

# Rape Myth Acceptance, Sexual Trauma History, and Posttraumatic Stress Disorder

Journal of Interpersonal Violence  
25(11) 2036–2053  
© The Author(s) 2010  
Reprints and permission: <http://www.sagepub.com/journalsPermissions.nav>  
DOI: 10.1177/0886260509354506  
<http://jiv.sagepub.com>



Shannon N. Baugher,<sup>1</sup> Jon D. Elhai,<sup>2</sup>  
James R. Monroe,<sup>1</sup> and Matt J. Gray<sup>3</sup>

## Abstract

The prediction of false rape-related beliefs (rape myth acceptance [RMA]) was examined using the Illinois Rape Myth Acceptance Scale (Payne, Lonsway, & Fitzgerald, 1999) among a nonclinical sample of 258 male and female college students. Predictor variables included measures of attitudes toward women, gender role identity (GRI), sexual trauma history, and posttraumatic stress disorder (PTSD) symptom severity. Using linear regression and testing interaction effects, negative attitudes toward women significantly predicted greater RMA for individuals without a sexual trauma history. However, neither attitudes toward women nor GRI were significant predictors of RMA for individuals with a sexual trauma history. PTSD did not moderate RMA's relationship with attitudes toward women and GRI. This study has clinical implications for treatment as well as for the development of rape myth–dispelling programs.

## Keywords

attitudes toward women, gender role, PTSD, rape myth, sexual trauma

---

<sup>1</sup>University of South Dakota, Vermillion

<sup>2</sup>University of Toledo, Toledo, OH

<sup>3</sup>University of Wyoming, Laramie

## Corresponding Author:

Jon D. Elhai, PhD, Department of Psychology, University of Toledo, Mail Stop 948, 2801 W. Bancroft St., Toledo, OH 43606-3390  
Email: [jonelhai@gmail.com](mailto:jonelhai@gmail.com)

Many rape survivors present to the offices of clinicians with complaints beyond clinical symptomatology. Survivors often feel and believe that they are being blamed by society for the occurrence of the sexual assault (Breitenbecher, 2006; Regehr, Cadell, & Jansen, 1999), feeling that by their actions, they “deserved it.” The acceptance of rape myths is a specific manner of assigning blame to the survivor for the sexual assault. Revealing variables affecting the public’s acceptance of myths about rape is necessary for devising a plan to reduce such myths. If clinicians who treat rape survivors are aware of the contributing factors in rape myth acceptance (RMA), they can be better equipped to provide effective treatment to the survivor. Effective psychoeducation regarding how and why others may react to the rape may provide inoculation against the self-blame and guilt that often occurs subsequent to sexual trauma (Breitenbecher, 2006; Regehr et al., 1999). Accurate information can be empowering for the survivor when dealing with sexual trauma, as such information may have the capacity to dispel rape myths and alleviate self-blame. This is extremely important given that self-blame from sexual assault has been directly linked to negative emotional consequences (Breitenbecher, 2006; Regehr et al., 1999).

Previous research has investigated a variety of predictors of RMA, but studies have often used nonstandardized case vignette methodology (Davies, Pollard, & Archer, 2001; Gerber, Cronin, & Steigman, 2004; Hammock & Richardson, 1993). Such nonstandardization has made it difficult to compare results across these studies. In addition, few studies examine the potentially important variable of sexual trauma history as a predictor of RMA, and no studies have examined posttraumatic stress disorder (PTSD) as a potential predictor. This study sought to clarify the contributing factors inherent in RMA.

## **RMA**

Rape myths are prejudicial, stereotyped, or false beliefs about rape, rape survivors, or rapists (Burt, 1991; Lonsway & Fitzgerald, 1994). Some examples of rape myths are “rapists are mentally ill,” “men cannot control their sexual impulses,” and “women routinely fabricate reports of rape.” Rape myths are part of the general culture, and people learn them in the same manner that they acquire other attitudes and beliefs—through peers and popular media (Burt, 1991). In fact, society’s common perception of rape does not match typical legal definitions, and rape myth beliefs are the concepts that influence this misperception (Burt, 1991). Empirical studies have shown that the more an individual believes in rape myths, the more he or she is apt to blame the survivor and to assign him or her more responsibility for the rape (Burt &

Albin, 1981; Caron & Carter, 1997; Costin & Schwarz, 1987; Frese, Moya, & Megias, 2004; Kopper, 1996). In fact, two attitudinal variables were most predictive of the willingness to convict a rapist: RMA and interpersonal violence acceptance, explaining 13% to 20% of the variance in the willingness to convict (Burt & Albin, 1981).

Oppressive belief systems such as racism, sexism, homophobia, ageism, classism, and religious intolerance have been shown to correlate with greater RMA (Aosved & Long, 2006). Two personal characteristics in particular have demonstrated fairly consistent relationships with RMA across studies, including gender role identity (GRI) and attitudes toward women (Burt & Albin, 1981; Caron & Carter, 1997; Kopper, 1996; Szymanski, Devlin, Chrisler, & Vyse, 1993; Thornton, Rychman, & Robbins, 1982). Furthermore, more recent studies have explored the relationship between sexual trauma history and RMA (Carmody & Washington, 2001; Mason, Riger, & Foley, 2004).

## **Gender Role Identity**

Sex (i.e., being biologically male or female), rather than GRI, has been extensively examined with regard to RMA and has obtained mixed results (Kopper, 1996; Szymanski et al., 1993). GRI involves the attitudinal and behavioral expression of masculine versus feminine traits. Some examples of such traits are dominance, ambition, compassion, and warmth. Some research demonstrates that regardless of biological sex, individuals with more masculine traits express a greater acceptance of rape myths, including having less empathy and attributing more responsibility to the survivor and perceiving the rape as less serious (McCreary, Rhodes, & Saucier, 2002; Spence, 1991). Thus, it is important to consider examining gender role identity when researching RMA.

## **Attitudes Toward Women**

Attitudes toward women is a construct previously examined for associations with RMA. Research exploring attitudes toward women evidenced a predictive link to the amount of blame and responsibility afforded to rape survivors (Burt & Albin, 1981; Caron & Carter, 1997). These studies found that negative and stereotyped attitudes about women created a venue for blaming and stigmatizing the rape victim. In addition, Caron and Carter (1997) reported that egalitarian attitudes about parental and marital roles, as well as negative attitudes toward violence against women, were predictive of an overall intolerance of rape. These findings underscore the role of the cognitive process as an influential element of RMA.

## Sexual Trauma History

The emotional distress resulting from experiencing a sexual trauma may have a significant impact on an individual's acceptance or nonacceptance of rape myths. The experience could serve to further reinforce already accepted rape myths or it may provide distinct evidence to counter the validity of such beliefs. There is a paucity of sound research examining the impact of a sexual trauma history on RMA. Only two studies have compared RMA levels across individuals with and without a history of rape (Carmody & Washington, 2001; Mason et al., 2004). Both samples consisted of female college students and used measures with weaker psychometric properties. Neither study found a relationship between sexual trauma history and RMA (Carmody & Washington, 2001; Mason et al., 2004). However, one of these studies had an insufficient sample size and did not report effect sizes, making it difficult to determine true associations (sexual assault group  $N = 32$ ; Mason et al., 2004). The other study did not examine RMA as a continuously scaled variable (Carmody & Washington, 2001). In addition, neither study examined the association between the mental health effects of rape (especially symptoms of PTSD) and RMA. It is possible that the presence of PTSD symptoms resulting from sexual assault would lead to a reduced tolerance for rape and thus result in the individual being less inclined to accept rape myths than someone who had not been sexually assaulted.

## Aim of Study

In this nonclinical study of young college students, we examined GRI and attitudes toward women as predictors of RMA using ordinary least squares regression analyses and examining for moderation effects. These methods are more sophisticated than those used in previous studies examining similar constructs. This study also explored moderator effects on RMA's relationship with GRI and attitudes toward women, based on sexual trauma history and PTSD symptom severity.

The following hypotheses were specified:

*Hypothesis 1:* More traditional levels of attitudes toward women and GRI would predict higher levels of RMA.

*Hypothesis 2:* Sexual trauma history would weaken the prediction of RMA by attitudes toward women and gender role identity.

*Hypothesis 3:* Higher levels of PTSD symptom severity would weaken the prediction of RMA by attitudes toward women and gender role identity.

## Method

### Participants

The sample consisted of 1,094 male and female students (age 18 or older) enrolled in introductory college courses at a medium-sized state university in the midwestern United States. Participants were recruited from the university's multidisciplinary research pool for research or extra credit, through a password-protected Web site listing available university-specific studies for electronic sign-up. Participants were asked to provide data about sex, age, educational level, relationship status, race, and ethnicity, and employment status, in addition to being administered the instruments below. Recruitment occurred from fall of 2005 through fall of 2006.

### Instruments

*Attitude Toward Women Scale—Short Form (AWS).* The AWS (Spence, Helmreich, & Stapp, 1973) is a 25-item version of the original 55-item Attitude Toward Women Scale. The psychometric properties of both the original and shortened scales are presented in the above cited research article. The authors theorize that gender is a construct of personality. The AWS contains statements about the rights and roles of women in such areas as vocational, educational, and intellectual activities, dating behavior and etiquette, sexual behavior, and marital relationships. Examples of items include "In general, the father should have greater authority than the mother in the bringing up of children" and "Women should be encouraged not to be sexually intimate with anyone before marriage, even their fiancés." Response alternatives range from 0 (*agree strongly*, representing traditional attitudes) to 3 (*disagree strongly*, representing liberal attitudes; Spence et al., 1973). A total score is generated by summing items, resulting in a possible total score from 0 to 75 (Spence et al., 1973). Internal consistency ranges from .89 to .97 for both long and short versions of the AWS (White & Kurpius, 2002). The AWS's validity has been partially supported by finding higher scores in women members of the National Organization of Women (a group of individuals holding very liberal attitudes toward women) than both female college students and their mothers (Kilpatrick & Smith, 1974).

*Femininity Trait Index (FTI) and Masculinity Trait Index (MTI).* These measures, extracted from the short form of the Bem Sex Role Inventory (BSRI; Bem, 1974), consist of lists of 10 feminine (e.g., tender, compassionate, sympathetic) and 10 masculine (e.g., ambitious, competitive, dominant) personality trait adjectives (Barak & Stern, 1986). Participants are instructed to respond on a Likert-type scale ranging from 1 (*never or almost never true of self*)

to 7 (*always or almost always true of self*) about how well the adjectives describe them (Barak & Stern, 1986). FTI and MTI total scores are computed through a summation of the 10 feminine/masculine items, with higher scores indicating more traditional GRI. In this study, GRI was calculated using the FTI for women and the MTI for men. Coefficient alpha of .89 has been found for both the FTI among women and MTI among men (Spence, 1991). Convergent validity for these scales has been established through correlations with the Personal Attributes Questionnaire's Feminine and Masculine scales, ranging from .52 to .71, and .72 to .84, respectively (Spence, 1991). The adjectives inherent in the BSRI have recently been reassessed among college student samples, with both the feminine and masculine adjectives easily discerned. Thus, the BSRI's Feminine and Masculine scales continue to validly measure gender role identity (Holt & Ellis, 1998).

*Stressful Life Events Screening Questionnaire (SLESQ)*. The SLESQ (Goodman, Corcoran, & Turner, 1998) is a self-report measure querying past exposure to 13 *DSM-IV*, American Psychiatric Association, PTSD criterion A (i.e., traumatic) events with behaviorally specific questions. The events queried consist of life-threatening illness and accident, robbery, unexpected death of loved ones, rape, attempted rape, molestation, physical abuse, threat of death with a weapon, witnessing violence or death against another person, and combat. Items query if the event occurred, when and how many times it occurred, and who was involved. Test-retest reliability is adequate, with a median kappa coefficient of .73. Convergent validity was established with an extensive trauma exposure interview, with a mean kappa coefficient of .64 and good discrimination between PTSD criterion A and non-criterion A events (Goodman et al., 1998).

*PTSD Checklist-Stressor (PCL-S)*. The PCL-S (Weathers, Litz, Herman, Huska, & Keane, 1993) is a 17-item self-report measure of PTSD symptoms experienced within the last month with respect to an identified stressful event. Participants respond to items on a scale from 1 (*not at all*) to 5 (*extremely*). Higher scores indicate more severe PTSD symptom severity. Internal consistency of .94 has been found (Ruggerio, Del Ben, Scotti, & Rabalais, 2003) and test-retest reliability of .88 for a 1-week interval in college students (Ruggerio et al., 2003). A cutoff score of 50 yielded PTSD diagnostic sensitivity of .78 and specificity of .86 in a civilian sample (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996). In the present study, the indexed event was identified as sexual trauma.

*Illinois Rape Myth Acceptance Scale (IRMA)*. The IRMA (Payne, Lonsway, & Fitzgerald, 1999) is a 45-item self-report measure of RMA, consisting of 40 rape myth items and five filler items for control of response sets. An example of a rape myth item is "If a woman is raped while she is drunk, she is at least

somewhat responsible for letting things get out of control.” Participants respond to items on a Likert-type scale from 1 (*not at all agree*) to 7 (*very much agree*; Payne et al., 1999), with higher scores indicating greater RMA. Adequate internal consistency (coefficient alpha) of .93 has been found (Payne et al., 1999). Convergent validity was supported using other scales measuring similar constructs, such as Burt’s Sex Role Stereotyping Scale ( $r = .55$ ; Burt, 1980), Adversarial Sexual Beliefs Scale ( $r = .74$ ; Burt, 1980), Hostility Toward Women Scale ( $r = .57$ ; Burt, 1980), Acceptance of Interpersonal Violence Scale ( $r = .71$ ; Burt, 1980), and Attitudes Toward Violence Scale ( $r = .50$ ; Lonsway & Fitzgerald, 1994).

### Procedure

After electronic sign-up for study participation, students were directed to a Web-based consent form. Those consenting to participate were presented Web-based versions of the survey materials. The protocol took approximately 60 min on average to complete. All participants received the demographics questionnaire, AWS, FTI, MTI, IRMA, and SLESQ.

After presenting the SLESQ, the content of the two items querying rape and attempted rape in behaviorally specific terms (i.e., use of physical force to make you/try to make you have intercourse, or oral or anal sex, against your wishes) was again presented to participants. This was asked in a single rape exposure question of whether either of those events had ever happened to them. This step was logistically required to appropriately route subjects to the next portion of the Web survey. Those responding affirmatively were subsequently administered the PCL, instructed to rate their PTSD symptoms based on the sexual assault (or most upsetting sexual assault, if they had experienced more than one). For participants responding negatively to this item, their survey was concluded. To guard against order effects, the SLESQ, PCL, and IRMA were counterbalanced as the last surveys.

### Results

Of the 1,094 participants, 210 provided responses to the SLESQ’s two rape items and the single rape exposure item that were inconsistent (e.g., endorsed being raped but then subsequently endorsed not being raped) and thus were eliminated from subsequent analyses. Of the remaining 884 participants, 132 endorsed a sexual trauma history, including both attempted and completed sexual assault (approximately 15% of the total sample), of which 129 had a mostly complete set of data (<10% missing items). The nominal amount

**Table 1.** Descriptive Statistics and Intercorrelations Between Variables

Variables	1	2	3	4
1. AWS (N)	—	.22 (257)	-.05 (129)	-.36 (258)
2. GRI (N)	—	—	-.03 (129)	-.17 (257)
3. PTSD (N)	—	—	—	.01 (129)
4. IRMA (N)	—	—	—	—
M	57.93	55.58	33.46	86.73
SD	9.10	8.25	12.60	29.97

Note: The PCL-S was completed by participants with a sexual trauma history only. AWS = Attitude Toward Woman Scale–Short Form; GRI = gender role identity; PTSD = post-traumatic stress disorder; IRMA = Illinois Rape Myth Acceptance Scale..

of resulting missing data were found to be missing completely at random and without systematic reasons for missingness, Little's MCAR  $\chi^2(5849) = 4089.22, p > .05$ , and thus, missing items were estimated using the Expectation Maximization (EM) algorithm (Schafer & Graham, 2002). Of the 752 participants endorsing no sexual trauma history, 749 had a mostly complete set of data (<10% missing items). The nominal amount of resulting missing data were found *not* to be missing completely at random, Little's MCAR test  $\chi^2(15570) = 16564.34, p < .001$ . Nonetheless, missing items were estimated using the EM algorithm. As a result of the normally distributed nature of the experimental variables, no data transformations were deemed necessary.

### Descriptive Statistics

Intercorrelations and descriptive statistics of the study variables are presented in Table 1. AWS exhibited a significant positive relationship with GRI,  $r(257) = .22$ , and a significant negative relationship with IRMA,  $r(257) = -.36$ . GRI indicated a significant negative relationship with PTSD,  $r(257) = -.17$ . There were no other significant correlations.

To reduce the sharp discrepancy in sample size between participants endorsing and denying sexual trauma, 129 (of the 749) non–sexual trauma participants were randomly selected (using a computer-generated process) to compare with the 129 sexual trauma participants. The final sample used for analyses consisted of 258 college student participants (40 men and 217 women, 1 missing sex data). The sexual trauma group consisted of 123 women (95.3%) and 6 men (4.7%). The group endorsing no sexual trauma consisted of 94 women (72.9%), 34 men (26.4%), and 1 person who did not identify his or her sex. There were significant sex differences between groups,  $\chi^2(1, N = 257) = 23.47$ ,

$p < .001$ ,  $\phi = .30$ , with men less likely to endorse a sexual trauma history. Being concerned about the small number of men in the sample, post hoc analyses were conducted using only women. The results of these analyses did not differ from those garnered from analyses that used the entire sample. Rather than delete cases entirely or match cases based on demographic variables, sex was controlled for in subsequent analyses by including the sex variable as a covariate in the first step of each regression model.

The identified employment status in the total sample of participants varied, with 133 reporting part-time employment (51.6%), 104 unemployed (40.3%), and 18 full-time employed (7.0%). The majority of the sample, 200 participants, identified themselves as single (77.5%), whereas 33 were living with a significant other (12.8%) and 20 were married (7.8%). Most participants identified their ethnicity as White ( $n = 246$ , 95.3%) and not Hispanic or Latino ( $n = 230$ , 89.1%). Age ranged from 18 to 59 years ( $M = 21.61$ ,  $SD = 6.08$ ) and education ranged from 12 to 21 years completed ( $M = 13.46$ ,  $SD = 1.75$ ).

Among participants who had a sexual trauma history, PTSD symptom severity scores ranged from 17 to 73 ( $M = 33.46$ ,  $SD = 12.60$ ); only 6.2% had an absence of symptoms, or a score of 17. Twenty-eight participants (21.7%) scored at or above the diagnostic cutoff of 44 suggested for PTSD associated with motor vehicle accidents (Blanchard et al., 1996). Twenty-two participants (17.1%) obtained scores one standard deviation above the mean for this sample. As PTSD symptoms severity was assessed only for participants reporting a trauma history, there are no concerns that the obtained results are the result of zero-inflated data.

## Primary Analyses

A sequential ordinary least squares (OLS) regression analysis was computed, controlling for sex in the first step. Predictor variables (entered in the second step) were AWS and GRI, and the dependent variable was the IRMA,  $R^2_{\text{change}} = .10$ ,  $F_{\text{change}}(2, 253) = 15.08$ ,  $p < .001$ . AWS was the only significant predictor (see Table 2).

Another OLS regression was computed, predicting IRMA scores but assessing interactions. Again, sex was controlled for in the first step, and AWS, GRI, and sexual trauma exposure group (coded 1 = *yes*; 0 = *no*) were added in the second step,  $R^2_{\text{change}} = .12$ ,  $F_{\text{change}}(3, 252) = 11.71$ ,  $p < .001$ . The interactions of sexual trauma group with both AWS and GRI were added in the third sequential step (after centering continuous-scaled predictors; Aiken & West, 1991), finding a significant AWS  $\times$  Sexual Trauma interaction,  $R^2_{\text{change}} = .04$ ,

**Table 2.** AWS/GRI Predicting Rape Myth Acceptance

Variable	B	SE B	$\beta$	t	p
Step 1					
Sex	-17.49	5.20	-.21	-3.37	.00***
Step 2					
Sex	-6.51	5.53	-.08	-1.18	.24
AWS	-1.08	0.21	-.32	-5.20	.00***
GRI	-0.27	0.23	-.07	-1.15	.25

Note: AWS = Attitude Toward Women Scale; GRI = gender role identity.  
 \*\*\* $p < .001$ .

**Table 3.** Sexual Trauma Moderation

Variable	B	SE B	$\beta$	t	p
Step 1					
Sex	-17.49	5.20	-.21	-3.37	.00**
Step 2					
Sex	-3.54	5.66	-.04	-0.63	.53
AWS	-9.75	1.89	-.32	-5.17	.00***
GRI	-2.02	1.94	-.07	-1.04	.30
Trauma	-7.97	3.74	-.13	-2.13	.03*
Step 3					
Sex	0.83	5.73	.01	0.15	.89
AWS	-15.13	2.59	-.49	-5.85	.00***
GRI	-3.47	2.48	-.11	-1.40	.16
Trauma	-9.20	3.69	-.15	-2.49	.01*
Trauma $\times$ AWS	11.07	3.65	.24	3.04	.00**
Trauma $\times$ GRI	4.42	3.80	.09	1.16	.25

Note: Sexual trauma exposure group (coded 1 = yes; 0 = no). AWS = Attitude Toward Woman Scale; GRI = gender role identity.  
 \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

$F_{\text{change}}(2, 250) = 5.90, p < .01$  (Table 3). To clarify sexual trauma’s moderation of RMA’s relationship with AWS, the same model was again examined for both sexual trauma and non-sexual trauma groups separately. This model was not significant for those participants endorsing a history of sexual trauma,  $R^2_{\text{change}} = .03, F_{\text{change}}(2, 125) = 1.61, p > .05$ , but was significant for those denying a sexual trauma history,  $R^2_{\text{change}} = .19, F_{\text{change}}(2, 124) = 15.60, p < .001$ .

Finally, OLS regression was again computed in predicting IRMA scores, controlling for sex (step 1), and examining AWS, GRI, and PTSD severity as predictors (step 2),  $R^2_{\text{change}} = .03$ ,  $F_{\text{change}}(3, 124) = 1.07$ ,  $p > .05$ . This regression on PTSD severity was conducted on the sexual trauma group only (since nontrauma participants did not complete the PTSD measure). PTSD severity's interactions with AWS and GRI were added in a third sequential step,  $R^2_{\text{change}} = .02$ ,  $F_{\text{change}}(2, 122) = 1.18$ ,  $p > .05$ .

## Discussion

This study found that attitudes toward women and sexual trauma history were significantly associated with RMA. GRI and PTSD symptom severity were not found to be associated with acceptance of rape myths. These findings have important treatment implications as well as implications for the development of empirically informed rape prevention programs.

Hypothesis 1 suggested that greater traditionality on attitudes toward women (lower AWS scores) and GRI (higher scores) would predict greater RMA (higher IRMA scores). This hypothesis was partly supported. Results demonstrated that attitudes toward women significantly predicted RMA. However, GRI was not a significant predictor.

The difference in predictive power between attitudes toward women and GRI could stem from the different human characteristics they measure. The attitudes toward women construct measures cognitive processes, whereas gender role is considered to measure personality characteristics (McCreary et al., 2002; Spence, 1991). Perhaps RMA may be more accurately predicted through cognitive processes rather than inherent personality traits. This suggestion has promising implications given the effectiveness of cognitive-behavioral interventions developed to change dysfunctional cognitive process. Personality traits are often extremely difficult to change, but research has shown that cognitions are malleable (Barlow & Barlow, 2008; Beck, 2005; Leahy, 2004). Thus, it may prove most feasible to change attitudes that ultimately predict RMA (traditional attitudes toward women). In the early stages of clinical interventions, clinicians may find it useful to explore the patient's beliefs surrounding rape, particularly their degree of RMA. Tailored interventions focused on reducing RMA and exploring more realistic and adaptive cognitions may alleviate the self-blame and guilt that is often associated with experiencing a sexual assault.

Although we measured attitudes toward women in the same manner as the previously cited research (using AWS), GRI was measured differently. This study used the FTI and MTI to measure GRI, whereas two of the

previous relevant studies used the BSRI (Bem, 1981) and another study used the Sex Role Egalitarianism Scale–Form B (SRES-B; Beere, 1984). Although the FTI and MTI are essentially the Feminine and Masculine scales extracted from the BSRI, the method of measuring GRI was different. The FTI and MTI produce a continuous measure of GRI, whereas the BSRI produces a categorization of Feminine, Masculine, Androgynous, or Undifferentiated via a median split measurement. Thus, it cannot be ruled out that a difference in measurement (continuous versus categorical) could be responsible for the disparity in results across studies. It should be noted, however, that dichotomizing continuously scaled variables (e.g., via a median split) has demonstrated serious negative consequences, such as reduced power and distorted estimates of both effect size and statistical significance (MacCallum, Zhang, Preacher, & Rucker, 2002).

Hypothesis 2 stated that sexual trauma history would moderate RMA's relationship with attitudes toward women and GRI. This hypothesis was supported, as the relationship held only for non-sexually traumatized participants but not for those endorsing a sexual trauma history. This finding also has implications for the development of rape prevention programs in which the goal is to reduce RMA. Perhaps sexual trauma's moderation of RMA prediction is a function of increased empathy toward rape survivors held by other rape survivors. If this mechanism holds in future research, creating a rape prevention program aimed at increasing such empathy could potentially be an effective strategy for reducing rape myths. Again, it should be noted that sexual trauma history was not associated with belief in rape myths in previous research (Carmody & Washington, 2001; Mason et al., 2004). However, methodological limitations in those studies, discussed above, may have been responsible for obscuring potentially significant associations (Mason et al., 2004).

It is important to note that the present study used the IRMA, which is a relatively new measure of RMA (Payne et al., 1999). Both previous studies mentioned used Burt's Rape Myth Acceptance Scale, which is the most popular RMA measure (Burt, 1980). However, the IRMA has impressive psychometric properties and item content that rival those of similar measures (Payne et al., 1999). The difference in measurement may also be responsible for the present study's unique significance for sexual trauma history compared to other studies. The IRMA, with better psychometric properties, may be capable of detecting differences other scales have been unable to detect.

Hypothesis 3 stated that participants with more severe PTSD symptomatology as a result of sexual assault would have reduced tolerance for rape and

thus would be less inclined to accept rape myths than those not so affected. Given the nonsignificant results, PTSD symptom severity was not found to moderate RMA's relationship with AWS and GRI. It is possible that the small percentage of participants endorsing severe PTSD symptomatology could have affected the results. Among the 129 participants who had a sexual trauma history, only 28 participants (21.7%) scored at or above the diagnostic cutoff suggested for PTSD associated with motor vehicle accidents and sexual assault (Blanchard et al., 1996). In addition, there are no published studies that specifically examine the severity of PTSD in relationship to RMA, making it difficult to compare the results of this study with existing literature. It is possible that asking participants about previous mental health treatment for PTSD, in addition to inquiring about the PTSD symptoms, may have resulted in a more precise method to quantify one's emotional reaction to the sexual assault, possibly altering the nature of the results.

### *Clinical Implications*

As mentioned previously, cognitive-behavioral interventions or education-based programs could be promising in reducing RMA through the manipulation of traditional attitudes toward women. According to the results of this study, focusing on cognitive change, specifically changing traditional attitudes about women, can effectively manipulate an individual's RMA. Many rape prevention programs are based on a prevention theory that consists of four preconditions for the etiology of rape: (a) deviant sexual arousal, (b) RMA, (c) date location, and (d) poor self-defense strategies (Finkelhor, 1986). Such interventions could be delivered in a variety of settings and specifically tailored to different audiences. It may be particularly useful to tailor such interventions toward high-risk populations such as college-aged women (Gidycz, Lynn, Rich, Marioni, et al., 2001).

Persuasion paradigms also exist that can assist in changing the valence and strength of attitudes and beliefs, such as the elaboration likelihood model (Petty, Wegener, & Fabrigar, 1997). Models such as this one help to describe how attitudes and beliefs might become biased and how a person might become aware of such biases. Direct methods, such as increasing the topic's personal relevance for the audience or exposing the audience to the topic's key elements may be useful for clinicians treating individuals or groups who accept rape myths, who hold strong traditional attitudes toward women, or with whom the therapeutic goal is to reduce the aforementioned attitudes.

Many programs use role-playing activities to enhance empathy toward survivors. The assumption is that individuals might be able to internalize the

experience through role-play. Also, having participants in rape myth dispelling programs become involved in campus or community-wide sexual assault prevention efforts may produce the desired empathy component. Such program components may help individuals to understand sexual assault on a more personal level. Rape myth dispelling programs using cognitive techniques to change traditional attitudes toward women and fostering survivor empathy may be appropriately informed by this research and could be an improvement to the programs that currently exist. There is excellent literature available regarding the format and content of these interventions (O'Donohue, Yeater, & Fanetti, 2003; Packard, 2007). However, these programs currently lack sufficient empirical support and would benefit from further examination.

### *Limitations*

A factor that limits the generalization of this study's results is the nature of the participants surveyed. The majority of the participants in this sample were female college students from a moderate-sized midwestern university. The gender disparity present in this study is common when using a university participant pool. However, it must be noted that there is also a disparity in the prevalence of sexual assault among women versus men in the general population. This study also measured attitudes that are often considered to be either liberal or conservative/traditional. Midwestern individuals may be more conservative/traditional in nature (especially regarding sex), though a slightly more liberal/progressive attitude may be attributed to the sample given their college student status (Flynn, 1994; Rubinson & deRubertis, 1991). Although this may limit the study from being widely generalizable, it is likely to be representative of young college-aged individuals in the midwestern United States.

Another possible limitation is that only adult sexual trauma was identified as the indexed traumatic event on the PCL-S. Therefore, it was not possible to examine the presence of traumatic stress symptoms resulting from other traumatic events. It is possible that traumatic stress resulting from separate events could have had possible moderating effects on the variables of interest. As PCL-S data were not collected from participants that did not report experiencing sexual trauma, it is impossible to compare the findings of the sexual trauma group to participants that had experienced nonsexual trauma. Further research is necessary to identify any possible moderating effects resulting from events other than sexual trauma.

Another limitation is that the experimental design was cross-sectional, rather than experimental. This design did not allow for conclusions about

the direction of causality between study variables. Thus, it cannot be concluded whether greater RMA is caused by or causes negative attitudes toward women or if there is some other variable responsible for this association. Despite these limitations, this study offers important new insights into relationships with RMA.

### Authors' Note

This article was based on the first author's doctoral dissertation. She is now affiliated with St. Anthony's Health Center, Alton, Illinois. J. Ric Monroe is now affiliated with the Edward Hines Jr. VA Medical Center in Chicago, Illinois.

### Declaration of Conflicting Interests

The authors declared no potential conflicts of interests with respect to the authorship and/or publication of this article.

### Funding

The authors declared no financial support for the research and/or authorship of this article.

### References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. London, England: Sage Publications.
- Aosved, A. C., & Long, P. J. (2006). Co-occurrence of rape myth acceptance, sexism, racism, homophobia, ageism, classism, and religious intolerance. *Sex Roles, 55*, 481-492.
- Barak, B., & Stern, B. (1986). *Sex-linked trait indexes among baby-boomers and pre-boomers: A research note*. Provo, UT: Association for Consumer Research.
- Barlow, D. H., & Barlow, D. H. (2008). *Clinical handbook of psychological disorders: A step-by-step treatment manual* (4th ed.). New York: Guilford.
- Beck, A. T. (2005). The current state of cognitive therapy: A 40-year retrospective. *Archives of General Psychiatry, 62*, 953-959.
- Beere, C. A. (1984). The sex-role egalitarianism scale: A measure of attitudes toward equality between the sexes. *Sex Roles, 10*, 563-576.
- Bem, S. L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology, 42*, 155-162.
- Bem, S. L. (1981). Gender schema theory: A cognitive account of sex typing. *Psychological Review, 88*, 354-364.
- Blanchard, E. B., Jones-Alexander, J., Buckley, T. C., & Forneris, C. A. (1996). Psychometric properties of the PTSD Checklist (PCL). *Behavior Research and Therapy, 34*, 669-673.

- Breitenbecher, K. H. (2006). The relationship among self-blame, psychological distress, and sexual victimization. *Journal of Interpersonal Violence, 21*, 597-611.
- Burt, M. R. (1980). Cultural myths and supports for rape. *Journal of Personality and Social Psychology, 38*, 217-230.
- Burt, M. R. (1991). Rape myths. In A. Parrot & L. Bechhofer (Eds.), *Acquaintance rape: The hidden crime* (pp. 26-40). New York: John Wiley.
- Burt, M. R., & Albin, R. S. (1981). Rape myths, rape definitions, and probability of conviction. *Journal of Applied Social Psychology, 11*, 212-230.
- Carmody, D. C., & Washington, L. M. (2001). Rape myth acceptance among college women. *Journal of Interpersonal Violence, 16*, 424-436.
- Caron, S. L., & Carter, D. B. (1997). The relationships among sex role orientation, egalitarianism, attitudes toward sexuality, and attitudes toward violence against women. *Journal of Social Psychology, 137*, 568-587.
- Costin, F., & Schwarz, N. (1987). Beliefs about rape and women's social roles. *Journal of Interpersonal Violence, 2*(1), 46-56.
- Davies, M., Pollard, P., & Archer, J. (2001). The influence of victim gender and sexual orientation on judgments of the victim in a depicted stranger rape. *Violence and Victims, 16*, 607-619.
- Finkelhor, D. (1986). *A sourcebook on child sexual abuse*. Beverly Hills, CA: Sage.
- Flynn, C. P. (1994). Regional differences in attitudes toward corporal punishment. *Journal of Marriage and Family, 56*, 314-324.
- Frese, B., Moya, M., & Megias, J. L. (2004). Social perception of rape: How rape myth acceptance modulates the influence of situational factors. *Journal of Interpersonal Violence, 19*, 143-161.
- Gerber, G. L., Cronin, J. M., & Steigman, H. J. (2004). Attributions of blame in sexual assault to perpetrators and victims of both genders. *Journal of Applied Social Psychology, 34*, 2149-2165.
- Gidycz, C. A., Lynn, S. J., Rich, C. L., Marioni, N. L., Loh, C., Blackwell, et al. (2001). The evaluation of a sexual assault risk reduction program: A multisite investigation. *Journal of Consulting and Clinical Psychology, 69*, 1073-1078.
- Goodman, L. A., Corcoran, C., & Turner, K. (1998). Assessing traumatic event exposure: General issues and preliminary findings for the Stressful Life Events Screening Questionnaire. *Journal of Traumatic Stress, 11*, 521-542.
- Hammock, G. S., & Richardson, D. R. (1993). Blaming drunk victims: Is it just world or sex role violation. *Journal of Applied Social Psychology, 23*, 1574-1586.
- Holt, C. L., & Ellis, J. B. (1998). Assessing the current validity of the Bem Sex-Role Inventory. *Sex Roles, 39*, 929-941.
- Kilpatrick, D. G., & Smith, A. D. (1974). Validation of the Spence-Helmreich Attitudes Towards Women Scale. *Psychological Reports, 35*, 461-462.

- Kopper, B. A. (1996). Gender, gender identity, rape myth acceptance, and time of initial resistance on the perception of acquaintance rape blame and avoidability. *Sex Roles, 34*(1/2), 81-93.
- Leahy, R. L. (2004). *Contemporary cognitive therapy: Theory, research, and practice*. New York: Guilford.
- Lonsway, K. A., & Fitzgerald, L. F. (1994). Rape myths: In review. *Psychology of Women Quarterly, 18*, 133-164.
- MacCallum, R. C., Zhang, S., Preacher, K. J., & Rucker, D. D. (2002). On the practice of dichotomization of quantitative variables. *Psychological Methods, 7*(1), 19-40.
- Mason, G. E., Riger, S., & Foley, L. A. (2004). The impact of past sexual experiences on attributions of responsibility for rape. *Journal of Interpersonal Violence, 19*, 1157-1171.
- McCreary, D. R., Rhodes, N. D., & Saucier, D. M. (2002). A confirmatory factor analysis of the short form sex role behavior scale. *Sex Roles, 47*, 455-457.
- O'Donohue, W., Yeater, E. A., & Fanetti, M. (2003). Rape prevention with college males. *Journal of Interpersonal Violence, 18*, 513-531.
- Packard, E. (2007). \$20,000 grant awarded to fight sexual violence. *Monitor on Psychology, 38*(3), 68-69.
- Payne, D. L., Lonsway, K. A., & 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, 33*, 27-68.
- Petty, R. E., Wegener, D. T., & Fabrigar, L. R. (1997). Attitudes and attitude change. *Annual Review Psychology, 48*, 609-647.
- Regehr, C., Cadell, S., & Jansen, K. (1999). Perceptions of control and long-term recovery from rape. *American Journal of Orthopsychiatry, 69*(1), 110-115.
- Rubinson, L., & deRubertis, L. (1991). Trends in sexual attitudes and behaviors of a college population over a 15-year period. *Journal of Sex Education & Therapy, 17*(1), 32-41.
- Ruggerio, K. J., Del Ben, K., Scotti, J. R., & Rabalais, A. E. (2003). Psychometric properties of the PTSD Checklist-Civilian Version. *Journal of Traumatic Stress, 16*, 495-502.
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods, 7*, 147-177.
- Spence, J. T. (1991). Do the BSRI and PAQ measure the same or different concepts. *Psychology of Women Quarterly, 15*, 141-165.
- Spence, J. T., Helmreich, R., & Stapp, J. (1973). A short version of the Attitudes Toward Women Scale (AWS). *Bulletin of the Psychonomic Society, 2*, 219-220.
- Szymanski, L. A., Devlin, A. S., Chrisler, J. C., & Vyse, S. A. (1993). Gender role and attitudes toward rape in male and female college students. *Sex Roles, 29*(1/2), 37-57.

- Thornton, B., Rychman, R. M., & Robbins, M. A. (1982). The relationship of observer characteristics to beliefs in the causal responsibility of victims of sexual assault. *Human Relations, 35*, 321-330.
- Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993). *The PTSD Checklist: Reliability, validity, and diagnostic utility*. Paper presented at the Annual Meeting of the International Society for Traumatic Stress Studies, San Antonio, TX.
- White, B. H., & Kurpius, S. E. R. (2002). Effects of victim sex and sexual orientation on perceptions of rape. *Sex Roles, 46*, 191-200.

## Bios

**Shannon N. Baugher**, PhD, completed her graduate training in clinical psychology at The University of South Dakota, in Vermillion, South Dakota. She completed an internship at the Department of Veterans Affairs Medical Center in St. Louis, Missouri. She is now a staff psychologist at Saint Anthony's Health Center, Alton, Illinois.

**Jon D. Elhai**, PhD, is an assistant professor in the department of psychology at the University of Toledo. He specializes in research on assessment, treatment, and health services among traumatic event victims and PTSD patients.

**James R. Monroe**, PhD, graduated in 2009 from The University of South Dakota with a PhD in clinical psychology. He now is a staff psychologist at the Edward Hines Jr. VA Medical Center in Chicago. His research and clinical interests include trauma assessment, mental health effects of disaster response work, and homeland security issues.

**Matt J. Gray**, PhD, is an associate professor in the Psychology Department at the University of Wyoming. He received his PhD from the University of Mississippi in 2000 and trained at the National Crime Victims Research and Treatment Center and the National Center for PTSD. His research interests include risk and resiliency variables related to PTSD and sexual assault prevention.