Thesis Defense Submission

The Influence of Athletic Participation on Attitudes toward Sexual Assault

Amanda Reed
Marietta College

Author Note
Amanda Reed, Department of Psychology, Marietta College.

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Correspondence concerning this article should be addressed to Amanda Reed, 200 W. Spring St.
Marietta, OH 45750.

Contact: Amandainez41@yahoo.com
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Amanda I. Reed

Marietta College

This thesis has been approved for the Department of Psychology of Marietta College by

Dr. Mary Barnas, Ph.D.

Thesis Committee Advisor

Dr. Mark Sibicky, Ph.D.

Thesis Committee Member
Abstract

Sexual assault on college campuses is a pervasive issue in American society. On college campuses with 1000 females, there are approximately 350 rapes each year (Fisher, Cullen, & Turner, 2000). The current study examined gender role orientation (GRO), rape myth acceptance (RMA), and the need to win attitude (NTW) among female athletes and non-athletes. In addition, among the athletes, participation in contact or non-contact sports was assessed. It was hypothesized that female athletes will more strongly identify with a masculine GRO and show greater RMA than non-athletes. Among athletes, it was hypothesized that women with a greater NTW, and those who participate in contact sports will identify more strongly with a masculine GRO and show greater RMA than female athletes in non-contact sports. Participants completed a counterbalanced series of surveys on Qualtrics including the Bem Sex Role Inventory (BSRI), sport orientation questionnaire (SOQ), and the Illinois Rape Myth Acceptance (IRMA) questionnaire. Results suggest female athletes were more accepting of rape myths than female non-athletes. Female athletes participating in contact sports were more accepting of rape myths than athletes in non-contact sports. Having a NTW attitude was significantly associated with being an athlete. There were no significant findings regarding gender role orientation.

Keywords: Sexual assault, rape myth acceptance, gender role orientation, athletes.
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Introduction

Sexual assault on college campuses is a pervasive issue in American society. Of 410 women surveyed, 97.6% reported experiencing an unwanted experience of sexual assault (Randall, Melanie, & Haskell, 1995). According to the Women’s Safety Project survey, 51% of sexual assault victims were between 16 and 21 years old (Randall, Melanie, & Haskell, 1995). Another study found 54% of college women report being sexually victimized or coerced (Koss, Gidycz, & Wisniewski, 1987). On college campuses with 1000 females, there are approximately 350 rapes each year (Fisher, Cullen, & Turner, 2000). Moreover, 3% of college women are raped within a year of being at school (Karjane, Fisher, & Cullen, 2005).

The costs of sexual assault are devastating to victims psychologically and physically. Victims of sexual assault are likely to experience physical pain and psychological pain including distress, fear, anxiety, lowered self-esteem, sexual dysfunction, drug abuse, alcohol abuse, and Post Traumatic Stress Disorder (PTSD) (Koss, 1993).

Masculine Gender Role Orientation and Sexual Assault

Research has consistently found that identifying with a masculine gender orientation is associated with problematic attitudes toward sexual assault (Murnen, & Kohlman, 2007). The original Bem Sex Role Inventory (BSRI; Bem, 1981) classifies participants into one of four gender role orientation (GRO) groups including feminine, masculine, androgynous, or undifferentiated. According to Bem (1981), an androgynous individual is high on both masculine and feminine traits while an undifferentiated person is low on masculine and feminine traits. Further, femininity refers to being high on feminine traits and low on masculine traits while masculinity is high on masculine traits and low on feminine traits.
Having a masculine gender role involves not being passive or weak (Kimmel, 2005). A major goal of masculinity is to be unassociated with feminine traits. Additionally, people with a masculine gender role reserve their emotions and do not express sensitivity toward others. Kimmel (2005) suggests people with a masculine gender role often seek power in general, but also sexual power including aggression.

DeKeseredy (1990) proposed Male Peer Support Theory to offer an explanation of dating violence between men and women. Male Peer Support Theory postulates that males in a dating relationship experience stress when their female partner challenges their authority. For example, minor arguments or sexual problems between the partners may create stress, which influences the male to seek social support from all-male peer groups. The all-male peer group perpetuates traditional/patriarchal attitudes that may influence the male to commit dating violence, sexual assault, and legitimizes beliefs that males are superior to females (DeKeseredy, 1990).

Athletic teams and fraternities are recognized as aggressive peer groups that support masculinity and are disproportionally associated with perpetuating sexual violence. These peer groups often endorse traditional sex-role attitudes. In addition to holding traditional attitudes and greater acceptance of rape myths, Bidwell, Barnett, Miller-Perrin, and Perrin (1997) reiterate that fraternity men and athletes value toughness, aggressiveness, and dominance. Koss and Gaines (1993) found that significant involvement in sports was associated with high levels of sexual aggression. Curry (1991) found that male athletes often referred to women as sexual objects and engaged in “locker room talk”, which could promote negative attitudes towards women.

A meta-analysis of college athletic participation and fraternity membership revealed a stronger effect size of sexually aggressive attitudes among male athletes than fraternity members (Murnen, & Kohlman, 2007). The majority of participants were college aged. Attitudes and
beliefs regarding sexual violence may be established during the high school years, and are further reinforced in the context of the collegiate environment.

Crosset and Ptacek (1996) assessed male’s athletic membership and reported sexual assaults from nine Division 1 institutions. The researchers looked at judicial records of sexual assault reports spanning over three years time. Male athletes made up 3% of the population examined. However, male athletes represented 35% of the perpetrators reported. The authors found significant overrepresentation of male student athletes and reports of sexual assault indicating male athletes may be disproportionally associated with supportive attitudes regarding sexual assault and sexual assault perpetration.

Boeringer (1999) examined differences between fraternity members and athletes concerning attitudes about rape. Participants were all males from a university with a prominent Greek life and athletic presence. Participants were classified as athletes, fraternity members, or controls (not involved with fraternities or athletics). Athletic members included in the study could not also be in a fraternity and fraternity members included in the study could not also be athletes. The researcher used questions from Burt’s (1980) study of cultural rape myths, such as the belief that any woman can resist rape if she truly wants to and that sexual force is exciting to a woman. Fraternity men were more likely to support the following five statements: Women like to be physically “roughed up”, women want to be forced into sex, women have secret desires to be raped, men should be the controllers of the relationship, and sexually liberated women are promiscuous. Athletes agreed with almost all of the rape myth statements as well as several sex role stereotyping and adversarial sexual belief statements. Additionally, there were a dramatically higher percentage of athletes who displayed strong agreement with rape-supportive statements (5.8%) when compared to the control group (3%). In sum, the author found a
significant relationship between rape-supportive attitudes and fraternity membership or athletic participation.

Brown, Sumner, and Nocera (2002) researched attitudes towards sexual aggression and level of sexual aggression among college men. Participants indicated whether they participated in sports (contact or non-contact) or simply watched sports (contact or non-contact) and were categorized accordingly. Approximately 24% of the participants were also fraternity members. Participants completed five questionnaires including the Psychosocial Function of Sports Scale (PFSS) to assess sports ideology (Spreitzer & Snyder, 1975), The Attitudes Towards Women Scale (ATWS) to assess attitudes regarding women’s role in society (Spence & Helmreich, 1978), and the Coercive Sexuality Scale (CSS) to assess aggressive or coercive sexual behavior (Rapaport & Burkhart, 1984). The authors found that fraternity membership was a significant predictor of sexual aggression towards women. Additionally, viewing higher levels of contact sports was a significant predictor of male’s sexual aggression towards women. Interestingly, participating in contact sports was not a significant predictor of aggression towards women, which conflicts with other research on male athletes. Therefore, the literature on athletes and attitudes towards sexual assault is mixed because some studies have found a connection between male athletes and sexual aggression towards women and others have not, especially regarding contact and non-contact sports. Thus, there is a need to further explore the topic.

Koss and Gaines (1993) investigated male’s alcohol use, fraternity membership, and athletic participation in relation sexual aggression. Participants were undergraduate men, including 140 athletes. The researchers examined sexual aggression, alcohol and drug use, and analyzed hostility towards women. Athletic participation was analyzed separate from alcohol and drug use. Regular use of alcohol and nicotine were found to be predictors of sexual aggression.
and formal sports involvement was associated with sexual assault perpetration. Specifically, the authors found that formal sports (especially revenue producing) were associated with sexual aggression.

In support of male peer support theory, Schaeffer and Nelson (1993) found that residents in all-male housing (regardless of fraternity status) held more traditional beliefs/attitudes about gender roles and were more accepting of rape myths than those in co-ed housing. Residents in all-male housing might be reinforcing each other’s beliefs about rape myths and gender roles, potentially influencing them to commit sexual violence. Compared to non-fraternity men, fraternity men have been found to have more traditional attitudes towards women (Schaeffer and Nelson 1993).

**Feminine Gender Role Orientation**

A feminine GRO may make women vulnerable to sexual assault because females are socialized to be passive, weak, and fearful (Lips, 2008). Femininity is also associated with being nurturing, sympathetic, dainty and cooperative (Lips, 2008). Bart (1981) examined 13 cases of both women who had been raped and women who avoided attempted rape as adults. Women who avoided an attempted rape did not identify with a traditional feminine gender role and used multiple active strategies (rather than one passive strategy) to avoid the rape such as struggling and screaming. When the sole strategy to avoid rape was pleading, rape avoidance was less successful. Overall, women were more likely to avoid rape if the rapist was a stranger. However, the majority of perpetrators were not strangers. This in no way implies the women were responsible for the rapes, but the conclusions have educational value for rape prevention. The finding suggests that women who do not have a feminine gender role are less susceptible to rape and fostering these qualities may present an important area of interest for prevention strategies.
Athletes serve as an organization associated with masculine gender role orientations among women. Researchers have found evidence that both male and female athletes reported masculine gender role orientations more so than non-athletes (Edwards, Gordin, & Henshen, 1984; Spence & Helmreich, 1978). Park Sang, Jeon Jae, and Youngsook (2012) examined gender role identity between female’s who exercised and females who did not exercise. Korean Participants completed a standardized version of the Bem Sex Role Inventory (BSRI) called the Korean Sex Role inventory (KSRI) (Bem, 1976; Chung, 1990) and the Intrinsic Motivation Inventory (IMI) (Sung, 1996). The IMI assessed the intensity, frequency and continuity of the participant’s exercise, or non-exercise, behavior. The authors found that females who participated in physical exercise reported more masculine gender roles than female non-exercisers.

The aforementioned research failed to examine female athletes and only examined female exercisers and non-exercisers. Miller and Levy (1996) examined several variables among female athletes and non-athletes including gender role conflict, masculinity, femininity, physical appearance self-concept, athletic competence self-concept, body image self-concept. Athletes were defined as persons involved in a collegiate sport and non-athletes were defined as persons not involved in a collegiate sport. Participants were college-aged female athletes or non-athletes. The athletic sports teams included were volleyball, basketball, track, swimming, and golf. Participants completed the Gender Role Conflict Scale, Personal Attributes Questionnaire (to assess masculinity and/or femininity), Physical Self-Perception Profile (to measure participants body image self-concepts). Physical Appearance, Athletic Competence, and Body Image Self-Concept measures were questions integrated from other research. Results indicate that female athletes had higher positive athletic competence self-concept, body image self-concept, and were
more likely to have parents who were also athletes when compared to non-athletes. The authors also found female athletes rated themselves as significantly more masculine than female non-athletes and had more positive self-concepts regarding their physical appearance.

Krane, Choi, Baird, Aimar, and Kauer (2004) proposed that female participants (who were also athletes) expressed that being feminine contrasted with athleticism. The researchers examined NCAA Division 1 female athletes involved with cross-country, track, soccer, swimming, gymnastics, volleyball, basketball, softball, tennis, rugby, or hockey. Participants attended a focus group interview. Focus group interviews have previously been found to be reliable in feminist research and eases anxiety when talking about the female body (Madriz, 2000). The discussion focused on athlete’s perceptions of their body, muscularity, and femininity. Interviews were videotaped and audiotaped.

Krane et al., (2004) found participants expressed perceiving female athletes as different from ‘normal’ females. Specifically, muscular bodies were perceived as contrasting with femininity. Doing “girl”, which refers to performing femininity by doing perceived feminine activities like wearing makeup and French braids, seemed to differ by sport, which exemplifies the need to examine sports separately. For example, tennis players were more concerned with looking feminine and reminding people of their femininity as opposed to rugby players who were not as concerned with looking feminine.

Lantz & Schroeder (1999) investigated the relationship of athletic participation and endorsement of masculine or feminine gender role orientations. Participants were male and female athletes and non-athletes. Athletic Identity (strength and exclusivity of their athletic role) was measured using the Athletic Identity Measurement Scale (AIMS; Brewer, Van Raalte, & Linder, 1993). GRO was measured using the Bem Sex Role Inventory (BSRI; Bem, 1981). The
researchers found that high identifying athletes reported identifying with a masculine gender role compared to non-athletes and low athletic identifiers. This was true for males and females. Non-athletes and low athletic identifiers reported greater identification of a feminine gender role. Thus, there is a link between sports and masculine traits (tough-minded, dominance, aggression, etc.).

**Athletic Identification and Attitudes**

Athletics can serve as a protective factor in multiple areas of life for males and females. Sport participation can enhance self-esteem (Pedersen, & Seidman, 2004) and is associated with better grades (Hanson & Krause, 1999) and overall good health. Fasting, Brackenridge, Miller, and Sabo (2008) examined the role of athletics in relation to protection against sexual assault. The authors found that being a student athlete was associated with a lower risk of sexual victimization from their peers. However this may not necessarily be a protective factor because female athletes may be vulnerable to sexual assault from coaches. Athletics may not serve as a protective factor for female athletes because female athletes have been found to experience high rates of sexual victimization from authority figures in comparison to non-athletes. Athletic coaches were found to be almost six times more likely than peer athletes to be identified as sexual perpetrators against female athletes (Kirby & Greaves, 1996). Thus, sexual victimization can still occur.

Although athletics may not serve as a protective factor against sexual assault, there is evidence that female athletes perceive themselves as less likely to experience rape. McMahon (2007) sought to understand how rape myths exist and function within the athletic subculture. Data was collected from male and female Division 1 athletes. Participants completed questionnaires, attended nine focus groups, and completed in-depth interviews during the focus
groups. Survey’s included the Scale for the Identification of Acquaintance Rape Attitudes (SIARA; Humphrey & Hillenbrand-Gunn, 1996) to measure attitudes regarding rape situations where the victim knew their perpetrator. The Form A short-from version of the Marlowe-Crowne Social Desirability Scale (Reynolds, 1982) was used to determine participants answering in socially desirable ways. Most participants agreed that rape was wrong and disagreed with victim-blaming statements. Interestingly, when participants were in the focus groups, they shared information that contradicted these findings. Specifically, male and female athletes directly victim-blamed during the interviews/focus groups saying things like “I always think it’s their fault” and “they’re asking for it.” Female participants indicated they believed female athletes were less at risk of rape than female non-athletes, which is detrimental because athletics may not necessarily be a protective factor against rape.

McMahon (2010) examined rape prevention by examining bystander intervention. Male and Female participants attended a rape prevention program and completed the Illinois Rape Myth Acceptance Scale (IRMA; Payne, Lonsway, & Fitzgerald, 1999) to measure beliefs regarding rape. Participants also completed the Bystander Attitude Scale (BAS-R; Banyard, Plante, & Moynihan, 2005) to assess bystander intervention tactics. Basic demographics were collected, including athletic participation. Overall, participants moderately supported rape myths and indicated a moderate willingness to intervene in situations involving sexual assault. Over half of the participants agreed with victim blaming statements such as “If a girl acts like a slut, she is eventually going to get into trouble.” Participants who endorsed rape myths were less likely to intervene. Males were most likely to support rape myths, but both male and female athletes scored high on the RMA scale and were less likely to intervene than non-athletes.
Merten (2008) found that a need to win attitude (NTW) among athletes was related to a greater acceptance of dating violence. Competitiveness refers to the desire to win or be successful regardless of actually winning or losing whereas a NTW attitude reflects the desire to win at any cost. Participants were males and females who completed the Sport Orientation Questionnaire (SOQ; Gill & Deeter, 1988) to assess their NTW attitudes. Participants read several vignettes depicting dating violence and were asked to express how acceptable they perceived each violent scenario. The researchers found that a NTW attitude, not athletic involvement, was associated with dating violence acceptance. Additionally, male and female participants rated female perpetration of violence as more acceptable than male perpetration. However, different types of athletics, such as contact and non-contact sports, were not examined.

**Attitudes and Contact Versus Non-contact Sports**

Sawyer, Thompson, and Chicorelli (2002) examined RMA among intercollegiate student athletes from five different universities. Attitudes regarding rape were assessed using a revised version of the BRMAS (Burt Rape Myth Acceptance Scale; Burt, 1980). A high score on the BRMAS indicated greater acceptance of rape myths. Freshman and sophomores scored higher on the BRMAS compared to juniors and seniors. Males participating in team sports (basketball, football, and baseball) scored significantly higher on the BRMAS than men in individual-oriented sports. Males were more likely than females to accept rape myths. Female athletes from Division 1 schools were more accepting of rape myths than female athletes from Division 2 schools. The authors interpreted this finding as reflecting more competitive attitudes among Division 1 female athletes because they are more invested and are at the highest level of their sport. The authors conclude that athletics should not be viewed as a homogenous group.
As mentioned previously, Krane (2001) found gender role differences among different sports, which exemplifies the need to examine sports separately rather than as a homogenous group. Tennis players were found to be more concerned with looking feminine and reminding people of their femininity as opposed to rugby players who were not as concerned with looking feminine. Therefore, there may be differences in levels of masculinity among different sports, which may relate to differing perspectives of dating violence and rape myth acceptance among contact and non-contact sports.

Nixon (1997) examined male and female athletes aggression outside of sports. The researchers found males had stronger beliefs towards sport toughness than females and were more likely to be aggressive outside of the athletic context. Female’s aggression during sports participation was not associated with engaging in aggressive acts outside of the sport context. There were no significant differences between male and female athletes versus non-athletes regarding which group would be more likely to be aggressive. However, the researchers found a relationship between contact sports and aggression outside of sports. Specifically, females participating in contact sports were significantly more likely than females in non-contact sports to have engaged in physically aggressive acts in everyday life outside of sports. Contact sports appear to be related to female athletes aggression, but is there a relationship between contact sports and attitudes about sexual violence?

Conclusions

Research on female athletes is lacking, especially comparing female athletes and non-athletes. A masculine gender role has been found to be disproportionately associated with problematic attitudes toward sexual assault and sexual assault perpetration.
Research consistently suggests that female athletes tend to rate themselves as more masculine than female non-athletes. Stronger identification with a masculine GRO might also relate to these women being more accepting of rape myths compared to female non-athletes. Research has examined RMA among athletes but has not compared attitudes toward rape myths to non-athletes. Also, a NTW attitude has been examined among athletes but has not been compared to non-athletes in relation to RMA. Finally, aggression has been researched among female athletes in either contact or non-contact sports and non-athletes, but problematic attitudes regarding sexual assault have not been examined comparing females in contact and non-contact sports as well as female athletes and non-athletes.

Summary and Hypotheses

The current study examined GRO, RMA, and the NTW attitude among female athletes and non-athletes. In addition, among female athletes, participation in contact or non-contact sports was assessed. It was hypothesized that female athletes will significantly identify with a masculine GRO and show greater RMA than non-athletes. Among athletes, it was hypothesized that women with a greater NTW, and those who participated in contact sports would identify more strongly with a masculine GRO and show greater RMA than female athletes in non-contact sports.

Method

Participants.

A total of 154 female participants were recruited from Marietta College. The researcher met with the coaches of the female athletic teams to encourage research participation. Participants from the athletic subject pool were told that they must be 18 years old to participate and if they chose to participate in the study, they would have the option to provide their e-mail
Participants were notified that e-mail addresses would be separate from the data. If provided, e-mail addresses went into a drawing for a $25.00 gift card. Participants were advised they could take the survey on their mobile devices or on a computer through the link emailed to them. Surveys were available through Qualtrics.

After administering the questionnaires to the athletic subject pool, additional participants were recruited through an all-campus e-mail that was sent out to every student on campus. Only females 18 years and older were eligible to participate. Participants had the option to enter their e-mail address into a drawing for a $25.00 gift card. Participants were notified that e-mail addresses would be separate from the data. Participants were told they could take the survey on their mobile devices or on a computer through the link emailed to them.

**Demographics.**

Participants were asked to provide their e-mail if they wished to be entered into the drawing. Participants were informed that if they provided an e-mail address, Qualtrics would not associate their e-mail with their data. Additionally, participants were asked to provide their age. Participants were also asked to indicate their current class standing as a freshman, sophomore, junior, or senior.

**Athletic Participation**

Participants were asked to indicate whether or not they were currently involved in Marietta College (MC) athletics. Further, if the participant indicated they were involved in athletics, they were asked what sports they were involved in. Sports were divided into contact and non-contact sports. Contact sports include physical contact with opponents while non-contact sports do not involve physical contact with opponents. For example, in basketball, contact with opponents is likely whereas tennis players do not make contact with opponents.
Intentional contact is not included in the current study’s definition of contact sports, such as rugby, because there are no sports at Marietta College involving intentional contact. Softball, Basketball, and Soccer were categorized as contact sports. Non-contact sports were classified as cross-country, track, rowing, tennis, track, and volleyball. Cheerleading was not included as a sport because it was not classified as a NCAA sport on the MC website. Additionally, participants were asked to indicate how many years they have participated in formal athletics. Formal athletics were defined as Junior Varsity and/or Varsity level sports at the high school and/or college level.

**Bem Sex Role Inventory (BSRI).**

To measure GRO the BSRI was administered. The original BSRI classifies participants into one of four sex role groups including feminine, masculine, androgynous, or undifferentiated. The original BSRI contains 60 items with 20 items assessing feminine traits (affectionate, understanding), 20 items assessing masculine traits (ambitious, independent), and includes 20 filler items. Responses are assessed on a 7-point Likert scale ranging from 1 (never or almost never true) to 7 (always or almost always true). A previous study with 791 graduate and undergraduate participants found reliability coefficients of .85 for masculinity and .81 for femininity. Similar reliability coefficients were found for the short version of the BSRI that eliminated 10 filler questions with reliability coefficients of .82 for masculinity and .89 for femininity (Campbell, Gillaspy, & Thompson, 1997). The short version of the BSRI contains 30 items with 10 items in each category. Choi, Fuqua, and Newman, (2009) report that the short form of the BSRI contains half as many items as the long form, yet has demonstrated better reliability and validity than the original using exploratory and confirmatory factor analyses.
Scores from the BSRI include raw masculine and raw feminine scores. For example, a participant could have a masculine raw score of 4.9 and a feminine raw score of 5.6. Additionally, the BSRI raw scores can be categorized into the four classifications as categorical variables including masculine, feminine, androgynous, and undifferentiated.

**The Illinois Rape Myth Acceptance Scale (IRMA).**

The IRMA assesses the degree to which an individual accepts rape myths. The original IRMA scale contains 22 items and 7 subscales including *She asked for it, It wasn’t really rape, he didn’t mean to, She wanted it, She lied, Rape is a trivial event* and *Rape is deviant event*. The original IRMA was found to be reliable and validated through a study of 598 adults yielding an alpha coefficient of .88 (Payne, Lonsway, & Fitzgerald, 1999). However, McMahon and Farmer (2011) developed a revised version of the IRMA includes updated language and focuses on specifically focuses on victim blaming. The revised IRMA contains 22 items and 4 of the original IRMA’s subscales including *She asked for it, It wasn’t really rape, he didn’t mean to* and *She lied*. Items are recorded on a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). Higher scores indicate a greater rejection of rape myths. A previous study with 957 undergraduate participants using the revised IRMA found an alpha coefficient of .87 (McMahon & Farmer, 2011).

**The Sport Orientation Questionnaire (SOQ) – Need to Win (NTW).**

The SOQ assesses competiveness and a need to win (NTW) attitude or “win orientation.” Competitiveness reflects the desire to participate and strive for success whereas the NTW attitude is characterized as avoiding losing at any cost. Responses are recorded on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). There are 13 items on the competitiveness subscale including items such as “I look forward to competing.” The NTW
subscale contains 6 items measuring the desire to win including “The only time I am satisfied is when I win.” The SOQ has been found to be a reliable measure of attitudes regarding winning and competing (Gill & Deeter, 1988; Wartenberg & McCutcheon).

**Procedure**

All surveys were accessed through a MC campus wide email containing the survey link through Qualtrics. Participants were asked to review the informed consent form. After receiving informed consent, participants were asked to provide their demographic and athletic participation information. Next, participants completed the BSRI, IRMA, and SOQ measures. The BSRI, IRMA, and SOQ were counterbalanced through Qualtrics. Each survey appeared in a random order each time a new participant clicked on the survey link. After finishing the questionnaires, participants were electronically debriefed and thanked for their time.

**Results**

**Participant Data**

A total of 154 female participants were recruited from Marietta College, 100 (64.94%) were non-athletes and 54 (35%) were athletes. A total of 10 participants from the non-athlete condition were removed to achieve more equal sample sizes in each condition. Of the 10 participants excluded, 8 were excluded primarily because they indicated not being currently involved in MC athletics, but indicated the sports they played. The other 2 participants were taken from the bottom of the survey completion list. There were 144 participants included in the final analysis, 90 (62.5%) were non-athletes and 54 (37.5%) were athletes.

The majority of participants were 21 years old (27.9%) and the mean age of the sample was 20.5. Most participants were juniors (36.8%) followed by sophomores (23.6%), seniors (22.2%), and freshman (17.4%). The majority of participating athletes played softball (10.4%)
followed by soccer (6.9%), rowing (4.2%), track, tennis, and basketball (2.8%), basketball (3.9%), volleyball (1.4%) and cross-country/track (1.4%). None of the participants participated in cross-country by itself. Every participant indicating they were in cross-country also participated in track. Thus, 2.4% of the participants were in track, but 1.4% of those participants were also in cross-country. Many participants indicated being involved in athletics at some point during their high school and/or college years. In fact, only 24.7% indicated never playing sports in either high school or college. Many participants indicated playing high school varsity (61.04%) followed by high school junior varsity (42.2%), college varsity (32.5%), and college junior varsity (13.6%). It must be noted that participants had the option to select more than one category. For example, a participant could select all four options if they had been involved in sports from high school junior varsity through college varsity. Most participants were involved in contact sports (18.8%) versus non-contact sports (13.9%).

Analysis of Gender Role Orientation

It was predicted that athletes would associate with a masculine GRO more than non-athletes. Further, those in contact sports would identify with a masculine GRO more than those in non-contact sports. Using an analysis of variance of the GRO masculine raw scores, there was a significant difference between athletes and non-athletes regarding masculine GRO, $F(1,142) = 6.12, p = .02, \eta^2 = .04$. There was not a difference between those in contact and non-contact sports in relation to GRO, $F(2,141) = .66, p = .18, \eta^2 = .02$.

Analysis of Rape Myth Acceptance

It was predicted that non-athletes would be score higher and be less accepting of rape myths than athletes. Using a one-way ANOVA, athletic status significantly differed regarding RMA, $F(1,136) = 9.305, p = .003, \eta^2 = .06$. GRO was not significantly different regarding RMA,
$F(3,136) = .09, p = .96, \eta^2 = .002$. There was not an interaction between GRO and athletic status in relation to RMA, $F(3,136) = .83, p = .48, \eta^2 = .02$. As predicted, non-athletes scored higher on the rape myth acceptance scale ($M = 91.11, SD = 13.42$) meaning they were less accepting of rape myths than athletes ($M = 83.96, SD = 11.81$).

It was hypothesized that those in non-contact sports would be score higher and be less accepting of rape myths than those in contact sports. Using a one-way ANOVA, RMA was significantly different by contact sport status $F(2,141) = 6.60, p = .002, \eta^2 = .09$. As predicted, participants involved in a contact sport ($M = 80.52$) were more accepting of rape myths than those who were in non-contact sports ($M = 88.55$) and those not involved in a sport ($M = 90.61$) (Table 2). A follow-up Sidak post-hoc analysis revealed there was a significant difference between those who played a contact sport and those who did not play a sport regarding RMA ($p = .001$). There was not a significant difference between contact and non-contact sport players ($p = .10$). Additionally, there were not significant differences between non-contact sport players and non-athletes ($p = .88$).

**Analysis of the Need to Win Attitude**

It was hypothesized that athletes would display higher levels of the NTW attitude than non-athletes. Further, it was hypothesized that athletes in contact sports would display higher levels of the NTW attitude than athletes in non-contact sports. A one-way ANOVA revealed that athletic status was significantly different regarding the NTW attitude, $F(1,136) = 20.79, p < .001, \eta^2 = .13$. GRO was not significantly different regarding the NTW attitude, $F(3,136) = 1.60, p = .19, \eta^2 = .03$. There was not an interaction between GRO and athletic status in relation to the NTW attitude, $F(3,136) = .63, p = .60, \eta^2 = .01$. A follow-up Sidak analysis revealed there was a significant difference between those who played contact sports ($M = 11.44, SD = 4.38$) and non-
athletes \((M = 16.29, SD = 5.18)\), \((p < .001)\), which supports the hypothesis that contact sport players would have greater NTW attitudes than non-athletes (Table 2). There was also a significant difference between non-contact athletes \((M = 12.95, SD = 5.27)\) and non-athletes, \((p = .02)\). However, there were not significant differences between contact and non-contact athletes, \((p = .68)\), which does not support the hypothesis that those in a contact sport would have greater NTW attitudes than those in non-contact sports.

The current study hypothesized that the NTW attitude would be predictive of RMA. A linear regression indicated that a NTW attitude significantly predicted rape myth acceptance, \(b = .70, t(142) = 3.50, p = .001, R^2 = .08\).

**Exploratory Analysis**

Although it was not part of the current predictions, an exploratory analysis using a one-way ANOVA revealed that class standing was not significantly different regarding the NTW attitude, \(F(3,140) = 1.54, p = .21, \eta^2 = .03\). However, there was a significant difference between class standing and rape myth acceptance, \(F(3,140) = 5.04, p = .002, \eta^2 = .10\). Seniors were less accepting of rape myths \((M = 96.06, SD = 12.03)\) than juniors \((M = 86.75, SD = 12.63)\), sophomores \((M = 86.41, SD = 13.76)\), and freshman \((M = 84.96, SD = 12.36)\). A Sidak post-hoc test revealed that the freshman were more accepting of rape myths than seniors \((p = .008)\).

**Discussion**

The findings from the current study have important implications for sexual assault prevention and intervention. Prevention methods often use the bystander intervention model (Banyard, Plante, & Moynihan, 2005), which stresses the importance of everybody being a potential bystander and does not target victims or potential perpetrators. The idea is that everyone is responsible for helping victims. The bystander prevention model attempts to foster
empathy, increase knowledge of sexual assault, and to identify ambiguous situations that may lead to sexual assault. Targeting athletes for prevention and intervention seems to be important because they are a peer group with elevated levels of RMA and masculinity. The results of the current study suggest that athletes are more likely to be masculine than non-athletes and that athletes had higher levels of RMA. RMA and problematic attitudes toward sexual assault are barriers to effective bystander intervention. The current study suggests female athletic status is related to RMA. Reducing rape myth acceptance among female athletes may help female athletes foster empathy for victims and have a better understanding of sexual assault. In turn, a better understanding of sexual assault, rape myths, and the role of traditional beliefs among female athletes may also protect female athletes from victimization.

Sexual assault is a serious issue, especially on college campuses. College is an environment with high levels of alcohol consumption, which complicates giving and receiving consent, but also increases the likelihood of sexual assault occurrence in general. Aggressive peer groups have been found to hold problematic attitudes about sexual assault. For example, Murnen and Kohlman’s (2007) meta-analysis of college athletic participation and fraternity membership revealed a strong effect size of sexually aggressive attitudes among male athletes. In general, peer groups are highly important for effective social functioning and overall good health. Athletics serve as a social organization where peer groups and friendships are formed. Research suggests that male athletes exhibit elevated instances of masculine gender role orientation and problematic attitudes toward sexual assault (Murnen, & Kohlman, 2007). Female athletes have also been found to have a masculine gender role. The current study is the first to examine female athletes and non-athletes gender role orientation, NTW attitude, and contact or non-contact sport status in relation to rape myth acceptance.
The BSRI measure of gender role orientation was associated with athletic status (Bem, 1981). The results coincide with previous research suggesting female athletes often associate with a masculine gender role orientation (Miller & Levy, 1996; Krane et al., 2004; Edwards, Gordin, & Henshen, 1984; Spence & Helmreich, 1978). However, the results emphasize the role of contact and non-contact sports participation. Playing a contact sport may increase the likelihood of having problematic attitudes toward sexual assault and accepting rape myths.

Athletes had greater levels of the NTW attitude than non-athletes. There were not vast differences between those in contact sports and those in non-contact sports regarding the NTW attitude, which does not support the hypothesis that those in a contact sport would have greater NTW attitudes than those in non-contact sports. The NTW attitude was predictive of RMA. The findings suggest that a NTW attitude is related to greater acceptance of rape myths and that athletes have a higher prevalence of the NTW attitude. NTW was not related to GRO, which does not support previous predictions. There is clearly a relationship between the NTW and problematic attitudes toward sexual assault. The NTW attitude may be reflective of personal investment and commitment to a sport, the product of life experiences with achieving goals at all costs, or both. Previously, athletic investment has been related to greater levels of RMA (Krane et al., 2004). The NTW might indicate an additional factor to consider when targeting groups for sexual assault prevention and intervention.

Although not initially part of our predictions, we found that class standing was significantly related to RMA. Specifically, freshman class standing was more closely related to RMA. Vonderhaar and Carmody (2015) examined sexual assault victimization, the belief in a just world (that bad things happen to bad people and good things happen to good people), and RMA. Survey data was collected from male and female participants. The researchers assessed
freshman, sophomores, juniors, seniors, graduate students, and included an “other” category. Men, young responders, and those with less education were more likely to support rape myths. Those who held just world beliefs also tended to be more accepting of rape myths. Regarding class standing, freshman and sophomore students scored higher on the RMA scale than juniors and seniors. Therefore, the current study supports previous research regarding class standing and RMA. Younger students in college, such as freshman and sophomores, as well as high-school students may be appropriate groups to target for sexual assault prevention and intervention.

Class standing was not related to having a NTW attitude. This may suggest that the NTW attitude is relatively stable and less likely to change across time. Contrastingly, it may suggest that the NTW attitude is variable and not exclusive to athletes.

Study Limitations and Future Research

The current study was not without limitations. Athletes were targeted for survey completion. However, MC does not have a large pool of athletes. The distribution of athletes and non-athletes data is skewed, with more non-athletes completing the survey.

The BSRI measurement has been a widely used psychological measure of feminine, masculine, androgynous, and undifferentiated characteristics, but has also endured criticism. The underlying theory behind the BSRI posits that gender is experienced as a schema or mental representation. Critics believe the BSRI is fundamentally flawed because it is unclear what the BSRI is measuring. For example, masculinity, femininity, etc. may not be intrinsic mental schemas, but may serve as a perceptual lens through which the world is interpreted rather than masculine and feminine traits. Critics of the BSRI assert that the short form indicates the degree to which individuals describe themselves as having “global” traits such as instrumental, dominant, assertive, expressive dispositions. However, critics portray that it is inappropriate to
label men and women in terms of masculinity and femininity because instrumentality and expressiveness are human traits that do not equate to femininity and masculinity.

Question phrasing may have been an issue in the demographic portion of the survey series. Specifically, one question may have been phrased in a confusing manner. The third question of the demographic portion of the survey asked, “Please indicate if you are currently part of a Marietta College athletic team. Please do not include intramurals.” The very next question asked, “Please indicate what sports you currently play. You may select more than one if necessary.” The latter question was not specific to MC athletics. Therefore, participants might have become confused and indicated sports they played that were not MC sports. In fact, 8 participants indicated they were not currently part of an MC athletic team and then preceded to select sports they “currently played”. This resulted in specifically excluding these participants. However, the exclusion of said participants was not entirely problematic because they were essentially non-athletes and some of the non-athletes data had to be excluded anyways to attempt to equalize sample sizes across conditions.

Participants could have answered the survey in a manner that increased social desirability and decreased the accuracy of their answers. Sexual assault is a sensitive topic as well as a serious issue on college campuses. Therefore, participants may not want to report the occurrence of sexual assault or be reluctant to answer questions about sexual assault accurately. Participants may have answered in a way that appeared politically correct to the researcher. Specific to the current study, participants may have answered questions to reflect political correctness rather than their true feelings about sexual assault and rape myths.

A clearer definition of contact and non-contact sports would be advantageous. The current study defined a contact sport as the potential for physical contact with opponents. Non-
contact sports were conceptualized as lacking the possibility of physical contact with opponents. However, the current definition did not include intent to come into physical contact with opponents. For example, hockey, martial arts, rugby, and lacrosse are sports in which physical contact is intentional. Unfortunately, there are currently no MC sports that involve intentional physical contact with opponents. Conducting a similar study at a larger university to include more sports could be beneficial.

Additionally, future studies could examine actual sexual assault victimization in relation to athletic status, gender role orientation, the NTW attitude, and contact or non-contact sport status. If future studies inquire about current sports, the questions should be explicit and carefully phrased. Including scales to prevent fence sitting, yay saying, or nay saying would be beneficial. Fence sitting refers to selecting the middle option, yay saying is answering yes or agree strongly, and nay saying is answering no or disagree strongly for every question of the survey.

The current study is the first to assess athletic status (including contact and non-contact sports) in relation to the NTW attitude, GRO, and RMA. The results suggest athletes tended to be more masculine, had elevated levels of the NTW attitude, and had elevated levels of RMA. The findings have useful implications for sexual assault prevention and intervention, suggesting such programs could target female athletes and potential problematic attitudes toward sexual assault. It may be important to note that female athletes are not necessarily protected from sexual assault because they are involved in athletics (McMahon, 2007). By targeting athletes, prevention and intervention programs could teach the flaws of rape myths and aid in overcoming barriers necessary for effective bystander intervention.
References


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Appendix A

Bem Sex Role Inventory (BSRI)

According to Mind Garden copyright, only 5 sample items may be used in defense demonstration.

You will find listed a number of personality characteristics. We would like you to use those characteristics to describe yourself, that is, we would like you to indicate, on a scale from 1 to 7, how true of you each of these characteristics is. Please do not leave any characteristic unmarked.

Never or Almost Never true (1), Usually not true (2), Sometimes but infrequently true (3), Occasionally true (4), Often true (5), Usually true (6), Often or almost always true (7)

1. Warm
2. Dominant
3. Tender
4. Moody
5. Assertive
Appendix B

Updated Illinois Rape Myth Acceptance Scale (IRMA)

• Scoring: Scores range from 1 (strongly agree) to 5 (strongly disagree).
• Scores may be totaled for a cumulative score.
• Higher scores indicate greater rejection of rape myths.

Subscale 1: She asked for it
1. If a girl is raped while she is drunk, she is at least somewhat responsible for letting things get out of hand.
2. When girls go to parties wearing slutty clothes, they are asking for trouble.
3. If a girl goes to a room alone with a guy at a party, it is her own fault if she is raped.
4. If a girl acts like a slut, eventually she is going to get into trouble.
5. When girls get raped, it’s often because the way they said “no” was unclear.
6. If a girl initiates kissing or hooking up, she should not be surprised if a guy assumes she wants to have sex.

Subscale 2: He didn’t mean to
7. When guys rape, it is usually because of their strong desire for sex.
8. Guys don’t usually intend to force sex on a girl, but sometimes they get too sexually carried away.
9. Rape happens when a guy’s sex drive goes out of control.
10. If a guy is drunk, he might rape someone unintentionally.
11. It shouldn’t be considered rape if a guy is drunk and didn’t realize what he was doing.
12. If both people are drunk, it can’t be rape.

Subscale 3: It wasn’t really rape
13. If a girl doesn’t physically resist sex—even if protesting verbally—it can’t be considered rape.
14. If a girl doesn’t physically fight back, you can’t really say it was rape.
15. A rape probably doesn’t happen if a girl doesn’t have any bruises or marks.
16. If the accused “rapist” doesn’t have a weapon, you really can’t call it rape.
17. If a girl doesn’t say “no” she can’t claim rape.

Subscale 4: She lied
18. A lot of times, girls who say they were raped agreed to have sex and then regret it.
19. Rape accusations are often used as a way of getting back at guys.
20. A lot of times, girls who say they were raped often led the guy on and then had regrets.
21. A lot of times, girls who claim they were raped have emotional problems.
22. Girls who are caught cheating on their boyfriends sometimes claim it was rape.
Appendix C

Sport Orientation Questionnaire (SOQ)

The following statements describe reactions to sport situations. We want to know how you usually feel about sports and competition. Read each statement and circle the letter that indicates how much you agree or disagree with each statement on the scale: A, B, C, D or E. There are no right or wrong answers; simply answer as you honestly feel. Do not spend too much time on any one statement. Remember; choose the letter that describes how you usually feel about sports and competition.

1. I am a determined competitor.
   Strongly Agree      Slightly Agree      Neither agree nor Disagree      Slightly Agree      Strongly Disagree

2. Winning is important.
   Strongly Agree      Slightly Agree      Neither agree nor Disagree      Slightly Agree      Strongly Disagree

3. I am a competitive person
   Strongly Agree      Slightly Agree      Neither agree nor Disagree      Slightly Agree      Strongly Disagree

4. I set goals for myself when I compete.
   Strongly Agree      Slightly Agree      Neither agree nor Disagree      Slightly Agree      Strongly Disagree

5. I try my hardest to win.
   Strongly Agree      Slightly Agree      Neither agree nor Disagree      Slightly Agree      Strongly Disagree

6. Scoring more points than my opponent is very important to me.
   Strongly Agree      Slightly Agree      Neither agree nor Disagree      Slightly Agree      Strongly Disagree

7. I look forward to competing.
   Strongly Agree      Slightly Agree      Neither agree nor Disagree      Slightly Agree      Strongly Disagree

8. I am most competitive when I try to achieve personal goals.
   Strongly Agree      Slightly Agree      Neither agree nor Disagree      Slightly Agree      Strongly Disagree

9. I enjoy competing against others.
   Strongly Agree      Slightly Agree      Neither agree nor Disagree      Slightly Agree      Strongly Disagree

10. I hate to lose.
    Strongly Agree      Slightly Agree      Neither agree nor Disagree      Slightly Agree      Strongly Disagree

11. I thrive on competition.
    Strongly Agree      Slightly Agree      Neither agree nor Disagree      Slightly Agree      Strongly Disagree

12. I try hardest when I have a specific goal.
    Strongly Agree      Slightly Agree      Neither agree nor Disagree      Slightly Agree      Strongly Disagree
13. My goal is to be the best athlete possible.

14. The only time I am satisfied is when I win.

15. I want to be successful in sports.

16. Performing to the best of my ability is very important to me.

17. I work hard to be successful in sports.

18. Losing upsets me.

19. The best test of my ability is competing against others.

20. Reaching personal performance goals is very important to me.

21. I look forward to the opportunity to test my skills in competition.

22. I have the most fun when I win.

23. I perform my best when I am competing against an opponent.

24. The best way to determine my ability is to set a goal and try to reach it.

25. I want to be the best every time I compete.
Appendix D

Informed Consent Document

**Project Title:** The Influence of Athletic Participation on Attitudes.

**Researcher:** Amanda Reed  **Advising Faculty:** Dr. Barnas

**Study Purpose:** This study is examining attitudes regarding athletic participation and gender role orientation. Questions inquire about attitudes regarding sports, sports participation (if applicable), personality traits, and attitudes regarding sensitive topics including attitudes regarding sexual behavior.

**Length and Content**
The study should take you approximately 1 hour and includes a series of surveys. You must be female to participate. You may not participate in the current study if you are under 18 years old.

**Risks and Benefits of the Study**
The Marietta College Human Subjects Committee has approved the current study. Additionally, the current study is entirely voluntary and you may choose to not participate or to drop out of the study at any time with no consequences.

The only risk to participating in this study is that you will be asked questions that may be upsetting or offensive to you. Furthermore, participants choosing to provide their email will be entered into a drawing for a $25.00 Wal-Mart gift card. Email addresses will be not be associated with the data. Lastly, if at any point you do not wish to continue, simply exit Qualtrics and do not complete the survey.

**Participant Privacy**
The researcher will make every effort to protect your privacy. All data entered into Qualtrics will be password protected. Only the researcher and the faculty advisor will have access to your data. Your name will not be associated with data collected. However, you will have the option to provide your email address for a chance to be entered into a drawing for a $25.00 Wal-Mart gift card. Your email address will not be attached to your data. All data will be destroyed five years after the research completion.

**Participant Agreement**
By signing this form you agree that you have read the above information and that you agree to participate in the research study. For any questions about the study you may contact Amanda Reed, (air001@marietta.edu; (304)-481-1016) or Dr. Barnas. (Barnasm@marietta.edu). Additionally, the Chair of the Human Subjects Committee, Ryan May (ryan.may@marietta.edu; Psychology Department, Mills Hall 401) is available if you have any questions regarding participant rights.

Approved by Marietta College HSC
Protocol 01202016-1
Date Approved 01/20/2016
Date Expires 01/20/2017
Appendix E

Debrief Document

Thank you for participating in my research study!

In this study I, the researcher, was interested in athletic participation, contact or non-contact sport involvement, attitudes toward winning, and gender role orientation’s relationship to attitudes regarding sexual assault. Through this research I hope to better understand whether or not athletics or contact sports are related to rape myths to enhance sexual assault treatment, prevention, and intervention programs.

Thank you again for your participation. I request that you keep the purpose of my research experiment in addition to your experience in the study private. This will ensure the data we collect are not tainted by discussion among students. If you provided an email address, your email address will be entered into the drawing for the $25.00 Wal-Mart gift card.

If you feel it necessary, feel free to contact our counseling center on campus. You may contact the Dr. J. Michael Harding Center For Health & Wellness (CHW) at 740-376-4477 and schedule an appointment.

Again, should you have any questions please do not hesitate to contact Amanda Reed, (air001@marietta.edu; (304)-481-1016), Dr. Barnas (Barnasm@marietta.edu). You may contact the Chair of the Human Subjects Committee, Ryan May (ryan.may@marietta.edu; Psychology Department, Mills Hall 401) for information or questions on participant rights. We request that you keep the purpose of our research experiment in addition to your experience in the study private. This will ensure the data we collect are not contaminated by discussion among students.
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<table>
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<th>Androgynous</th>
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Table 2. Means and Standard Deviations of Sport Status related to RMA and NTW

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<td>$SD$</td>
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<tr>
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<td>8.85</td>
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<tr>
<td>NTW</td>
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<td>4.38</td>
<td>12.95</td>
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Error Bars: 95% CI