The Longitudinal Effects of Rape Myth Beliefs and Rape Proclivity

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Abstract

Both rape myth acceptance (RMA) and rape proclivity are associated with acts of sexual aggression. Although this relationship is assumed to be unidirectional with RMA contributing to rape proclivity, no studies have examined the possibility of a predictive relationship, with proclivity to perpetrate also impacting RMA. This is important to consider in a longitudinal context, as both constructs may increase risk of sexual assault perpetration and support each other over time, further escalating the risk of a sexual assault. Using longitudinal data with a sample of 488 college men, this study employed cross-lagged panel analysis to investigate these relationships across four time points according to two models: autoregressive effects of RMA and rape proclivity, meaning each construct predicts itself over time, and RMA and rape proclivity predicting each other over time. The results of this study indicate that causality exists for RMA and rape proclivity. These findings have implications for prevention efforts directed towards modifying attitudes associated with sexual assault perpetration—particularly for men who are at high-risk of perpetrating sexual assault, including those with high rates of RMA and rape proclivity.

Keywords

Sexual violence; prevention; cross-lagged panel; campus; perpetration

Two risk-factors for perpetration of sexual violence identified in the literature are rape myth acceptance (RMA) (Tharp et al., 2012; Yapp & Quayle, 2018) and self-reported rape proclivity (DeGue & DiLillo, 2004; Gidycz et al., 2011; Malamuth, 1981). Rape myths are described as false beliefs regarding sexual assault either in relation to the survivor or perpetrator of the assault or the incident of rape itself (Brownmiller, 1975; Burt, 1980). Conventionally, scholars have assumed that these attitudes are causally linked to rape proclivity, which is an individual's endorsement of the likelihood of committing sexual violence in the future given the condition that the person would never be caught (Bohner et al., 2009; Bohner et al., 2005; Bohner et al., 2006). But it is also possible that both these constructs, RMA and rape proclivity, reinforce one another in a reciprocal fashion. For example, not only may RMA predict rape proclivity, but individuals' perceptions of their

likelihood to commit assault could impact beliefs including rape myths to potentially justify their attitudes. Thus, RMA might support the likelihood of future rape perpetration; and conversely, beliefs endorsing future rape perpetration may increase RMA. Therefore, this study examines two sets of beliefs known to be associated with sexual violence perpetration: namely, RMA and rape proclivity, to determine if causality might exist. It is especially important to examine how RMA affects rape proclivity and vice-versa longitudinally to understand if these constructs feed off each other and reinforce each other over time.

Beliefs Associated with Sexual Violence Perpetration: RMA and Rape Proclivity

Given that not all men are perpetrators of sexual assault, an important step in prevention is to identify male students at higher risk for sexual violence perpetration. Once such risk-factors are identified, tailored prevention messages can appropriately address attitudes and beliefs related to sexual violence perpetration among these men. Such an approach suggests prevention responses should target high-risk men in order reduce the likelihood of individuals of developing into perpetrators (Welsh & Farrington, 2012). Few studies have examined prevention efforts that tailor programs to differing risk-groups for sexual violence perpetration (for examples of studies using risk-groups, see Elias-Lambert & Black, 2015; Stephens & George, 2004, 2009) despite suggestions by scholars that such research is needed (Stephens & George, 2009); these include recommendations to conduct research on men who demonstrate a proclivity to rape (Gidycz et al., 2011). In order to improve intervention efforts targeted at men who are at high-risk of sexual violence perpetration an important first step is understanding the exact risk-factors for perpetration and the relationship of these risk-factors have to each other over time.

While no studies have examined if rape proclivity predicts RMA, a predictive relationship could be hypothesized to exist wherein the two beliefs predict each other over time. It is easy to imagine that false beliefs about rape (e.g., the idea that the victim "asked for it") are associated with an increased likelihood of future sexual violence. In turn, endorsing a likelihood to engage in future acts of sexual violence could intensify rape myth beliefs as a justification for such violence. Ascertaining whether these two beliefs predict each other could help inform our understanding of how these beliefs are associated with sexual violence perpetration behaviors and increase our understanding of how to prevent sexual violence in those men who are at high risk for perpetration given their self-reported rape proclivity.

Rape Myth and Sexual Violence.

Rape myths are beliefs that often reference survivors of sexual assault and blame the victim rather than the perpetrator of a rape; these myths are typically gendered beliefs wherein men are the perpetrators and women are the victims. Such beliefs suggest that women who dress a certain way, drink alcohol, or are perceived as "promiscuous" are somehow asking to be raped (McMahon & Farmer, 2011; Payne et al., 1999). Other rape myths excuse the perpetrator for his actions through ideas such as "he could not help it" or "he was drunk" (McMahon & Farmer, 2011; Payne et al., 1999). Finally, some rape myths trivialize incidents of sexual assault by implying they are not violent or serious enough

to qualify as "real rape" (Payne et al., 1999). RMA is associated with rape proclivity in several studies (Chapleau & Oswald, 2010; Malamuth, 1981) as well as with actual sexual assault perpetration (DeGue et al., 2010; Russell & King, 2016; Tharp et al., 2012; Troche & Herzberg, 2017; Yapp & Quayle, 2018). Murnen and Kohlman (2007), in a meta-analysis of factors associated with sexual aggression, found that RMA was significantly associated with sexual aggression across multiple individual studies; RMA also is linked to sexual assault perpetration over time in longitudinal studies (Davis et al., 2015; Kingree & Thompson, 2015; Lanier, 2001). These studies demonstrate that, those who endorse rape myths are more likely to commit acts of sexual aggression or violence.

Rape Proclivity and Sexual Violence.

Another belief associated with sexual assault perpetration is rape proclivity. Survey items used to measure rape proclivity assess individuals' beliefs in their likelihood of committing rape under specific situations such as knowing they would not be caught after committing a sexual assault (Bohner et al., 1998; Malamuth, 1981). In the seminal study of rape proclivity, Malamuth (1981) found that one in three men indicated some rape proclivity, a high percentage of men holding such beliefs. Other studies further support these early research findings, demonstrating that a sizable percentage of men self-report being likely to commit rape under specific circumstances (Bohner et al., 1998; Chapleau & Oswald, 2010). Specifically, Bohner and colleagues (1998) found that nearly two out of three men (63%) self-reported rape proclivity, using a hypothetical question that assured participants no one would find out what they did. Chapleau and Oswald (2010) found slightly lower rates; just over half (57%) of men indicated some likelihood of committing sexual violence in response to five different rape scenarios when asked "In this situation, what is the likelihood that you would have done the same?" (p. 72). Together, these studies suggest that rape proclivity rates are high among some groups of men.

Rape proclivity rates are also higher in sexually coercive men as compared to men who are not sexually coercive (DeGue & DiLillo, 2004). Additionally, in a longitudinal study of men who committed sexual violence, the majority of these men had previously expressed rape proclivity before perpetrating sexual violence (Gidycz et al., 2011). Although these studies do not prove that men who demonstrate rape proclivity will go on to perpetrate sexual violence, some researchers have suggested that rape proclivity beliefs may be used to identify men who may commit sexually violent acts in the future (DeGue & DiLillo, 2004). In sum, the existing research on rape proclivity appears to suggest that men who exhibit rape proclivity may be at increased risk of committing sexual violence.

Rape Myths and Rape Proclivity.

Both RMA and rape proclivity have been used as outcomes in prevention programs in order to demonstrate effects of program participation (Anderson & Whiston, 2005; De La Rue et al., 2014; DeGue et al., 2014). Several studies have demonstrated an association between RMA and proclivity to perpetrate (Bohner et al., 2010; Bohner et al., 2006; Chapleau & Oswald, 2010; Palmer et al., 2020; Süssenbach et al., 2013). Scholars have hypothesized that rape myths may act as "psychological neutralizers" which allow men to disregard their usual inhibitions against perpetuating sexual violence, increasing their

rape proclivity by rationalizing it (Bohner et al., 1998; Burt, 1980). Bohner and colleagues in four studies (Bohner et al., 2005; Bohner et al., 1998; Bohner et al., 2006; Gerger et al., 2007) demonstrated that rape myths serve as causal antecedents for rape proclivity. Bohner et al.'s studies (1998; 2005; 2006) provide preliminary evidence that RMA are an antecedent to rape proclivity and offer a foundation for additional exploration. Their studies were cross-sectional in nature, and there have been no longitudinal studies examining whether RMA over time is a causal factor in rape proclivity. Indeed, there have been few studies examining rape proclivity that are not correlational designs (Drieschner & Lange, 1999). Longitudinal studies are needed to examine whether one variable truly precedes another variable over time to establish temporal causation. In addition, while studies have hypothesized and demonstrated that RMA predicts rape proclivity, they have not examined the reverse relationship, namely: is rape proclivity predictive of RMA? That is, is the relationship a predictive one wherein RMA provide a causal link to rape proclivity and vice versa? It could be that the relationship is complex, not just unidirectional, and the beliefs feed off each other, with each belief reinforcing the other.

Research indicates that men fall into differing trajectories of sexual assault perpetration throughout their college years: the majority of men do not perpetrate, while other groups of men do so at a consistently moderate or high level, a decreasing level, or an increasing level throughout college (Swartout, Swartout, et al., 2015; Thompson et al., 2013). Building on this work, scholars found that risk-factors related to sexual violence perpetration, including rape supportive beliefs (a construct similar to RMA), changed among men whose own perpetration behaviors increased over time, indicating that as perpetration increases, there is a corresponding increase in risk-factors including problematic beliefs (Thompson et al., 2015). These findings indicate that men have differing risks for sexual violence perpetration that may change over time along with sexual violence perpetration rates. Constructs such as RMA and rape proclivity may be used to identify men at risk for sexual violence perpetration and this risk may change over time.

Theoretical Framework

The ultimate driver of behavior is individual level factors including attitudes and beliefs. Given the messages men receive regarding sexuality and masculinity, the resulting attitudes may include rape myth beliefs which are associated with sexual assault. We must examine how attitudes might theoretically lead to sexually aggression by male college students. The Theory of Planned Behavior (TPB) may help explain individual behavior including how attitudes and beliefs may affect sexual violence perpetration.

The Theory of Planned Behavior

The Theory of Planned Behavior (Ajzen, 1991, 2001, 2005) is widely used in conceptualizing individual behaviors and how such behaviors can be modified (Ajzen, 2001) including in understanding perpetration of violence against women in studies investigating intimate partner violence (Betts et al., 2011; Kernsmith, 2005); to measure sexual aggression perpetration (Swartout, Thompson, et al., 2015); to identify sexual offending etiology in both in adults and adolescents (Miller, 2010); and to predict college male sexual aggression

(Kingree & Thompson, 2013). Using the TPB to understand the relationship between rape myths and sexual assault perpetration, it is expected that RMA would predict intentions to perpetrate sexual violence (rape proclivity), which in turn would ultimately predict sexual aggression. According to this theory, attitudinal change is a prerequisite for changing behaviors such as sexual violence. For this study, rape myths are the attitudes under investigation in order to understand their relationship with rape proclivity, or rape intentions, as it is hypothesized that eliminating these beliefs and intentions is key to reducing sexual violence perpetration. This study also expands upon the TPB by investigating how attitudes and intentions might predict each over time, moving beyond a simple linear relationship.

Attitudes indicate the degree to which a behavior is regarded positively or negatively (Humphreys & Brousseau, 2010). Ajzen (2001) describes an attitude as "a disposition to respond favorably or unfavorably to an object, person, institution, or event." (p. 3). In the case of rape myths, these beliefs signify the extent to which men regard sexual violence as acceptable, or not acceptable including deciding who is to blame for the sexual violence: the perpetrator or the victim of the sexual violence. Attitudes similar to rape myths were used by Thompson et al. (2011) who found that variables related to the TPB were predictive of college males' sexual aggressive behavior and mediated other predictive variables. Similarly, Miller (2010) describes "cognitive distortions" (p. 114) that may lead to sexual offending. These findings are in line with research demonstrating that rape supportive attitudes are associated with sexual violence perpetration (Murnen et al., 2002; Tharp et al., 2012). Thus, the TPB is use within this study to frame how attitudes such as rape myth beliefs and intentions such as rape proclivity might then be translated into the behavior of sexual violence perpetration. Ultimately this research can help guide efforts to prevent sexual violence through a better understanding of how important variables theorized to lead to perpetration predict each other over time.

The Current Study

This study addresses the gaps in the current research field by using longitudinal data to examine a causal link of RMA to rape proclivity, as well as the converse relationship: rape proclivity's relationship with RMA. This study addresses the following research question and corresponding hypotheses. Research Question 1: What is the relationship between RMA and rape proclivity beliefs over time? Hypothesis 1: Over time, RMA and rape proclivity will demonstrate autoregressive effects, predicting themselves over time, indicating stability of the constructs. Hypothesis 2: There will be a predictive relationship between RMA and rape proclivity and vice versa indicating causality between the constructs over time.

Methods

Procedures

The data for this study are four waves of a larger longitudinal study conducted at a large public university in a Mid-Atlantic state of the United States. A randomized, quasi-experimental study tested the effectiveness of a peer theater program in relation to undergraduate students' bystander interventions. All participants viewed the peer theater presentation and were randomized into the experimental or comparison group. The

experimental group then worked in small groups with the peer educators two more times. The study was approved at the time of data collection by the university's Institutional Review Board. For a full description of the intervention and the methods used, see McMahon, Winter, et al. (2015).

Participants

Incoming first-year students were recruited for the study at orientation sessions between June 2010 and August 2010 and baseline data was collected at this point. If they participated, participants were entered into a raffle for a television or iPad. Informed consent was provided, and students completed an anonymous pre-intervention survey before viewing the peer-theater presentation. Data was collected over four additional time points included in this study. Time 1 (T1) in September of the 2010 when students consented to longitudinal participation, T2 in December 2010, T3 in February/March 2011, and T4 in September 2011 (see Table 1). To make participation anonymous, participants created their own unique code based on personal demographic information. An intention-to-treat design was used for this study which includes participants who were randomized into the experimental study design, even those who were lost at follow-up (Armijo-Olivo et al., 2009; Hollis & Campbell, 1999). As such, the sample includes: 1) all participants who were randomly assigned to either the comparison or experimental group after the first follow-up survey (T1) and 2) had at least one follow up survey with an identification code that could be matched to the baseline survey. A total of 1,390 students (837 in the experimental group and 553 in the comparison group) of the 2,021 participants who completed T1 were able to be matched to baseline (69%). Of these participants, 38% were male and 62% were female, and less than one percent identified as another gender or left gender blank (n=7) while another eight participants did not consistently identify as male over all waves and were eliminated from the final sample. Finally, two validity questions were asked in the survey to ensure participants paid attention to the questions, those who did not correctly answer these questions at baseline (n=25) were removed from the analytic sample.

The current study focuses on T1–T4 panel data to examine the relationship between RMA and rape proclivity. T1 was used as the first time point in this analysis as the data from the prior wave (baseline) was collected prior to assignment of participants into the experimental and comparison groups. As the focus of this study is on risk of perpetration, and as most sexual assault measured is perpetrated by men (Cantor & Thomas, 2015; Krebs et al., 2016), only the male sample was used for this study. The final analytic sample consisted of 488 respondents. Of these participants, 49% identified as White, 34% as Asian, 7% as Latino, 4% as Black, and 7% as other. Overall, the racial/ethnic distribution of the analytic sample and the population (the incoming class) were similar.

Measures

Rape myth acceptance.—A seventeen-item scale, a modified version of the Illinois RMA Scale (McMahon & Farmer, 2011), was used in this survey. This version of the RMA scale was modified to assess more subtle rape myths that younger generations of college students hold. For each item, agreement was rated on a 5-point scale ranging from *1 (Strongly Disagree)* to *5 (Strongly Agree)* on questions such as "If a girl goes to a room

alone with a guy at a party, it is her own fault if she is raped". A confirmatory factor analysis was previously conducted for this scale, indicating a five-factor solution, with the following factors: *1) RM 1: she asked for it* (4 items α = .70 at T1); *2) RM 2: it was not really rape* (3 items α = .77); *3) RM 3: he did not mean to due to intoxication* (2 items α = .64); *4) RM 4: he did not mean to* (3 items α = .66); and *5) RM 5: she lied* (5 items α = .81). The fit for this model was acceptable: RMSEA = .059; CFI = .923; TLI = .897) (Brown, 2006). Some items were reverse coded so that higher scores on all subscales signify higher RMA.

Proclivity to perpetrate sexual assault.—Rape proclivity was measured through two questions. The first asked participants, "*How likely would you be to force another person to do something sexual even if she didn't want to, if you were assured that no one would know and that you could in no way be punished?*" This question is from the Attraction to Sexual Aggression Scale (Malamuth, 1989). The second question asked, "*How likely would you be to have sex with another person who was too intoxicated to resist your sexual advances, if you were assured that no one would know and that you could in no way be punished?*" This item was created using Malamuth's question combined with a question from the Perpetrator History scale (Lisak et al., 2000). The response options were *1 (Not at All Likely), 2 (Somewhat Unlikely), 3 (Neutral), 4 (Somewhat Likely),* and *5 (Extremely Likely)*. The two items were summed to create a composite rape proclivity variable measuring proclivity to commit sexual violence.

Control variables.—In order to control for the effect of the intervention, group assignment to either the experimental or the comparison group was added as a control variable to analysis. Another control variable, social desirability as measured by the Marlowe–Crowne Social Desirability Scale Short Form (Reynolds, 1982), was also added to the model.

Missing Data

Of the total sample who were randomly assigned to either the experimental or the comparison group after T1 and had at least one subsequent time point with an accurate identification code, 96% had complete data on the outcome measures at baseline, 83% at T1, 66% at T2, 58%, at T3 and 52% at T4. Multiple imputation using maximum likelihood (ML) in AMOS, was used to handle missing data. As the amount of missing data increases, multiple imputation using ML provides less biased parameter estimates and standard errors than listwise or pairwise deletion (Newman, 2002). Additionally, multiple imputation using ML is recommended for latent variables (RMA in this study).

Analysis

Four models were tested using cross-lagged panel analysis to see if predictive causality exists between RMA and rape proclivity over time. Using ML estimation procedures in AMOS 22 to preform structural equation modeling, data from T1 to T4 were tested to see if a predictive relationship exists among the two variables of interest: RMA and rape proclivity (Arbuckle, 2007). RMA was entered into the model as a latent variable with five subscales (not shown in Figure 1). Four models were compared: Models 1 to 3 tested autoregressive and bidirectional effects to support the fully cross-lagged model (Model 4), see Table 2. The

final model, Model 4, the fully cross-lagged model, tested autoregressive effects and RMA at T1, T2, and T3 predicting future rape proclivity (T2-T4) and rape proclivity predicting later RMA. To control for the effect of the intervention, if participants were assigned to the experimental or comparison group and social desirability was entered as an control variable predicting rape myths and rape proclivity at T1-T4.

Using methods from prior research studies that employed cross-lagged panel analysis (Christens et al., 2011), including a previous peer-reviewed study that uses the same data as this study (McMahon, Peterson, et al., 2015), the following variables were correlated with each other: 1) the control variables; 2) the residual terms associated with all variables after T1; and 3) the error terms associated with measurement of RMA at T1 and all later time points. The errors were correlated, since it was expected that measurement error factors would be the same across all time points (Christens et al., 2011; McMahon, Peterson, et al., 2015) and as is normal for these types of models. Finally, direct paths were hypothesized between variables measuring RMA and proclivity to perpetrate. The four models were tested to determine which best fits the data. The following model fit indices were used: Chi-Square (X^2), the Comparative Fit Index (CFI), the Normed Fit Index (NFI) and the Root Mean Square Error of Approximation (RMSEA). Cut-off points suggested by prior researchers include non-significant X^2 values and values close to .95 for both the CFI and NFI and finally, lower RMSEA values indicate better model fit (Hu & Bentler, 1999). General guideline for RMSEA outline that values close to .06 are a good fit (Hu & Bentler, 1999).

Results

This study tested four models to see if causality existed between RMA and rape proclivity while controlling for intervention group and social desirability (see Figure 1, controls not shown for clarity). Across all models, the fit indices showed an acceptable fit to the data (see Table 2). All models indicated stability of the constructs of RMA and rape proclivity over time. Model 4 had the best fit indices, including a CFI and NFI close to the suggested cut-off level of .95 (CFI=.94; NFI=.91) and a RMSEA of .06 (Hu & Bentler, 1999). The X^2 was significant across all models, as is expected with large samples, and does not necessarily indicate a poor model fit. Additionally, in Model 4 all paths except one were significant at the $p<.001$ level indicating a good model fit. The control variable of the intervention group was never a significant predictor of RMA nor rape proclivity. The control variable of social desirability was also largely non-significant except at T1 when social desirability decreased reported rape proclivity ($B = -.15$; p <.001).

Supporting hypothesis 1—RMA and rape proclivity will demonstrate autoregressive effects, predicting themselves over time—the constructs were stable over time. All autoregressive, or self-predictive, pathways were significant ($p<.001$) for both rape myths and rape proclivity predicting themselves over time (see Table 3 and Figure 1). Rape myths at each time point predicted future RMA. The magnitude of these standardized paths ranged from .35 to .40 suggesting stability of the rape myth construct over time. Similarly, for rape proclivity, all autoregressive paths were significant ($p<.001$), meaning rape proclivity predicted itself over time, and the standardized regression coefficients ranged from .34 to .38 demonstrating construct stability.

Hypothesis 2—there will be causality between RMA and rape proclivity and vice versa— was also supported. All but one of the cross-lagged pathways (those of the constructs predicting each other over time) in Model 4 were significant (see Table 3 and Figure 1). Measures of RMA and rape proclivity predicted future time points of these constructs, signifying a predictive relationship between the constructs except for rape myths at T1 predicting rape proclivity at T2 which was not significant. Rape proclivity at T1-T2 predicted rape myths at T2-T4 with standardized regression coefficients from .16 to .24 ($p < .001$) in size. And rape myths predicted rape proclivity at T3 ($B = .27$; $p < .001$) and T4 ($B = .17$; $p < .001$) but not at T2 ($B = .09$; $p = .06$, ns).

Post Hoc Analysis

T1-T3 data were collected in a short amount of time, a 7-month period, while T4 was collected 7 months later. This means that the interval between time points was short, especially for T1-T3 data. To address concerns regarding the time periods, analysis was conducted with just T1 predicting T4 (results available upon request). The results were still significant, rape proclivity predicted RMA and vice versa, with a one-year period between these two time points indicating that the result hold for the first year of college at least.

Discussion

This study is the first known to examine the bidirectional predictive relationship between RMA and rape proclivity over time. Hypothesis 1 for this study was that the two constructs, RMA and rape proclivity, would show autoregressive effects, indicating stability of the constructs as each construct predicts itself over time. This hypothesis was supported; RMA predicted itself over time as did rape proclivity, suggesting stability of the constructs.

Hypothesis 2 was that predictive causality between RMA and rape proclivity would be demonstrated over time. This hypothesis was supported, indicating that RMA predicted rape proclivity at later time points and vice versa. The findings concerning predictive causality indicate that the relationship between the two constructs is complex and multifaceted. Using longitudinal data, this study demonstrates an association between the two constructs over time: men who accept rape myths at a given time point are more likely to show rape proclivity at future time points, indicating a temporal sequence. The same was found for rape proclivity, with rape proclivity at early time points being associated with RMA at later time points. These results held up at all time points except at T1 when rape myths did not predict rape proclivity at T2. At all other time points tested within this study (T2 and T3), predictive causality for these two constructs was found. It is unclear why T1 did not produce significant and similar results to the other time points. All the participants, not just the experimental group, viewed the peer-led theater performance intervention, which aimed to increase bystander behaviors and to combat beliefs related to sexual assault prior to completing the T1 survey. Perhaps the intervention affected the strength of the measure of RMA at T1 as the unacceptability of these attitudes might have been particularly salient at that time point and decreased the predictive relationship between RMA and rape proclivity. Additional research is needed, both to replicate the significant findings from this study and

to examine if in other samples, RMA and rape proclivity predict each other at each and every time point.

The significant findings from this study expand results from previous studies demonstrating that RMA predicts rape proclivity. Prior to this current study, all investigations on the association between RMA and rape proclivity were cross-sectional, and no researchers had examined the existence of a reciprocal relationship between the constructs. The current study addresses this gap in the research field through longitudinal data and demonstrates that predictive causality exists between RMA and rape proclivity.

Implications

This study demonstrates that RMA and rape proclivity do in fact predict each other over time, an important finding for identifying intervention points to decrease perpetration using the TPB and a step towards understanding if there is a causal relationship between these constructs. These findings have implications for prevention programming aimed at reducing sexual violence perpetration as such programs often target attitudes like RMA for intervention. Indeed, reducing RMA is an outcome that many prevention programs measure as an indicator of success (for reviews of sexual assault prevention programing with RMA measures see Katz & Moore, 2013). Rape proclivity has been less studied, but the results of this study indicate that it is both an important precursor belief to RMA as well as an outcome of RMA. As such, sexual violence prevention programs may need to address men at higher risk of sexual assault, such as those with higher RMA and those who demonstrate rape proclivity, in order to reduce perpetration of sexual violence. As both RMA and rape proclivity predict each other over time, and are both linked to sexual violence perpetration, it is important to find methods of reducing or eliminating RMA among men in order to reduce rape proclivity which ultimately increases the risk of committing sexual violence. Finally, this study demonstrates that rape proclivity predicts RMA over time suggesting that men at risk of sexual violence increase their risk of committing such violence through a complex and reciprocal relationship with beliefs related to perpetration.

While shedding light on possible new directions for prevention programming, the findings of this study might also help improve the intended outcomes of prevention programming. Currently, few prevention programs have proven effective at reducing sexual violence perpetration (Tharp et al., 2012). This may be in part due to a lack of clarity about how to tailor prevention efforts toward individuals with differing pre-existing attitudes and beliefs, such as RMA and rape proclivity beliefs, that create varying risk-levels. Thompson et al. (2015) found that risk-factors for sexual assault perpetration were not static over time and corresponded to perpetration behaviors. Some researchers have called for tailoring prevention programming to groups of men who may have differing risks of sexual assault perpetration (Salazar et al., 2018; Thompson & Morrison, 2013), including for "…factors such as their (men's) level of attitudinal support for sexual aggression and their professed intent to engage in this behavior." (Swartout, Swartout, et al., 2015). Understanding how risk of perpetration is affected by RMA and rape proclivity as they reinforce each other over time is important in improving sexual assault prevention efforts and may be used to tailor prevention programming specifically for men at higher risk of sexual assault perpetration.

Of the limited research into prevention programming with high-risk men, one study found that while low-risk men's rape myths and rape proclivity (using a measure of "sexually coercive behavioral intentions" that examined rape proclivity for four types of sexually violence behaviors) were significantly lowered by prevention programming, the same was not true for high-risk men (Elias-Lambert & Black, 2015). These men, identified as high-risk due to self-reports of past sexual aggression, did not demonstrate lower rape myths or rape proclivity after the prevention programming. Similarly, some scholars have hypothesized a "boomerang effect" may exist for high-risk men wherein exposure to messages countering norms around sexual violence may actually heighten perpetration (Bosson et al., 2019; Bosson et al., 2015; Malamuth et al., 2018). For high-risk men, attitudes and beliefs related to sexual violence and viewing women as potential targets of such, may be more deeply engrained and difficult to modify, suggesting the need for differential prevention efforts directed at high-risk men (Elias-Lambert & Black, 2015). The findings from the current study likewise suggest that over time, men's beliefs related to sexual violence, namely RMA, reinforce and increase rape proclivity, a risk-factor for perpetration, suggesting that beliefs and risk-factors for perpetration of sexual violence are mutable and reinforce each other over time.

Considering the differing risk-factors for the perpetration of sexual assault and how such risk-factors may influence uptake and receptiveness to prevention interventions, it is important to assess risk among individuals participating in prevention efforts that target attitudes and beliefs associated with perpetration such as rape myths and rape proclivity beliefs. Additionally, it may be that different prevention efforts are needed that account for risk and tailor content and messaging accordingly. Finally, due to the longitudinal relationship between the risk-factors examined in this study, traditional "one-shot" prevention programming may not be appropriate with men who endorse high-risk beliefs related to perpetration such as rape myths and rape proclivity. As these constructs predict each other over time, it may be that prevention programming should be implemented at multiple time points, not just in a "one-shot" dose, in order to disrupt the negative feedback cycle whereby these beliefs mutually reinforce each other over time.

Limitations

First, missing data was an issue within this study due to the number of participants who could not be matched over time with their self-generated identification code. Self-generated identification codes are useful within research settings to reduce social desirability bias (Schnell et al., 2010), which may be a particular issue surrounding attitudes related to sexual violence perpetration. However, in this study, the self-generated identification codes were often not useful in matching participants and resulted in the removal of a number of participants from the analysis.

Second, the measure used for rape proclivity in this study, based on other questions within the field of perpetration (Lisak et al., 2000; Malamuth, 1989), is not ideal. In this study, the rape proclivity measure asked two questions to which participants indicated their level of agreement. Newer methods of measuring proclivity to perpetrate have been developed and used by Bohner and colleagues (Bohner et al., 2009; Bohner et al., 2010; Bohner et

al., 1998; Bohner et al., 2006). This newer measure of rape proclivity is based on a series of sexual violence perpetration scenarios which participants read and then indicate how likely they would be to do the same behavior depicted in the scenario. Many researchers investigating rape proclivity use these scenario-based questions, wherein participants read a brief scenario and then are asked how likely they would be to commit future sexual violence in such a situation (e. g., Romero-Sánchez et al., 2017). As the field has shifted towards this method of measuring rape proclivity, scenario-based measures might be preferred for future investigations into questions regarding rape proclivity.

Finally, the brief intervals between survey administrations could result in a couple possible concerns. First, participants might remember their answers from time point to time point and moderate their responses to be in line with prior responses. Second, college students' view on sexual violence might undergo change throughout their time in college, however due to the shortened data collection periods, over their first year of college, the data analyzed within this study do not reflect change over a college career in attitudes and beliefs related to sexual violence. This might hold especially true to for men who join fraternities and are subject to peer's norms surrounding sexual violence as peer norms and pressure have been shown to affect view of sexual violence (Edwards & Vogel, 2015; Seabrook et al., 2016) and likewise, men with baseline rape proclivity, who then go onto join a fraternity, afterward demonstrate increased levels of rape proclivity (Seabrook et al., 2018). To address these concerns, post hoc follow-up analysis was conducted and indicated that the reciprocal relationship between rape proclivity and RMA holds even if the two variables are only measured at T1 and T4.

Future Directions

The findings from this study indicate several areas that warrant further investigation. As this is the first study of its kind examining predictive causality between RMA and rape proclivity, replication of these findings using other longitudinal data is needed. The results from this study suggest a reciprocal relationship between the constructs under investigation; however, this is a single study. Additional research is needed to verify the findings of this study. Furthermore, as this is the first study to examine any relationship between RMA and rape proclivity using longitudinal data, further examinations on these constructs using multiple time points are needed.

Another area for future research is in predicting behaviors of sexual violence perpetration from these constructs. This study only examined the relationship between RMA and rape proclivity and did not predict other distal outcomes from these variables. However, ultimately these variables are hypothesized to predict future sexual violence perpetration. Research is needed to test these relationships and investigate how a predictive causal relationship between RMA and rape proclivity is related to future sexual violence perpetration among men.

Conclusion

Constructs such as RMA and rape proclivity are commonly hypothesized to be the antecedents to committing the behavior of sexual violence itself. Furthermore, researchers

have concluded that RMA is associated with rape proclivity but had never examined if rape proclivity might predict RMA. This study is the first of its kind using longitudinal data to examine the relationship between rape proclivity and RMA over time. The results of this study indicate that rape proclivity and RMA predict each other over time, existing in a reciprocal relationship. These results can inform sexual violence prevention efforts to better address beliefs associated with sexual violence perpetration with the ultimate aim of eliminating sexual violence perpetration before it occurs.

Acknowledgments

References

Ajzen I (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211. 10.1016/0749-5978(91)90020-T

Ajzen I (2001). Nature and operation of attitudes. Annual Review of Psychology, 52, 27–58.

Ajzen I (2005). Attitudes, personality, and behavior (2 ed.). Open University.

Anderson LA, & Whiston SC (2005). Sexual assault education programs: A meta-analytic examination of their effectiveness [Article]. Psychology of Women Quarterly, 29(4), 374–388. 10.1111/j.1471-6402.2005.00237.x

Arbuckle JL (2007). Amos (Version 7.0) [Computer Program]. Chicago: SPSS.

Armijo-Olivo S, Warren S, & Magee D (2009). Intention to treat analysis, compliance, drop-outs and how to deal with missing data in clinical research: a review. Physical Therapy Reviews, 14(1), 36–49. 10.1179/174328809X405928

Betts KR, Hinsz VB, & Heimerdinger SR (2011). Predicting intentions of romantic partner abuse with the Theory of Planned Behavior. Current Psychology, 30(2), 130–147.

Bohner G, Eyssel F, Pina A, Siebler F, & Viki GT (2009). Rape myth acceptance: Cognitive, affective, and behavioral effects of beliefs that blame the victim and exonerate the perpetrator. In Horvath MAH & Brown JM (Eds.), Rape: Challenging contemporary thinking (pp. 17–45). Willan.

Bohner G, Jarvis CI, Eyssel F, & Siebler F (2005). The causal impact of rape myth acceptance on men's rape proclivity: comparing sexually coercive and noncoercive men. European Journal of Social Psychology, 35(6), 819–828.

Bohner G, Pina A, Viki GT, & Siebler F (2010). Using social norms to reduce men's rape proclivity: Perceived rape myth acceptance of out-groups may be more influential than that of in-groups. Psychology, Crime & Law, 16(8), 671–693.

Bohner G, Reinhard MA, Rutz S, Sturm S, Kerschbaum B, & Effler D (1998). Rape myths as neutralizing cognitions: Evidence for a causal impact of anti-victim attitudes on men's self-reported likelihood of raping [Article]. European Journal of Social Psychology, 28(2), 257–268.

Bohner G, Siebler F, & Schmelcher J (2006). Social norms and the likelihood of raping: Perceived rape myth acceptance of others affects men's rape proclivity. PERSONALITY AND SOCIAL PSYCHOLOGY BULLETIN, 32(3), 286–297. 10.1177/0146167205280912 [PubMed: 16455857]

Bosson JK, Kuchynka SL, Parrott DJ, Swan SC, & Schramm AT (2019). Injunctive norms, sexism, and misogyny network activation among men. Psychology of Men & Masculinities. 10.1037/men0000217

Bosson JK, Parrott DJ, Swan SC, Kuchynka SL, & Schramm AT (2015). A dangerous boomerang: Injunctive norms, hostile sexist attitudes, and male-to-female sexual aggression. Aggressive Behavior, 41(6), 580–593. 10.1002/ab.21597 [PubMed: 26174353]

Brown TA (2006). Confirmatory factor analysis for applied research. The Guilford Press.

Brownmiller S (1975). Against our will: Men, women, and rape. Simon & Schuster.

Burt MR (1980). Cultural myths and supports for rape [Article]. Journal of Personality & Social Psychology, 38, 217–230. 10.1037/0022-3514.38.2.217 [PubMed: 7373511]

Cantor D, Fisher B, Chibnall S, Townsend R, Lee H, Bruce C, &, & Thomas G (2015). Report on the AAU campus climate survey on sexual assault and sexual misconduct. https://www.aau.edu/uploadedFiles/AAU_Publications/AAU_Reports/Sexual_Assault_Campus_Survey/AAU_Campus_Climate_Survey_12_14_15.pdf

Chapleau KM, & Oswald DL (2010). Power, sex, and rape myth acceptance: testing two models of rape proclivity. Journal of Sex Research, 47(1), 66–78. [PubMed: 19431039]

Christens BD, Peterson NA, & Speer PW (2011). Community participation and psychological empowerment: Testing reciprocal causality using a cross-lagged panel design and latent constructs. Health Education & Behavior, 38(4), 339–347. [PubMed: 21460177]

Davis KC, Danube CL, Stappenbeck CA, Norris J, & George WH (2015). Background predictors and event-specific characteristics of sexual aggression incidents: The roles of alcohol and other factors. Violence Against Women, 21(8), 997–1017. 10.1177/1077801215589379 [PubMed: 26048213]

De La Rue L, Polanin JR, Espelage DL, & Pigott TD (2014). School-Based Interventions to Reduce Dating and Sexual Violence: A Systematic Review. Campbell Systematic Reviews 2014:7 (1891–1803). https://campbellcollaboration.org/better-evidence/school-based-interventions-dating-and-sexual-violence.html

DeGue S, & DiLillo D (2004). Understanding perpetrators of nonphysical sexual coercion: characteristics of those who cross the line. Violence and Victims, 19(6), 673–688. [PubMed: 16004069]

DeGue S, DiLillo D, & Scalora M (2010). Are all perpetrators alike? Comparing risk factors for sexual coercion and aggression. Sexual Abuse: A Journal of Research and Treatment, 22(4), 402–426. 10.1177/1079063210372140 [PubMed: 20693517]

DeGue S, Valle LA, Holt MK, Massetti GM, Matjasko JL, & Tharp AT (2014). A systematic review of primary prevention strategies for sexual violence perpetration. Aggression and Violent Behavior, 19(4), 346–362. 10.1016/j.avb.2014.05.004 [PubMed: 29606897]

Drieschner K, & Lange A (1999). A review of cognitive factors in the etiology of rape: Theories, empirical studies, and implications. Clinical Psychology Review, 19(1), 57–77. [PubMed: 9987584]

Edwards SR, & Vogel DL (2015). Young Men's Likelihood Ratings to Be Sexually Aggressive as a Function of Norms and Perceived Sexual Interest. Psychology of Men & Masculinity, 16(1), 88–96.

Elias-Lambert N, & Black BM (2015). Bystander sexual violence prevention program: Outcomes for high-and low-risk university men. Journal of Interpersonal Violence, 31(19), 3211–3235.

Gerger H, Kley H, Bohner G, & Siebler F (2007). The acceptance of modern myths about sexual aggression scale: Development and validation in German and English. Aggressive Behavior, 33(5), 422–440. [PubMed: 17683102]

Gidycz CA, Warkentin JB, Orchowski LM, & Edwards KM (2011). College men's perceived likelihood to perpetrate sexual aggression. Journal of Aggression, Maltreatment & Trauma, 20(3), 260.

Hollis S, & Campbell F (1999). What is meant by intention to treat analysis? Survey of published randomised controlled trials. Bmj, 319(7211), 670–674. [PubMed: 10480822]

Hu L, & Bentler PM (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling, 6, 1–55. 10.80/10705519909540118

Humphreys TP, & Brousseau MM (2010). The sexual consent scale-revised: Development, reliability, and preliminary validity. Journal of Sex Research, 47(5), 420. [PubMed: 19685367]

Katz J, & Moore J (2013). Bystander education training for campus sexual assault prevention: An initial meta-analysis. Violence and Victims, 28(6), 1054–1067. 10.1891/0886-6708.vv-d-12-00113 [PubMed: 24547680]

Kernsmith P (2005). Treating perpetrators of domestic violence: Gender differences in the applicability of the Theory of Planned Behavior. Sex Roles, 52(11–12), 757.

Kingree JB, & Thompson M (2015). A comparison of risk factors for alcohol-involved and alcohol-uninvolved sexual aggression perpetration. Journal of Interpersonal Violence, 30(9), 1478–1492. 10.1177/0886260514540806 [PubMed: 24997103]

Kingree JB, & Thompson MP (2013). Fraternity membership and sexual aggression: An examination of mediators of the association. Journal of American College Health, 61(4), 213–221. 10.1080/07448481.2013.781026 [PubMed: 23663125]

Krebs CP, Lindquist C, Berzofsky M, Shook-Sa BE, Peterson K, Planty MG, Langton L, & Stroop J (2016). Campus climate survey validation study final technical report. https://www.bjs.gov/index.cfm?ty=pbdetail&iid=5540

Lanier CA (2001). Rape-accepting attitudes; Precursors to or consequences of forced sex [Article]. Violence Against Women, 7(8), 876–885. 10.1177/10778010122182802

Lisak D, Conklin A, Hopper J, Miller P, Altschuler L, & Smith BM (2000). The abuse-perpetration inventory: Development of an assessment instrument for research on the cycle of violence [Article]. Family Violence & Sexual Assault Bulletin, 16, 21–30.

Malamuth NM (1981). Rape proclivity among males. Journal of Social Issues, 37(4), 138.

Malamuth NM (1989). The Attraction to Sexual Aggression scale: Part one [Article]. The Journal of Sex Research, 26(1), 26–49. 10.1080/00224498909551491

Malamuth NM, Huppin M, & Linz D (2018). Sexual assault interventions may be doing more harm than good with high-risk males. Aggression and Violent Behavior, 41, 20–24. 10.1016/j.avb.2018.05.010

McMahon S, & Farmer LG (2011). An updated measure for assessing subtle rape myths. Social Work Research, 35(2), 71–80.

McMahon S, Peterson NA, Winter SC, Palmer JE, Postmus JL, & Koenick RA (2015). Predicting bystander behavior to prevent sexual assault on college campuses: The Role of self-efficacy and intent. American Journal of Community Psychology, 56(1–2), 46–56. 10.1007/s10464-015-9740-0 [PubMed: 26194588]

McMahon S, Winter SC, Palmer JE, Postmus JL, Peterson NA, Zucker S, & Koenick R (2015). A randomized controlled trial of a multi-dose bystander intervention program using peer education theater [Article]. Health Education Research, 30(4), 554–568. 10.1093/her/cyv022 [PubMed: 26135957]

Miller DL (2010). An application of the Theory of Planned Behavior to the proximal and distal etiology of sexual offending [Article]. Trauma, Violence, and Abuse, 11(3), 113–128. 10.1177/1524838010372523

Murnen SK, & Kohlman MH (2007). Athletic participation, fraternity membership, and sexual aggression among college men: A meta-analytic review. Sex Roles, 57(1–2), 145–157. 10.1007/s11199-007-9225-1

Newman DA (2002). Longitudinal modeling with randomly and systematically missing data: A simulation of ad hoc, maximum likelihood, and multiple imputation techniques. Organizational Research Methods, 6(3), 328–362.

Palmer JE, McMahon S, & Fissel E (2020). Correlates of incoming male college students' proclivity to perpetrate sexual assault. Violence Against Women, 1077801220905663. 10.1177/1077801220905663

Payne DL, Lonsway KA, & Fitzgerald LF (1999). Rape myth acceptance: Exploration of its structure and its measurement using the Illinois Rape Myth Acceptance scale. [Article]. Journal of Research in Personality, 33, 27–68. 10.1006/jrpe.1998.2238

Reynolds W (1982). Development of reliable and valid short forms of the Marlow–Crowne Social Desirability Scale. Journal of Clinical Psychology, 38, 119–125. 10.1002/1097-4679(198201)38:1<119::AID-JCLP2270380118>3.0.CO;2-I

Romero-Sánchez M, Toro-García V, Megías JL, & Horvath MAH (2017). More than a magazine: Exploring the links between lads' mags, rape myth acceptance, and rape proclivity [Article]. Journal of Interpersonal Violence, 32(4), 515–534. 10.1177/0886260515586366 [PubMed: 26045501]

Russell TD, & King AR (2016). Anxious, hostile, and sadistic: Maternal attachment and everyday sadism predict hostile masculine beliefs and male sexual violence [Article]. Personality and Individual Differences, 99, 340–345. 10.1016/j.paid.2016.05.029

Salazar LF, Swartout KM, Swahn MH, Bellis AL, Carney J, Vagi KJ, & Lokey C (2018). Precollege sexual violence perpetration and associated risk and protective factors among male college freshmen in Georgia. Journal of Adolescent Health, 62(3), S51–S57. 10.1016/j.jadohealth.2017.09.028

Schnell R, Bachteler T, & Reiher J (2010). Improving the use of self-generated identification codes. Evaluation Review, 34, 391–418. [PubMed: 21081512]

Seabrook RC, McMahon S, & O'Connor J (2018). A longitudinal study of interest and membership in a fraternity, rape myth acceptance, and proclivity to perpetrate sexual assault. Journal of American College Health, 1–9. 10.1080/07448481.2018.1440584

Seabrook RC, Ward LM, & Giaccardi S (2016). Why is fraternity membership associated with sexual assault? Exploring the roles of conformity to masculine norms, pressure to uphold masculinity, and objectification of women [Article]. Psychology of Men and Masculinity. 10.1037/men0000076

Stephens KA, & George WH (2004). Effects of anti-rape video content on sexually coercive and noncoercive college men's attitudes and alcohol expectancies. Journal of Applied Social Psychology, 34(2), 402–416.

Stephens KA, & George WH (2009). Rape prevention with college men: Evaluating risk status [Article]. Journal of Interpersonal Violence, 24(6), 996–1013. 10.1177/0886260508319366 [PubMed: 18591366]

Süssenbach P, Bohner G, & Eyssel F (2013). Metacognitive aspects of rape myths: subjective strength of rape myth acceptance moderates its effects on information processing and behavioral intentions [Article]. Journal of Interpersonal Violence, 28(11), 2250–2272. 10.1177/0886260512475317 [PubMed: 23400886]

Swartout KM, Swartout AG, Brennan CL, & White JW (2015). Trajectories of male sexual aggression from adolescence through college: A latent class growth analysis [Article]. Aggressive Behavior, 41(5), 467–477. 10.1002/ab.21584 [PubMed: 25735916]

Swartout KM, Thompson MP, Koss MP, & Su N (2015). What is the best way to analyze less frequent forms of violence? The case of sexual aggression. Psychology of Violence, 5(3), 305–313. 10.1037/a0038316 [PubMed: 26925298]

Tharp AT, DeGue S, Valle LA, Brookmeyer KA, Massetti GM, & Matjasko JL (2012). A systematic qualitative review of risk and protective factors for sexual violence perpetration. Trauma, Violence, & Abuse, 14(2), 133–167. 10.1177/1524838012470031

Thompson MP, Kingree JB, Zinzow H, & Swartout K (2015). Time-varying risk factors and sexual aggression perpetration among male college students [Article]. Journal of Adolescent Health, 57(6), 637–642. 10.1016/j.jadohealth.2015.08.015

Thompson MP, & Morrison DJ (2013). Prospective predictors of technology-based sexual coercion by college males. Psychology of Violence, 3(3), 233–246. [PubMed: 24073356]

Thompson MP, Swartout KM, & Koss MP (2013). Trajectories and predictors of sexually aggressive behaviors during emerging adulthood. Psychology of Violence, 3(3), 247–259. 10.1037/a0030624 [PubMed: 23914305]

Troche SJ, & Herzberg PY (2017). On the role of dominance and nurturance in the confluence model: A person-centered approach to the prediction of sexual aggression [journal article]. Aggressive Behavior, 43(3), 251–262. 10.1002/ab.21685 [PubMed: 27775152]

Welsh BC, & Farrington DP (2012). Science, politics, and crime prevention: Toward a new crime policy [Article]. Journal of Criminal Justice, 40, 128–133. 10.1016/j.jcrimjus.2012.01.008

Yapp EJ, & Quayle E (2018). A systematic review of the association between rape myth acceptance and male-on-female sexual violence. Aggression and Violent Behavior, 41, 1–19. 10.1016/j.avb.2018.05.002

Public Significance Statement:

This study demonstrates that two constructs, rape myth beliefs and rape proclivity, predict each other over time within a sample of college men, a step towards understanding if there is a causal relationship between the constructs. Since these constructs are both linked to sexual violence perpetration, campus prevention efforts should be implemented at multiple time points, not just in at a single time point such as orientation, to disrupt the path whereby these beliefs reinforce each other over time.
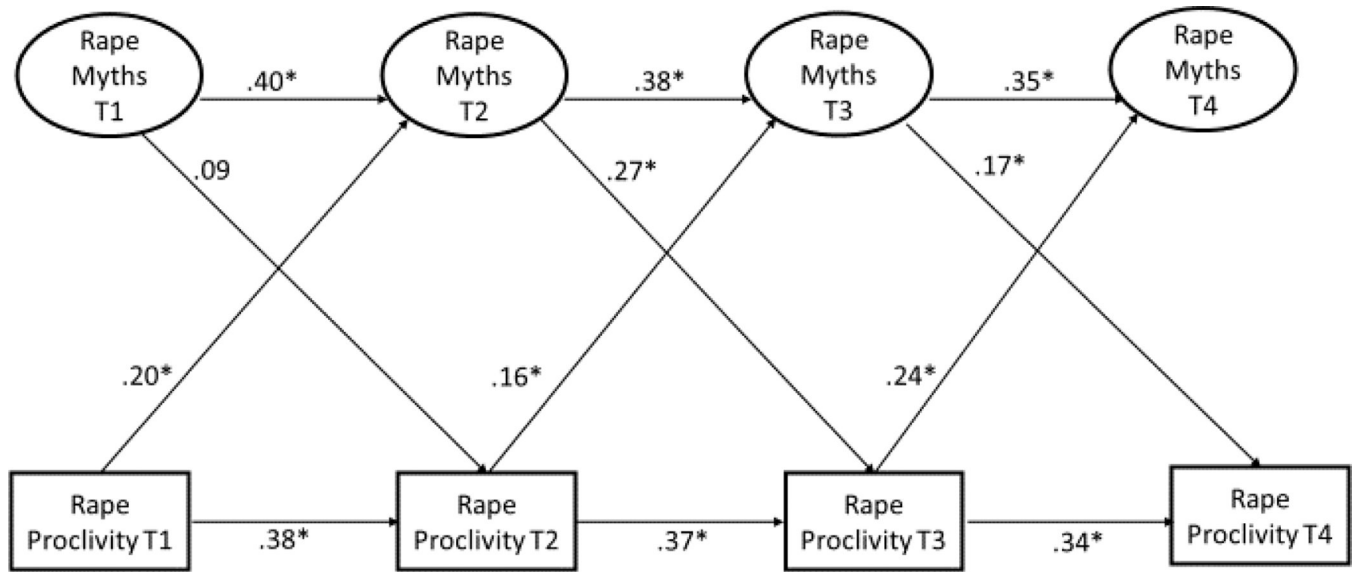
Figure 1:
Fully Cross-Lagged Model with Standardized Effects
*P<.001; figure shown without subscales of Rape Myths, errors, residuals, or control variables

Table 1:

Descriptive information for each wave

Wave	Month/Year	RMA	Rape Proclivity
T1	September, 2010	2.53	1.40
T2	December, 2010	2.49	1.44
T3	February/March, 2011	2.48	1.44
T4	September, 2011	2.38	1.50

Table 2:

Model Fit Indices for all Four Models

Test	Model 1: baseline with autoregressive effects	Model 2: autoregressive effects and RMA predicting rape proclivity	Model 3: autoregressive effects and rape proclivity predicting RMA	Model 4: fully cross-lagged model
CFI	.93	.93	.93	.94
NFI	.90	.90	.90	.91
RMSEA	.07	.06	.06	.06
X2 Value	772.01	732.73	717.67	672.47
df	249	246	246	243
P value	.000	.000	.000	.000
Difference in X^2 Test				
Model	----	1	1	3
Compared				
Change in X^2	----	39.28	54.34	45.2
Change in df	----	3	3	3
P<	----	.001	.001	.001

Table 3:

Associations between Variables in the Cross-Lagged Model

Path			Standardized Regression Estimate	Unstandardized Regression Estimate	S.E.	p-value
RMA T1	→	RMA T2	0.40	0.45	0.06	***
Rape Proclivity T1	→	Rape Proclivity T2	0.38	0.41	0.05	***
Rape Proclivity T1	→	RMA T2	0.20	0.19	0.04	***
RMA T1	→	Rape Proclivity T2	0.09	0.12	0.06	0.06
RMA T2	→	RMA T3	0.38	0.30	0.05	***
Rape Proclivity T2	→	Rape Proclivity T3	0.37	0.38	0.04	***
Rape Proclivity T2	→	RMA T3	0.16	0.17	0.04	***
RMA T2	→	Rape Proclivity T3	0.27	0.50	0.05	***
RMA T3	→	RMA T4	0.35	0.37	0.05	***
Rape Proclivity T3	→	Rape Proclivity T4	0.34	0.36	0.05	***
Rape Proclivity T3	→	RMA T4	0.24	0.22	0.04	***
RMA T3	→	Rape Proclivity T4	0.17	0.22	0.06	***

***
P<.001