 1$ (269), $p = 0.008$		
<i>Victim behaviour</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	$F = 18.58$ , $df = 1$ (269), $p < 0.001$			$F = 29.83$ , $df = 1$ (269), $p < 0.001$		$F = 25.34$ , $df = 1$ (269), $p < 0.001$		
<i>Interaction term</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	$F = 18.58$ , $df = 1$ (269), $p < 0.001$			$F = 29.83$ , $df = 1$ (269), $p < 0.001$		$F = 25.34$ , $df = 1$ (269), $p < 0.001$		

Notes: VB = Victim blame; PB = perpetrator blame; SoC = seriousness of the crime

Source: Created by authors

*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 ( $M = 4.55$ ,  $SD = 0.54$ ),  $p < 0.001$ ,  $\eta_p^2 = 0.18$ . There was no significant interaction between victim gender and victim behaviour on perpetrator blame,  $p = 0.935$ .

*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 ( $M = 3.92$ ,  $SD = 0.88$ ),  $p < 0.008$ ,  $\eta_p^2 = 0.04$ . Rapes involving a resisting victim ( $M = 4.37$ ,  $SD = 0.69$ ) were also perceived as more serious than rapes with a freezing victim ( $M = 3.77$ ,  $SD = 0.87$ ),  $p < 0.001$ ,  $\eta_p^2 = 0.14$ . There was no significant interaction between victim gender and victim behaviour on seriousness of the crime,  $p = 0.655$ .

### ***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 rape myth acceptance.* Male RMA significantly predicted victim blame ( $b = 0.87$ ,  $SE = 0.11$ ,  $t(129) = 7.90$ ,  $p < 0.001$ ), perpetrator blame ( $b = -0.62$ ,  $SE = 0.12$ ,  $t(129) = -5.07$ ,  $p < 0.001$ ) and seriousness of the crime ( $b = -0.86$ ,  $SE = 0.17$ ,  $t(129) = -5.07$ ,  $p < 0.001$ ). 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 ( $b = 0.29$ ,  $SE = 0.16$ ,  $t(129) = 1.80$ ,  $p = 0.074$ ), male victim behaviour and perpetrator blame ( $b = -0.12$ ,  $SE = 0.18$ ,  $t(129) = -0.70$ ,  $p = 0.484$ ) and male victim behaviour and seriousness of the crime ( $b = -0.12$ ,  $SE = 0.25$ ,  $t(129) = -0.48$ ,  $p = 0.630$ ). These results showed that people's level of male RMA did not affect their judgements on victim or perpetrator blame or seriousness of the crime when exposed to a male freezing vs male resisting victim.

*Female rape myth acceptance.* Female RMA significantly predicted victim blame ( $b = 0.37$ ,  $SE = 0.11$ ,  $t(136) = 3.50$ ,  $p < 0.001$ ), perpetrator blame ( $b = -0.39$ ,  $SE = 0.12$ ,  $t(136) = 3.22$ ,  $p = 0.002$ ) and seriousness of the crime ( $b = -0.49$ ,  $SE = 0.15$ ,  $t(136) = -3.38$ ,  $p < 0.001$ ). 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, ( $b = 0.76$ ,  $SE = 0.14$ ,  $t(136) = 5.30$ ,  $p < 0.001$ ), perpetrator blame, ( $b = -0.53$ ,  $SE = 0.16$ ,  $t(136) = -3.32$ ,  $p = 0.001$ ) and seriousness of the crime, ( $b = -0.68$ ,  $SE = 0.20$ ,  $t(136) = -3.47$ ,  $p < 0.001$ ).

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 3](#) shows that in all cases, the relationship between RMA and the outcome variables was stronger when victims froze compared to those who resisted.



**Table 3** The effect of female RMA on victim blame, perpetrator blame and seriousness of the crime in the case of female victims

Outcome	Condition	B	Simple slopes		Slope comparisons				
			SE	LowerCI	UpperCI	B	SE	t	p
VB	Freezing	1.13	0.11	0.95	1.32	-0.76	0.14	5.30	< 0.001
	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	0.001
	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	0.001
	Refusal	-0.49	0.12	-0.78	-0.20				

Notes: VB = victim blame; PB = perpetrator blame; SoC = seriousness of the crime, *df* for slope comparisons are all 136

Source: Created by authors

We also tested whether mean scores on our dependent variables varied depending on the level of RMA endorsement. These results are presented in Table 4. 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.

## 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

**Table 4** 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	EMM	SE	B	SE	t	p
VB	Low	Freezing	1.13	0.06	-0.11	0.09	1.19	0.238
		Refusal	1.02	0.07				
	Medium	Freezing	1.54	0.05	-0.39	0.07	5.44	<0.001
		Refusal	1.16	0.05				
	High	Freezing	2.29	0.07	-0.89	0.12	8.23	<0.001
		Refusal	1.40	0.08				
PB	Low	Freezing	4.47	0.07	0.30	0.11	2.80	0.006
		Refusal	4.77	0.08				
	Medium	Freezing	4.14	0.05	0.49	0.08	6.16	<0.001
		Refusal	4.63	0.06				
	High	Freezing	3.54	0.08	0.84	0.12	6.97	<0.001
		Refusal	4.38	0.09				
SoC	Low	Freezing	4.43	0.09	0.35	0.13	2.68	0.008
		Refusal	4.78	0.10				
	Medium	Freezing	4.01	0.07	0.59	0.10	6.10	<0.001
		Refusal	4.60	0.07				
	High	Freezing	3.24	0.10	1.04	0.15	7.06	<0.001
		Refusal	4.28	0.11				

Notes: EMM = estimated marginal means; *df* = 136; low = 16<sup>th</sup> percentile - 1.14, medium = 50<sup>th</sup> percentile - 1.50, high = 84<sup>th</sup> percentile - 2.16; VB = victim blame, PB = perpetrator blame, SoC = seriousness of the crime

Source: Created by authors

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 who 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 and Dorahy, 2022; Stemple *et al.*, 2017; Turchik and Edwards, 2012; van der Bruggen and 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 and Bull, 2009; van der Bruggen and Grubb, 2014; (Willmott and Widanaralage, 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 and 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, § 177, 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, § 177, 2016). Thus, while current legislation does align with the attitudes of their population, or at least as 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 and 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 and Pina, 2013; van der Bruggen and 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 was 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 is 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 and 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 well-being than the sexual assault itself due to a lack of empathy from professionals (Bateman and 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; Widanaralage *et al.*, 2022) and which considers rape myths beyond gender binaries (Reinhart, 2023; Urban and 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 and King, 2010).

*Debunking rape myths.* Our findings underscore the importance of addressing prevalent misconceptions about rape. In particular, our finding was that the only occasion where (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 and Hine, 2018; Sleath and Bull, 2017; Shechory Bitton and 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 and Oxburgh, 2022). Therefore, police officers who endorse rape myths may represent a significant risk of secondary victimisation (Calton *et al.*, 2016; Murphy and 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 well-being (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. Still, 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 and DiVita, 2021). Similarly, rape myth endorsement may vary based on cultural beliefs and religiosity (Prina and Schatz-Stevens, 2020), especially for male rape myths (Willmott and Widanaralage, 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 and 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 who 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.

## Notes

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.
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.
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.

## References

- Akkermans, M., Gielen, W., Kloosterman, R., Moons, E., Reep, C. and Wingen, M. (2020), “Prevalentiemonitor huiselijk geweld en seksueel geweld”.
- Bateman, J. and Wathen, C. (2015), “Understanding rape myths: a guide for counselors working with male survivors of sexual violence”, available at: [www.counseling.org/docs/default-source/vistas/understanding-rape-myths.pdf?sfvrsn=1cdb432c\\_8](http://www.counseling.org/docs/default-source/vistas/understanding-rape-myths.pdf?sfvrsn=1cdb432c_8)
- Beshers, S. and DiVita, M. (2021), “Changes in rape myth acceptance among undergraduates: 2010 to 2017”, *Journal of Interpersonal Violence*, Vol. 36 Nos 19/20, pp. 9371-9392, doi: [10.1177/0886260519867153](https://doi.org/10.1177/0886260519867153).
- Calton, J.M., Cattaneo, L.B. and Gebhard, K.T. (2016), “Barriers to help seeking for lesbian, gay, bisexual, transgender, and queer survivors of intimate partner violence”, *Trauma, Violence, & Abuse*, Vol. 17 No. 5, pp. 585-600, doi: [10.1177/1524838015585318](https://doi.org/10.1177/1524838015585318).
- Campbell, R. and Wasco, S.M. (2016), “Understanding rape and sexual assault”, *Journal of Interpersonal Violence*, Vol. 20 No. 1, doi: [10.1177/0886260504268604](https://doi.org/10.1177/0886260504268604).
- Canan, S.N., Jozkowski, K.N., Wiersma-Mosley, J.D., Bradley, M. and Blunt-Vinti, H. (2021), “Differences in lesbian, bisexual, and heterosexual women’s experiences of sexual assault and rape in a national U.S. sample”, *Journal of Interpersonal Violence*, Vol. 36 Nos 19/20, pp. 9100-9120, doi: [10.1177/0886260519863725](https://doi.org/10.1177/0886260519863725).
- Capers, B. (2011), “Real rape too”, *California Law Review*, Vol. 99 No. 5, pp. 1259-1307, available at: [www.jstor.org/stable/41345384?seq=1](http://www.jstor.org/stable/41345384?seq=1)
- Catton, A.K.H. and Dorahy, M.J. (2022), “Blame attributions against heterosexual male victims of sexual coercion: effects of gender, social influence, and perceptions of distress”, *Journal of Interpersonal Violence*, Vol. 37 Nos 9/10, pp. NP7014-NP7033, doi: [10.1177/0886260520967153](https://doi.org/10.1177/0886260520967153).
- Clements, H., Dawson, D.L. and das Nair, R. (2013), “Female-perpetrated sexual abuse: a review of victim and professional perspectives”, *Journal of Sexual Aggression*, Vol. 20 No. 2, pp. 197-215, doi: [10.1080/13552600.2013.798690](https://doi.org/10.1080/13552600.2013.798690).

- Conroy, E., Willmott, D., Murphy, A. and Widanaralalage, B.K. (2023), "Does perpetrator gender influence attitudes towards intimate partner violence (IPV)? examining the relationship between male-perpetrated and female-perpetrated IPV attitudes among a sample of UK young adults", *Mental Health and Social Inclusion*, doi: [10.1108/MHSI-05-2023-0057](https://doi.org/10.1108/MHSI-05-2023-0057).
- Cortoni, F., Hanson, R.K. and Coache, M.-È. (2010), "The recidivism rates of female sexual offenders are low: a meta-analysis", *Sexual Abuse: A Journal of Research and Treatment*, Vol. 22 No. 4, pp. 387-401, doi: [10.1177/1079063210372142](https://doi.org/10.1177/1079063210372142).
- Coxell, A.W. and King, M.B. (2010), "Adult male rape and sexual assault: prevalence, re-victimisation and the tonic immobility response", *Sexual and Relationship Therapy*, Vol. 25 No. 4, pp. 372-379, doi: [10.1080/14681991003747430](https://doi.org/10.1080/14681991003747430).
- Davies, M., Rogers, P. and Whitelegg, L. (2009), "Effects of victim gender, victim sexual orientation, victim response and respondent gender on judgements of blame in a hypothetical adolescent rape", *Legal and Criminological Psychology*, Vol. 14 No. 2, pp. 331-338, doi: [10.1348/978185408x386030](https://doi.org/10.1348/978185408x386030).
- Dawtry, R.J., Cozzolino, P.J. and Callan, M.J. (2019), "I blame therefore it was: rape myth acceptance, victim blaming, and memory reconstruction", *Personality and Social Psychology Bulletin*, Vol. 45 No. 8, pp. 1269-1282, doi: [10.1177/0146167218818475](https://doi.org/10.1177/0146167218818475).
- de Heer, B.A. and Jones, L.C. (2017), "Investigating the self-protective potential of immobility in victims of rape", *Violence and Victims*, Vol. 32 No. 2, pp. 210-229, doi: [10.1891/0886-6708.VV-D-15-00099](https://doi.org/10.1891/0886-6708.VV-D-15-00099).
- de la Torre Laso, J. (2023), "The reality of tonic immobility in victims of sexual violence: 'I was paralyzed, I couldn't move'", *Trauma, Violence, & Abuse*, Vol. 25 No. 2, doi: [10.1177/15248380231191232](https://doi.org/10.1177/15248380231191232).
- de Motte, C. and Mutale, G. (2019), "How the construction of women in discourse explains society's challenge in accepting that females commit sexual offences against children", *Journal of Criminal Psychology*, Vol. 9 No. 4, pp. 155-165, doi: [10.1108/jcp-07-2019-0024](https://doi.org/10.1108/jcp-07-2019-0024).
- Debowska, A., Boduszek, D., Fray-Aiken, C., Ochen, E.A., Powell-Booth, K., Nanfuka Kalule, E., Harvey, R., Turyomurugyendo, F., Nelson, K., Willmott, D. and Mason, S. (2023), "Child abuse and neglect and associated mental health outcomes: a large, population-based survey among children and adolescents from Jamaica and Uganda", *Mental Health and Social Inclusion*, doi: [10.1108/mhsi-08-2023-0089](https://doi.org/10.1108/mhsi-08-2023-0089).
- Dowds, E. (2020), "Towards a contextual definition of rape: consent, coercion and constructive force", *The Modern Law Review*, Vol. 83 No. 1, pp. 35-63, doi: [10.1111/1468-2230.12461](https://doi.org/10.1111/1468-2230.12461).
- Dworkin, E.R., Krahé, B. and Zinzow, H. (2021), "The global prevalence of sexual assault: a systematic review of international research since 2010", *Psychology of Violence*, Vol. 11 No. 5, pp. 497-508, doi: [10.1037/vio0000374](https://doi.org/10.1037/vio0000374).
- Edwards, K.M., Turchik, J.A., Dardis, C.M., Reynolds, N. and Gidycz, C.A. (2011), "Rape myths: history, individual and Institutional-Level presence, and implications for change", *Sex Roles*, Vol. 65 Nos 11/12, pp. 761-773, doi: [10.1007/s11199-011-9943-2](https://doi.org/10.1007/s11199-011-9943-2).
- Eigenberg, H. and Policastro, C. (2015), "Blaming victims in cases of interpersonal violence: attitudes associated with assigning blame to female victims", *Women & Criminal Justice*, Vol. 26 No. 1, pp. 37-54, doi: [10.1080/08974454.2014.997417](https://doi.org/10.1080/08974454.2014.997417).
- Faul, F., Erdfelder, E., Buchner, A. and Lang, A.-G. (2009), "Statistical power analyses using G\*power 3.1: tests for correlation and regression analyses", *Behavior Research Methods*, Vol. 41 No. 4, pp. 1149-1160, doi: [10.3758/brm.41.4.1149](https://doi.org/10.3758/brm.41.4.1149).
- Fisher, N.L. and Pina, A. (2013), "An overview of the literature on female-perpetrated adult male sexual victimization", *Aggression and Violent Behavior*, Vol. 18 No. 1, pp. 54-61, doi: [10.1016/j.avb.2012.10.001](https://doi.org/10.1016/j.avb.2012.10.001).
- Fleming, P. (2012), "Social desirability, not what it seems: a review of the implications for self-reports", *The International Journal of Educational and Psychological Assessment*, Vol. 11 No. 1, pp. 3-22.
- Fusé, T., Forsyth, J.P., Marx, B., Gallup, G.G. and Weaver, S. (2007), "Factor structure of the tonic immobility scale in female sexual assault survivors: an exploratory and confirmatory factor analysis", *Journal of Anxiety Disorders*, Vol. 21 No. 3, pp. 265-283, doi: [10.1016/j.janxdis.2006.05.004](https://doi.org/10.1016/j.janxdis.2006.05.004).
- Gambardella, G., Benz, M., Hines, D.A. and Palm Reed, K.M. (2020), "A descriptive analysis of college students' experiences of female-perpetrated sexual assault", *Journal of Contemporary Criminal Justice*, Vol. 36 No. 4, pp. 520-538, doi: [10.1177/1043986220936077](https://doi.org/10.1177/1043986220936077).
- Gudjonsson, G.H. and Singh, K.K. (1989), "The revised gudjonsson blame attribution inventory", *Personality and Individual Differences*, Vol. 10 No. 1, pp. 67-70, doi: [10.1016/0191-8869\(89\)90179-7](https://doi.org/10.1016/0191-8869(89)90179-7).



- Hayes, R.M., Lorenz, K. and Bell, K.A. (2013), "Victim blaming others", *Feminist Criminology*, Vol. 8 No. 3, pp. 202-220, doi: [10.1177/1557085113484788](https://doi.org/10.1177/1557085113484788).
- Hellmann, D.F., Kinninger, M.W. and Kliem, S. (2018), "Sexual violence against women in Germany: prevalence and risk markers", *International Journal of Environmental Research and Public Health*, Vol. 15 No. 8, doi: [10.3390/ijerph15081613](https://doi.org/10.3390/ijerph15081613).
- Hogge, I. and Wang, Y.-W. (2022), "Revising the male rape myths scale", *Psychology of Men & Masculinities*, Vol. 23 No. 4, pp. 422-433, doi: [10.1037/men0000405](https://doi.org/10.1037/men0000405).
- Horii, H. and Bouland, A. (2023), "Drafting new rape law", *Recht Der Werkelijkheid*, Vol. 44 No. 1, pp. 14-38, doi: [10.5553/RdW/138064242023044001002](https://doi.org/10.5553/RdW/138064242023044001002).
- Hörnle, T. (2017), "The new German law on sexual assault and sexual harassment", *German Law Journal*, Vol. 18 No. 6, pp. 1309-1330, doi: [10.1017/S2071832200022355](https://doi.org/10.1017/S2071832200022355).
- Hudspith, L.F., Wager, N., Willmott, D. and Gallagher, B. (2023), "Forty years of rape myth acceptance interventions: a systematic review of what works in naturalistic institutional settings and how this can be applied to educational guidance for jurors", *Trauma, Violence, & Abuse*, Vol. 24 No. 2, pp. 981-1000, doi: [10.1177/15248380211050575](https://doi.org/10.1177/15248380211050575).
- Krumpal, I. (2013), "Determinants of social desirability bias in sensitive surveys: a literature review", *Quality & Quantity*, Vol. 47 No. 4, pp. 2025-2047, doi: [10.1007/s11135-011-9640-9](https://doi.org/10.1007/s11135-011-9640-9).
- Laso, J. (2023), "Tonic immobility in rape: a little-known reality", *Journal of Forensic Sciences & Criminal Investigation*, Vol. 16 No. 3, pp. 1-2, doi: [10.19080/JFSCI.2023.16.555939](https://doi.org/10.19080/JFSCI.2023.16.555939).
- Lewandowicz-Machnikowska, M., Grzyb, T., Dolinski, D. and Kulesza, W. (2023), "Gender biases in legal decision-making: an exploration of judicial and public perceptions across multiple offences", *Journal of Criminal Psychology*, doi: [10.1108/JCP-07-2023-0049](https://doi.org/10.1108/JCP-07-2023-0049).
- Lilley, C., Willmott, D. and Mojtahedi, D. (2023), "Juror characteristics on trial: investigating how psychopathic traits, rape attitudes, victimization experiences, and juror demographics influence decision-making in an intimate partner rape trial", *Frontiers in Psychiatry*, Vol. 13, doi: [10.3389/fpsy.2022.1086026](https://doi.org/10.3389/fpsy.2022.1086026).
- McMahon, S. and Farmer, G.L. (2011), "An updated measure for assessing subtle rape myths", *Social Work Research*, Vol. 35 No. 2, pp. 71-81, doi: [10.1093/swr/35.2.71](https://doi.org/10.1093/swr/35.2.71).
- Melanson, P.K. (1998), "Belief in male rape myths: a test of two competing theories", [Doctoral dissertation, Queen's University].
- Möller, A., Söndergaard, H.P. and Helström, L. (2017), "Tonic immobility during sexual assault – a common reaction predicting post-traumatic stress disorder and severe depression", *Acta Obstetrica Et Gynecologica Scandinavica*, Vol. 96 No. 8, pp. 932-938, doi: [10.1111/aogs.13174](https://doi.org/10.1111/aogs.13174).
- Moore, M.V. and Miller-Perrin, C. (2021), "Exploring the effects of perpetrator, victim, and participant gender on perceptions related to sexual assault", *Journal of Aggression, Maltreatment & Trauma*, Vol. 31 No. 9, pp. 1-19, doi: [10.1080/10926771.2021.2019157](https://doi.org/10.1080/10926771.2021.2019157).
- Munroe, C. and Shumway, M. (2020), "Female-perpetrated sexual violence: a survey of survivors of female-perpetrated childhood sexual abuse and adult sexual assault", *Journal of Interpersonal Violence*, Vol. 37 Nos 9/10, p. 88626052096713, doi: [10.1177/0886260520967137](https://doi.org/10.1177/0886260520967137).
- Murphy, A. and Hine, B. (2018), "Investigating the demographic and attitudinal predictors of rape myth acceptance in U.K. Police officers: developing an evidence-base for training and professional development", *Psychology, Crime & Law*, Vol. 25 No. 1, pp. 69-89, doi: [10.1080/1068316x.2018.1503663](https://doi.org/10.1080/1068316x.2018.1503663).
- Oliver, B.E. (2007), "Preventing female-perpetrated sexual abuse", *Trauma, Violence, & Abuse*, Vol. 8 No. 1, pp. 19-32, doi: [10.1177/1524838006296747](https://doi.org/10.1177/1524838006296747).
- Oostinga, M.S.D., Rispa Hoyes, M.L. and Watson, S.J. (2024), "The power of words: the impact of police interviewer's judgment error and apology on sexual violence victims in simulated interviews", [Manuscript submitted for publication].
- Overheid.nl (2023), "Wetboek van strafrecht", <https://wetten.overheid.nl/BWBR0001854/2020-07-25#BoekTweede>
- Parratt, K.A. and Pina, A. (2017), "From 'real rape' to real justice: a systematic review of police officers' rape myth beliefs", *Aggression and Violent Behavior*, Vol. 34, pp. 68-83, doi: [10.1016/j.avb.2017.03.005](https://doi.org/10.1016/j.avb.2017.03.005).

- Payne, D.L., Lonsway, K.A. and Fitzgerald, L.F. (1999), "Rape myth acceptance: exploration of its structure and its measurement using the Illinois rape myth acceptance scale", *Journal of Research in Personality*, Vol. 33 No. 1, pp. 27-68, doi: [10.1006/jrpe.1998.2238](https://doi.org/10.1006/jrpe.1998.2238).
- Prina, F. and Schatz-Stevens, J.N. (2020), "Sexism and rape myth acceptance: the impact of culture, education, and religiosity", *Psychological Reports*, Vol. 123 No. 3, pp. 929-951, doi: [10.1177/0033294119826896](https://doi.org/10.1177/0033294119826896).
- Reinhart, R.R. (2023), "Impact of gender identity on observer blame in sexual assault (publication number 30491981)", MA thesis, Northern Arizona University, available at: [www.proquest.com/openview/b6d71e6dc2ce1c323a87a889c6834428/1?pq-origsite=gscholar&cbl=18750&diss=y](http://www.proquest.com/openview/b6d71e6dc2ce1c323a87a889c6834428/1?pq-origsite=gscholar&cbl=18750&diss=y)
- Reitz-Krueger, C.L., Mummert, S.J. and Troupe, S.M. (2017), "Real men can't get raped: an examination of gendered rape myths and sexual assault among undergraduates", *Journal of Aggression, Conflict and Peace Research*, Vol. 9 No. 4, pp. 314-323, doi: [10.1108/jacpr-06-2017-0303](https://doi.org/10.1108/jacpr-06-2017-0303).
- Ricciardelli, R., Spencer, D.C. and Dodge, A. (2021), "Society wants to see a true victim': police interpretations of victims of sexual violence", *Feminist Criminology*, Vol. 16 No. 2, pp. 216-235, doi: [10.1177/1557085120970270](https://doi.org/10.1177/1557085120970270).
- Rubin, D.C. and Bell, C.F. (2023), "Tonic immobility (freezing) during sexual and physical assaults produces stronger memory effects than other characteristics of the assaults", *Memory*, Vol. 31 No. 5, pp. 678-688, doi: [10.1080/09658211.2023.2188642](https://doi.org/10.1080/09658211.2023.2188642).
- Schiewe, M. (2019), "Tonic immobility: the fear-freeze response as a forgotten factor in sexual assault laws", *DePaul Journal of Women, Gender and the Law*, available at: <https://via.library.depaul.edu/cgi/viewcontent.cgi?article=1046&context=jwgl>
- Scurich, N. (2023), "Female perpetrators of child sexual abuse in the United States", *Journal of Criminal Psychology*, Vol. 13 No. 4, pp. 417-428, doi: [10.1108/JCP-07-2023-0045](https://doi.org/10.1108/JCP-07-2023-0045).
- Shechory Bitton, M. and Jaeger, L. (2020), "It can't be rape': female vs. male rape myths among Israeli police officers", *Journal of Police and Criminal Psychology*, Vol. 35 No. 4, pp. 494-503, doi: [10.1007/s11896-019-09327-4](https://doi.org/10.1007/s11896-019-09327-4).
- Sleath, E. and Bull, R. (2009), "Male rape victim and perpetrator blaming", *Journal of Interpersonal Violence*, Vol. 25 No. 6, pp. 969-988, doi: [10.1177/0886260509340534](https://doi.org/10.1177/0886260509340534).
- Sleath, E. and Bull, R. (2017), "Police perceptions of rape victims and the impact on case decision making: a systematic review", *Aggression and Violent Behavior*, Vol. 34 No. 1, pp. 102-112, doi: [10.1016/j.avb.2017.02.003](https://doi.org/10.1016/j.avb.2017.02.003).
- Stanko, B. (2022), "Operation soteria bluestone year 1 report", ISBN 978-1-5286-3824-1, available at: [www.gov.uk/government/publications/operation-soteria-year-one-report](http://www.gov.uk/government/publications/operation-soteria-year-one-report)
- Stemple, L., Flores, A. and Meyer, I.H. (2017), "Sexual victimization perpetrated by women: federal data reveal surprising prevalence", *Aggression and Violent Behavior*, Vol. 34, pp. 302-311, doi: [10.1016/j.avb.2016.09.007](https://doi.org/10.1016/j.avb.2016.09.007).
- Strafgesetzbuch, § 177 (2016), available at: [www.gesetze-im-internet.de/stgb/\\_177.html](http://www.gesetze-im-internet.de/stgb/_177.html)
- Stylianou, S. (2003), "Measuring crime seriousness perceptions: what have we learned and what else do we want to know", *Journal of Criminal Justice*, Vol. 31 No. 1, pp. 37-56, doi: [10.1016/s0047-2352\(02\)00198-8](https://doi.org/10.1016/s0047-2352(02)00198-8).
- Thornton, G., Willmott, D., Richardson, E.V. and Flynn Hudspith, L. (2023), "Examining the immediate and enduring psychological impact of street harassment on women's mental health", *Mental Health and Social Inclusion*, doi: [10.1108/mhsi-07-2023-0080](https://doi.org/10.1108/mhsi-07-2023-0080).
- Turchik, J.A. and Edwards, K.M. (2012), "Myths about male rape: a literature review", *Psychology of Men & Masculinity*, Vol. 13 No. 2, pp. 211-226, doi: [10.1037/a0023207](https://doi.org/10.1037/a0023207).
- Tyler, T.R. and Darley, J.M. (1999), "Building a law-abiding society: taking public views about morality and the legitimacy of legal authorities into account when formulating substantive law", *Hofstra Law Review*, Vol. 28, p. 707.
- Ullman, S.E. and Brecklin, L.R. (2002), "Sexual assault history and suicidal behavior in a national sample of women", *Suicide and Life-Threatening Behavior*, Vol. 32 No. 2, pp. 117-130, doi: [10.1521/suli.32.2.117.24398](https://doi.org/10.1521/suli.32.2.117.24398).
- Urban, R.E. and Porras Pyland, C. (2022), "Development and preliminary validation of the gender inclusive rape myth acceptance scale", *Journal of Interpersonal Violence*, Vol. 37 Nos 21/22, pp. NP20630-NP20652, doi: [10.1177/08862605211055076](https://doi.org/10.1177/08862605211055076).

- van der Bruggen, M. and Grubb, A. (2014), "A review of the literature relating to rape victim blaming: an analysis of the impact of observer and victim characteristics on attribution of blame in rape cases", *Aggression and Violent Behavior*, Vol. 19 No. 5, pp. 523-531, doi: [10.1016/j.avb.2014.07.008](https://doi.org/10.1016/j.avb.2014.07.008).
- Walfield, S.M. (2021), "Men cannot be raped": correlates of male rape myth acceptance", *Journal of Interpersonal Violence*, Vol. 36 Nos 13/14, pp. 6391-6417, doi: [10.1177/0886260518817777](https://doi.org/10.1177/0886260518817777).
- Weare, S. (2017), "Forced-to-penetrate cases: lived experiences of men – baseline research findings", Lancaster University.
- Weare, S. (2018a), "I feel permanently traumatized by it": physical and emotional impacts reported by men forced to penetrate women in the United Kingdom", *Journal of Interpersonal Violence*, Vol. 36 Nos 13/14, p. 88626051882081, doi: [10.1177/0886260518820815](https://doi.org/10.1177/0886260518820815).
- Weare, S. (2018b), "Oh you're a guy, how could you be raped by a woman, that makes no sense": towards a case for legally recognising and labelling 'forced-to-penetrate' cases as rape", *International Journal of Law in Context*, Vol. 14 No. 1, pp. 110-131, doi: [10.1017/S1744552317000179](https://doi.org/10.1017/S1744552317000179).
- Webster, W.S. and Oxburgh, G.E. (2022), "Victims of sexual offences: aspects impacting on participation, cooperation and engagement with the interview process", *Psychiatry, Psychology and Law*, Vol. 29 No. 5, pp. 679-697, doi: [10.1080/13218719.2021.1956387](https://doi.org/10.1080/13218719.2021.1956387).
- Widanaralalage, B.K., Hine, B.A., Murphy, A.D. and Murji, K. (2022), "I didn't feel i was a victim": a phenomenological analysis of the experiences of male-on-male survivors of rape and sexual abuse", *Victims & Offenders*, Vol. 17 No. 8, pp. 1-26, doi: [10.1080/15564886.2022.2069898](https://doi.org/10.1080/15564886.2022.2069898).
- Widanaralalage, B.K., Hine, B.A., Murphy, A.D. and Murji, K. (2023), "A qualitative investigation of service providers' experiences supporting raped and sexually abused men", *Violence and Victims*, Vol. 38 No. 1, pp. 53-76, doi: [10.1891/VV-2022-0084](https://doi.org/10.1891/VV-2022-0084).
- Wijkman, M., Bijleveld, C. and Hendriks, J. (2010), "Women don't do such things! characteristics of female sex offenders and offender types", *Sexual Abuse*, Vol. 22 No. 2, pp. 135-156, doi: [10.1177/1079063210363826](https://doi.org/10.1177/1079063210363826).
- Willmott, D., Boduszek, D., Debowska, A. and Hudspith, L. (2021), "Jury decision making in rape trials: an attitude problem?", in Crighton, G.J.T.D. (Ed.), *Forensic Psychology*, 3rd ed. Wiley-Blackwell, New York, NY, pp. 94.-113.
- Willmott, D. and Widanaralalage, B.K. (2024), "Male rape myths: examining the role of victim empathy and socio-demographics in a cross-sectional sample of UK adults", *International Journal of Law, Crime and Justice*, Vol. 76, p. 100645, doi: [10.1016/j.ijlcj.2023.100645](https://doi.org/10.1016/j.ijlcj.2023.100645).

## Further reading

- Hill, H. (2014), "Rape myths and the use of expert psychological evidence", *Victoria University of Wellington Law Review*, Vol. 45 No. 3, p. 471, doi: [10.26686/vuwlr.v45i3.4949](https://doi.org/10.26686/vuwlr.v45i3.4949).
- Latcheva, R. (2017), "Sexual harassment in the European Union: a pervasive but still hidden form of gender-based violence", *Journal of Interpersonal Violence*, Vol. 32 No. 12, pp. 1821-1852, doi: [10.1177/0886260517698948](https://doi.org/10.1177/0886260517698948).
- Nielsen, M., Haun, D., Kärtner, J. and Legare, C.H. (2017), "The persistent sampling bias in developmental psychology: a call to action", *Journal of Experimental Child Psychology*, Vol. 162, pp. 31-38, doi: [10.1016/j.jecp.2017.04.017](https://doi.org/10.1016/j.jecp.2017.04.017).
- Struckman-Johnson, C. and Struckman-Johnson, D. (1992), "Acceptance of male rape myths among college men and women", *Sex Roles*, Vol. 27 Nos 3/4, pp. 85-100, doi: [10.1007/bf00290011](https://doi.org/10.1007/bf00290011).

## Corresponding author

Steven James Watson can be contacted at: [s.j.watson@utwente.nl](mailto:s.j.watson@utwente.nl)

---

For instructions on how to order reprints of this article, please visit our website:  
[www.emeraldgrouppublishing.com/licensing/reprints.htm](http://www.emeraldgrouppublishing.com/licensing/reprints.htm)  
Or contact us for further details: [permissions@emeraldinsight.com](mailto:permissions@emeraldinsight.com)