PSYCHOPATHY, NARCISSISM, AND THE BIG FIVE:

UNDERSTANDING SEXUAL ASSAULT PERPETRATION AND BYSTANDER

INTERVENTION

A Dissertation

by

ELYSE NICOLE MOWLE

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Chair of Committee,	John F. Edens
Committee Members,	Sherecce A. Fields
	Holly A. Foster
	Rebecca J. Schlegel
Head of Department,	Heather C. Lench

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ABSTRACT

Due to the level of victimization experienced by college students, it is important to understand factors contributing to perpetration of sexual assault, including personality traits and sexually aggressive attitudes. Furthermore, an increased interest in solving the problem of sexual aggression on college campuses has highlighted the importance of identifying effective intervention strategies, such as bystander interventions. The present study expands upon previous work by evaluating how specific psychopathic and narcissistic traits predict sexual assault in college men. Additionally, this research examined personality traits and sexual attitudes associated with bystander intervention behavior. The primary hypotheses were (1) individuals with higher levels of narcissistic and psychopathic traits would be more likely to commit sexually aggressive acts, (2) perpetrators of sexual assault and rape would be lower in Agreeableness and Conscientiousness, (3) belief in rape myths would mediate the relationship between personality traits and sexual assault behavior, and (4) individuals who intervened as bystanders would be lower in psychopathic and narcissistic traits, and endorse fewer rape myth beliefs. Participants ($N = 438$) were male undergraduate students from a psychology department subject pool at a large university in the southwestern United States. A total of 48 participants indicated they had initiated or attempted any non-consensual sexual contact since age 14. Higher scores on narcissistic vulnerability and psychopathic boldness and meanness were associated with greater endorsement of common myths about rape. Higher scores on open-mindedness predicted lower belief in

rape myths. Rape myth beliefs were further examined as a possible mediator of the relationship between personality traits and sexual assault perpetration. The results indicated that latent levels of psychopathy and narcissism did not significantly predict total number of sexual assault perpetrations. Analyses indicated that higher levels of specific narcissistic (entitlement and vulnerability) and psychopathic (boldness and disinhibition) traits increased the odds of sexual assault perpetration. Big Five agreeableness and neuroticism were important predictors of decreased likelihood of committing sexual assault. Regarding bystander behavior, Big Five extraversion and open-mindedness predicted bystander intervention. Bystander variables were unrelated to rape myth beliefs.

DEDICATION

This work is dedicated to my family – my parents, Jan and Tom, and my sister Kat. To Charlie, for all of the comfort and love you provided. And to all survivors of sexual violence.

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Contributors

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1. INTRODUCTION

Between 1995 and 2013, women aged 18 to 24 had the highest rate of sexual assault victimization compared to all other groups, with as many as 1 in 5 college women reporting sexual assault victimization (Krebs et al., 2007). Sexual assault comes with a high cost for both survivors and society at large, including financial costs and barriers to educational attainment. Research estimates that sexual violence costs the US economy upwards of $250,000 per offense (Bolger, 2016). A clear understanding of individual differences in beliefs and attitudes about sexual aggression is needed to intervene more effectively to reduce sexual assault.

A number of factors, such as personality and attitudes about rape, have been proposed as possible contributors to the likelihood of committing sexual assault (Abbey et al., 2001; Berkowitz, 1992; Greendlinger & Byrne, 1987). A number of studies have reported significant positive relationships between specific personality traits, particularly psychopathy and narcissism, and sexually aggressive attitudes and behaviors (Abbey & Jacques-Tiura, 2011; Kosson, Kelly, & White, 1997; Mouilso & Calhoun, 2012b). Furthermore, rape myth acceptance (Bohner, Siebler, & Schmelcher, 2006) has been suggested as one mechanism through which personality traits are associated with assault perpetration and the likelihood of bystander intervention (McMahon, 2010; Mouilso & Calhoun, 2013). However, the mediating effect of belief in rape myths has not been tested empirically.

In an effort to prevent sexual assault, many college campuses now include universal sexual violence prevention education programs for students. Bystander intervention, an approach that attempts to raise the willingness of individuals to intervene before an assault occurs and to provide support and advocacy for victims, has become an increasingly popular prevention approach used by college campuses. However, there is a limited understanding of how personality attributes and beliefs about sexual assault contribute to bystander intervention. To develop effective intervention policies, research must determine how beliefs and personality relate to both perpetration of sexual aggression as well as individual willingness to intervene as a bystander. In the absence of such information, a reduction in the rate of sexual aggression on college campus will remain elusive.

In spite of the well-documented prevalence of sexual victimization on college campuses, there is still a critical need to determine exactly how individual factors contribute to sexually aggressive behavior in this population. My objective in this proposal is to determine how attitudes towards sexual violence and individual differences in personality characteristics contribute to sexually aggressive behavior and bystander intervention willingness. My central hypothesis is that greater acceptance of rape myths and sexually aggressive attitudes will mediate the relationship between psychopathic personality traits and sexually aggressive behavior. Similarly, I hypothesize that the individuals likely to intervene in sexually aggressive situations will report lower acceptance of sexually aggressive attitudes and rape myths. My rationale for this project is that if resources are to be directed at programs emphasizing prevention

and bystander intervention, we must understand the components that facilitate successful efforts. Prevention training could be tailored towards attitudinal change in areas that are found to be particularly predictive of perpetration or non-intervention.

The proposed project is innovative because of the focus on identification of how personality contributes to perpetration and bystander behavior. Furthermore, unlike the majority of studies examining sexual assault perpetration, this project will examine both pathological and normal-range personality traits, allowing the conclusions to apply to a general college population. This project is also innovative in its simultaneous examination of perpetrator and bystander attitudes and behaviors. At the completion of this project, which personality traits are associated with sexually aggressive attitudes will be clearer. It will also be clearer how personality is related to perpetration and intervention. Finally, this project will provide a more complete picture of college student perceptions of sexual behavior.

1.1. Sexual Assault Perpetration on College Campuses

The study of rape victimization originated in the 1970s as a result of the work of criminologists and feminist scholars who focused on bringing attention to female sexual victimization (Fisher & Cullen, 2000). However, the study of rape victimization was limited by a lack of consensus of what behaviors constituted sexual assault and rape. In the 1980s, Koss and colleagues created and refined the Sexual Experiences Survey (SES; Koss & Oros, 1982) to clarify the nature of sexual victimization and to identify crimes not reported to the police. In a national survey of college students (Koss et al., 1987),

responses to the SES indicated that in one year, approximately 10% of women experienced an attempted rape and 6.5% had been raped.

The risk of sexual violence remains highest for women aged 18-24 (Black et al., 2011), with nearly 30% of college women reporting being a victim of attempted or completed sexual assault by the time of graduation (Krebs et al., 2007). The per-offense societal cost of sexual violence is estimated to be almost a quarter of a million dollars, with a cost of $87,000 for survivors (Bolger, 2016). Survivors suffer educational costs including lower grades, skipping classes, and dropping out of school (Bolger, 2016). Alarmingly, about 6% of college men report committing sexual assault, with 4% of those men responsible for an average of 6 rapes each (Lisak & Miller, 2002). In 2007, the American College Health Association (ACHA, 2007) declared sexual assault a major public health concern for colleges and universities and suggested that campuses use prevention strategies to reduce campus violence.

Despite the multitude of research examining factors associated with sexual assault, these numbers have remained mostly unchanged (Senn & Forrest, 2016). One possible explanation for this lack of change in the rate of sexual assault on college campuses is a disconnect between psychological research examining associations between these constructs and research examining actual assault *behavior*. This problem was recently highlighted by Lonsway and colleagues (2009). Evaluation research with rape prevention remains limited by the dearth of studies measuring men's sexual behavior, with research instead focusing on outcomes such as rape supportive attitudes, gender stereotypes, and behavioral intentions (Gidycz et al., 2002; Lonsway et al.,

2009). Notably, the body of research that has examined personality and assault perpetration used early versions of the SES, which has since been revised (Koss et al., 2007). Earlier versions of the SES have been criticized for use of the word "intercourse," ambiguous assessment of consent, heterosexist bias, and a failure to clarify that alcohol-associated rape must involve impairment and inability to give consent. Despite the availability of the revised SES, this measure has not been used in the studies cited in this review. A clearer picture of the relationship between sexual assault and personality may be gained by using the updated, more accurate measure.

Given the prevalence of sexual assault in college student populations, research has focused on identifying the contributors to and predictors of sexual assault (Abbey et al., 2001; Berkowitz, 1992; Fischer, 1992; Greendlinger & Byrne, 1987; Porter et al., 1992). Sexual assault is defined as a range of behaviors including coerced, physically forced, or substance-incapacitated acts of kissing, touching, or sexual penetration (Bureau of Justice Statistics, 2014). A number of factors have been examined as contributors to sexual assault, including alcohol consumption (Abbey, 2002; Abbey et al., 2003), athletic and fraternity participation (Koss & Gaines, 1993), and rape myths (Burt, 1980).

Early studies examined reduction in rape myths as an outcome variable of sexual assault prevention programs (Flores & Hartlaub, 1998). Rape myths are attitudes and beliefs that assign blame to sexual assault victims and may be used to justify rape (Lonsway & Fitzgerald, 1994). A study of university men in Germany tested whether rape myths are related to self-reported rape proclivity (Bohner et al., 2006). Rape

proclivity was measured by presenting students with five acquaintance rape scenarios. After reading the scenarios, participants were asked to indicate how sexually aroused they would be in that situation, if they themselves would have behaved like this, and how much they would have enjoyed behaving that way. The responses to these items were combined to form an index of rape proclivity. Rape myth acceptance and rape proclivity were strongly correlated ($r = .48$, $p < .001$). Furthermore, students in this study were randomly assigned to experimental conditions where they received feedback about supposed fellow students' responses to the rape myth acceptance questionnaire. Participants were told that the other respondents demonstrated low rape myth acceptance or high rape myth acceptance. Another group of participants was not provided with feedback about their supposed peers' rape myth acceptance. Bohner et al. (2006) found that self-reported rape myth acceptance interacted with rape myth acceptance feedback, such that high peer rape acceptance particularly influenced rape proclivity at high levels of self-reported rape myth acceptance. Overall, these studies indicate that rape myth acceptance is an important variable influencing acceptance of and likelihood of committing sexual assault.

At the same time, a body of research emerged examining the relationship between personality traits and sexual assault. The Hierarchical-Mediational Confluence model (HMC; Malamuth, 1986, 2003) is one proposed model for understanding contributors to sexual violence. The HMC model suggests that individual characteristics such as hostility towards women, rape myths, hostile masculinity, attitudes condoning sexual aggression, and personality traits such as psychopathy and narcissism contribute

to an individual's likelihood to commit sexual violence (Abbey & Jacques-Tiura, 2011; Malamuth, 2003; Voller & Long, 2010). Based on this prior literature, I propose to test the personality and attitude aspects of the HMC model in a sample of college men and women, with a focus on both normal-range and pathological (e.g., psychopathic and narcissistic) personality traits.

1.1.1. Sexual Assault Perpetration and Personality Traits

1.1.1.1. Personality

Personality can be defined as an individual's enduring pattern of interpersonal, emotional, attitudinal, and motivational styles (Costa & McCrae, 1992). Personality traits are broad, relatively stable dimensions of individual differences and are the most often experienced states a person experiences across situations and time (Fleeson, 2001). One of the most commonly accepted models of personality is the five-factor model (FFM; Costa & McCrae, 1992; Goldberg, 1993). The "Big Five" traits are Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness.

Neuroticism encompasses the tendency to experience negative affect and includes traits such as anxiety, depression, and hostility. Extraversion is a measure of sociability and warmth and is associated with traits such as assertiveness, excitement-seeking, and positive emotionality. Openness is defined as an individual's openness to ideas and experiences and includes traits such as creativity and aesthetic tendencies. Agreeableness encompasses traits such as altruistic interpersonal tendencies, modesty, compliance, and trust. Finally, Conscientiousness involves traits including planning, organization, need for achievement, and self-discipline (Goldberg, 1993). Research

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demonstrates strong links between the Big Five personality domains and significant life outcomes such as psychopathology, relationship quality, relationship conflict, antisocial behavior, and criminality (for a review, see Ozer & Benet-Martínez, 2006).

1.1.1.2. Personality Traits and Sexual Assault

Despite emphasis in the sexual aggression literature on individual traits contributing to likelihood of perpetration, as well as the widespread acceptance of the FFM, few studies have examined normal-range personality traits and sexual aggression. The majority of the research examining the FFM and sexual assault perpetration has used forensic samples (Dennison, Stough, & Birgden, 2001; Lehne, 2002). Dennison et al. (2001) studied FFM personality traits in a sample of 64 males ($M_{age} = 47$) incarcerated for sexual offenses against children. The sample was grouped according to type of offense: incest within the family, incest in stepfamily, and non-familial offenses. This sample was compared to 33 non-offending men in the community. The offending group scored significantly higher on Neuroticism and lower on Extraversion and Conscientiousness than the comparison group. Lehne (2002) examined a sample of 99 men charged with at least one sexual offense undergoing evaluation or treatment at a sexual disorders clinic. Scores on facets of the FFM were compared to norms provided for the NEO-PI-R (Costa & McCrae, 1992). Mean scores on all facets of Neuroticism were at least half a standard deviation higher in the sample of sexual offenders than scores in the normal population. Finally, 81 men incarcerated for nonsexual and sexual offenders were compared to a community sample of 42 non-offending men (Becerra-García, García-León, Muela-Martínez, & Egan, 2013). The community sample was

significantly higher in Extraversion than the sexual offenders, and both sexual and nonsexual offenders scored higher on Neuroticism than the community sample. Overall, this body of literature has indicated personality differences between forensic samples of sexual offenders and community comparison groups of non-offenders, with offenders scoring higher in Neuroticism and lower in Extraversion.

Other studies examining sexually aggressive behavior in community samples have found relationships between Agreeableness and sexual behavior. A sample of 110 employed men completed a self-report survey measuring Agreeableness, Conscientiousness, and Neuroticism and provided responses to a number of vignettes measuring likelihood to sexual harass (Krings & Facchin, 2009). Men lower in agreeableness who reported low interactional justice (e.g., perceptions of fairness of interpersonal treatment at work) indicated they were more likely to sexually harass. In contrast, men who reported high Agreeableness were less likely to sexually harass. Five-factor personality traits have also been examined in relation to mating strategies among college men (Lewis, Easton, Goetz, & Buss, 2012). In this study, 72 heterosexual male students rated photos of women by indicating how seduceable, deceivable, pressurable, and assaultable she appeared. Among college men both single and currently in committed relationships, low Agreeableness combined with an orientation towards uncommitted sex was associated with greater perceptions of women's sexual exploitability.

A handful of researchers have examined the FFM and sexual behavior in college student samples. Voller and Long (2010) administered the NEO-PI-R (Costa & McCrae,

1992) and an expanded version of the Sexual Experiences Survey (SES; Koss & Gidycz, 1985) to a sample of 521 college men. The SES was scored by placing men in rape, sexual assault, and no perpetration categories. Rape was defined as attempted or completed vaginal or anal intercourse, oral-genital contact, or object penetration either by use of force, threat of force, or in cases where the victim was unable to consent due to drug or alcohol intoxication. In contrast, sexual assault comprised of individuals who had attempted or completed vaginal or anal intercourse, oral-genital contact, or object penetration by use of continual argument and pressure or misuse of authority, as well as individuals who perpetrated fondling through use of force, threat of force, or intoxication. Individuals placed in the sexual assault category had not also committed rape. Nonperpetrators were any men who had not reported any acts of rape or sexual assault. Using this scoring method, approximately 7% of the sample had perpetrated rape and another 6% had perpetrated sexual assault.

Voller and Long (2010) found that rape perpetrators scored lower on Agreeableness, Conscientiousness, and Extraversion than nonperpetrators, and lower on Agreeableness and Conscientiousness than sexual assault perpetrators. Sexual assault perpetrators scored higher on the Depression facet of Neuroticism than nonperpetrarors. However, sexual assault perpetrators did not differ from nonperpetrators on any of the five domains. The authors concluded that sexual assault perpetrators appear more similar to nonperpetrators than to rape perpetrators in terms of personality traits. Another study reported that male college student perpetrators of sexual aggression might be differentiated from convicted offenders by low Conscientiousness (Carvalho & Nobre,

2013). Collectively, this body of research clearly demonstrates a relationship between low Agreeableness, low Extraversion, and sexual offending, with some indications that low Conscientiousness is associated with sexual aggression as well. As discussed in the next section, low Agreeableness and low Conscientiousness are also reflected in measures of psychopathy (Lilienfeld et al., 2015).

 1.1.2. Sexual Assault Perpetration and Psychopathy

1.1.2.1. Psychopathy

Psychopathy is a personality disorder characterized by a combination of behavioral and personality traits, such as deceitfulness, charm, insufficiently motivated antisocial behavior, and dysfunctional emotional responding (Cleckley, 1941). Psychopathic personality is generally defined by affective and interpersonal features such as grandiose sense of self-worth and callousness, as well as behavioral features such as impulsivity and antisocial lifestyle (Hare, 1991, 2003). The most widely researched psychopathy assessment instrument is the Psychopathy Checklist-Revised (PCL-R; Hare, 2003). Scores on the PCL-R have been reliably associated with adverse outcomes for society, with higher-scoring individuals committing particularly violent and instrumental forms of aggression and crime (Hare, 1998; Reidy, Kearns, & DeGue, 2013; Reidy, Shelley-Tremblay, & Lilienfeld, 2011).

Psychopathy is often diagnosed categorically (e.g., "psychopathic" versus "non-psychopathic") through a cutoff score on the PCL-R. However, evidence suggests that psychopathy is composed of a number of underlying dimensions rather than by a single taxon (Edens, Marcus, Lilienfeld, & Poythress, 2006), and a growing body of literature

suggests that psychopathy is an "amalgam of personality traits" (Lilienfeld, et al., 2015, p. 595). In addition to antisocial behavior, affective dysfunctions are considered central to psychopathy by many classic (Cleckley, 1976; Lykken, 1957) and modern (Lilienfeld et al., 2012; Patrick et al., 2009) conceptualizations of the construct. Despite agreement about the relevance of traits such as impulsivity and callousness to the construct, researchers disagree about the inclusion of seemingly adaptive personality traits, such as low anxiety and social potency (Lilienfeld et al., 2012; Miller & Lynam, 2012; Patrick, Venables, & Drislane, 2013). For example, psychopathy as measured by the Psychopathic Personality Inventory (PPI-R; Lilienfeld & Widows, 2005) emphasizes traits such as stress immunity, fearlessness, social boldness, and emotional resilience (together known as "fearless dominance") in addition to impulsivity and antisociality. Additionally, the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) criteria for Antisocial Personality Disorder include a psychopathy specifier that is largely related to PPI-R Fearless Dominance (Anderson, Sellbom, Wygant, Salekin, & Krueger, 2014).

The Triarchic Model of psychopathy (Patrick, Fowles, & Krueger, 2009) was designed to integrate constructs relevant to psychopathy into one descriptive framework. This framework combines the behavioral and interpersonal-affective traits most commonly identified in the PCL-R with personality factors such as those measured in the PPI-R. The model describes three phenotypic components of psychopathy; namely, disinhibition, meanness, and boldness. Disinhibition is characterized by impulse control problems, negative affect, and problems with behavioral restraint, reflecting a general

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proneness to externalizing behavior. Disinhibition is well-represented by Factor 2 of the

PCL-R model (Patrick, Hicks, Krueger, & Lang, 2005). Meanness encompasses traits

such as deficient empathy, callousness, lack of close attachments, and a tendency to

exploit others, and is well-represented by Factor 1 (e.g., affective and interpersonal

items) of the PCL-R (Patrick, Drislane, & Strickland, 2012). Finally, boldness includes

traits such as fearlessness, risk tolerance, social potency, confidence, and quick recovery

from stress.

Although boldness was designed to measure traits similar to PPI-R Fearless

Dominance (Patrick et al., 2009) and is therefore relevant to some measures of

psychopathy, it is only minimally represented in the PCL-R. Factor 1 in the PCL-R

includes items reflecting charm and grandiosity that are moderately correlated with

boldness (Patrick, Hicks, Nichol, & Krueger, 2007). The Triarchic Model and the

relationship of its components to the PCL-R factors are presented in Figure 1. Research

examining Five Factor Model correlates of psychopathy indicates that psychopathy is

composed of lower-order dimensions that can be drawn from normal-range personality

traits. A recent meta-analysis (Lilienfeld, Watts, Smith, Berg, & Latzman, 2015)

examined the associations between psychopathy and the Big Five as well as the Big

Three (e.g., Eysenck & Eysenck, 1975; Tellegen & Waller, 2008). A meta-analysis of

the Psychopathy Checklist-Revised (PCL-R; Hare, 2003) and its variants (referred to as

"PCL instruments") and measures of the Big Five and Big Three identified 30 studies.

Overall, PCL total scores reflected low Agreebleness and low Conscientiousness. PCL

Factor 1 and Factor 2 were characterized by low Agreeableness. However, Factor 1 also

reflected high Extraversion, whereas PCL Factor 2 was additionally characterized by

Neuroticism and low Conscientiousness. In studies using the Big Three, PCL total scores

reflected high Negative Emotionality (NEM) and reversed Constraint. However, PCL

Factor 1 was associated with high Positive Emotionality rather than NEM.
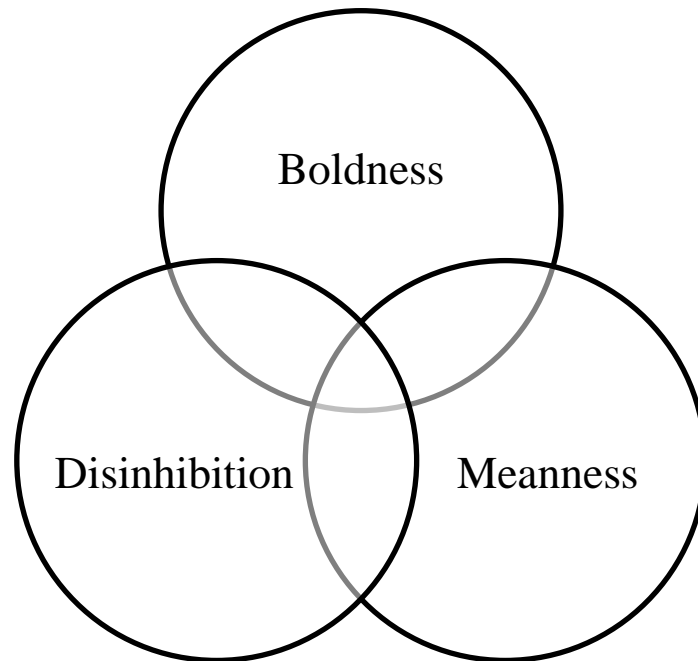
Figure 1. Relationship between components of the Triarchic model (Patrick et al., 2009) and PCL-R Factors (Hare, 2003)

In addition, the authors reviewed the literature about normal-range personality

traits and other measures of psychopathy. They reported that PPI-R Fearless Dominance

(FD) was associated with reversed Neuroticism, high Openness, and high Extraversion,

whereas PPI-R Self-Centered Impulsivity was associated with low Agreeableness,

Neuroticism, and low Conscientiousness (Lilienfeld et al., 2015). In sum, the research

literature consistently reports that psychopathy as a whole is associated with low

Agreeableness and low Conscientiousness. However, some psychopathy subdimensions

(e.g., PCL Factor 1 and PPI-R FD) have positive associations with seemingly adaptive personality traits such as high Extraversion, low Neuroticism, and high Openness.

Furthermore, subdimensions of psychopathy display different – and sometimes opposite – personality correlates. For example, fearlessness may be less associated with violence and impulsivity than other subdimensions (see Miller & Lynam, 2012). Altogether, the research literature indicates that it is important to examine trait components of psychopathy in addition to focusing on total scores of commonly used psychopathy measures. Further evidence that psychopathy should be measured as a combination of interactive traits rather than a single entity comes from studies showing that the constituents of psychopathy interact to predict important outcomes, such as attitudes about sexual aggression (Marcus & Norris, 2013).

1.1.2.2. Psychopathy and Sexual Assault

Early research investigating psychopathy and sexual aggression focused on psychopathic personality traits in incarcerated sex offenders (Brown & Forth, 1997; Serin et al., 1994). In recent years, research has focused on relationships between sexual aggression and psychopathy in college student samples. A commonly referenced early study of psychopathy and sexual aggression in college students identified psychopathic traits as predictors of sexual aggression among college males (Kosson et al., 1997). As part of a larger study investigating narcissism and psychopathic traits, 63 male students completed the Sexual Experiences Survey and were interviewed using questions from the Psychopathy Checklist (Hare, 1991). Unlike the majority of studies using this measure, the SES was scored as a continuous measure of sexual aggression based on

frequency of perpetration (ranging from 0 to 5 or more perpetrations). These frequency scores were further divided into categories based upon the type of behavior (e.g., use of threats, force, argument, or intoxication of victim). Results indicated that PCL Factor 1 scores correlated positively with use of threats and negatively with use of force or arguments. In contrast, PCL Factor 2 scores were only correlated with use of arguments. A series of multiple hierarchical regressions with both factors as independent variables revealed that Factor 2 did not contribute to the prediction of sexual aggression.

Another study examined a number of risk factors associated with sexual assault perpetration, including nonclinical levels of psychopathic traits (Abbey & Jacques-Tiura, 2011). Participants completed the Self-Report Psychopathy Scale-III (SRP-III; William, Paulhus, & Hare, 2007) and computer-assisted self-interviews examining tactics to obtain sex. Men who committed acts qualified as sexual assault (using the same definition used to score the SES) scored higher on SRP-III psychopathy than nonperpetrators. Additionally, Mouilso and Calhoun (2012b) examined the link between narcissism, SRP-III psychopathy, sociosexuality, and sexual aggression in a sample of 314 college men. Perpetration frequency was positively associated with psychopathy and narcissism. However, psychopathy was only related to sexual assault perpetration within this sample; narcissism was significantly associated with rape perpetration but not with sexual assault perpetration.

Furthermore, rape myth acceptance is associated with psychopathy. Mouilso and Calhoun (2013) explored associations between rape myth acceptance, sexual assault perpetration severity, and psychopathy in a sample of 308 unversity men. Students

completed the SRP-III, the Illinois Rape Myth Acceptance scale (IRMA; Payne, Lonsway, & Fitzgerald, 1999), and the SES. The SES was scored using the classification system of non-perpetration, sexual assault, and rape. Although psychopathy was generally associated with rape myth acceptance and perpetration, the Erratic Lifestyle subscale of the SRP-III was not related rape myth acceptance. Sexual assault perpetrators scored higher on Interpersonal Manipulation, Erratic Lifestyle, and Antisocial Behavior, but not on the Callous Affect subscale. Furthermore, scores of rape perpetrators did not differ significantly from sexual assault perpetrators, suggesting that the relationship between psychopathy and sexual assault does not depend on the severity of the assaultive act. Logistic regression analyses indicated that total SRP-III and IRMA scores significantly predicted perpetration status. However, in a model that tested both predictors simultaneously, rape myth acceptance no longer significantly predicted perpetration. Psychopathy remained a significant predictor of perpetration. The researchers proposed that rape myth acceptance may be one mechanism through which psychopathy is associated with assault perpetration (Mouilso & Calhoun, 2013).

Other studies have also reported differences in sexually aggressive attitudes depending on specific psychopathic traits. Marcus and Norris (2013) created a new measure of attitudes towards sexually predatory tactics and tested its association with psychopathy (more details about this measure can be found in the Method section). The measure consists of a series of vignettes that include sexually coercive tactics; however, none of the vignettes involve the use of physical restraint or force. The researchers hypothesized that all three components of the Triarchic model would predict coercive

attitudes. The measure was administered to 170 sexually active college men. The total score on the measure significantly correlated with PPI-R total score, Coldheartness, and Self-Centered Impulsivity, but not with Fearless Dominance. However, FD did correlate significantly with the Manipulative subscale on the measure. Additionally, an interaction between SCI and FD predicted the Severe-Coercive subscale items, indicating that at higher levels of fearlessness, disinhibition was a stronger predictor of positive attitudes towards coercive behaviors. Additionally, only SCI was positively associated with positive attitudes towards more severe and potentially criminal behaviors. In summary, men higher in psychopathic traits rate sexually aggressive behaviors as more acceptable and report they are more likely to enact these behaviors (Marcus & Norris, 2013). In a follow-up study, O'Connell and Marcus (2016) examined the relationship between acceptance of sexually predatory behavior and psychopathy in a larger sample of 452 college men and women. Psychopathy was again measured with the PPI-R. The researchers added 8 vignettes to their measure to capture more severe behaviors. Overall, men reported more positive attitudes towards sexually predatory behavior than women. For men, all three subscales (FD, SCI, and CH) were associated with positive attitudes; for women, only SCI was associated with these attitudes. Additionally, interaction effects indicated that all three factors were better predictors of positive attitudes towards predatory behavior in men than in women (O'Connell & Marcus, 2016).

1.1.3. Sexual Assault Perpetration and Narcissism

1.1.3.1. Narcissism

Although definitions of narcissism vary depending across clinical and social-personality contexts, the construct of narcissism is generally defined as a grandiose sense of self, feelings of superiority, and entitlement (Ackerman et al., 2011; Bosson et al., 2008). Similar to psychopathy, narcissistic personality traits are considered to exist on a continuum from "normal-range" to maladaptive (Foster & Campbell, 2007). High scores on the most commonly used narcissism measure, the Narcissistic Personality Inventory (Raskin & Hall, 1979), are associated with aggressive reactions to self-esteem threat (Bushman & Baumeister, 1998), high self-esteem (Brown, Budzek, & Tamborski, 2009), and dominant interpersonal style (Brown & Zeigler-Hill, 2004).

Researchers have also examined the relationship between narcissism and the five-factor model of personality. An early study reported that narcissism was negatively related to Neuroticism and Agreeableness (Rhodewalt & Morf, 1995). An examination of the 37-item Narcissistic Personality Inventory (NPI; Emmons, 1987) and separate measures of narcissistic grandiosity and entitlement reported that the relationship between the FFM and narcissism depended on the measure of narcissism (Brown et al., 2009). In a sample of 754 participants, narcissistic entitlement was negatively correlated with Agreeableness but was not related to any other five-factor domains. In contrast, narcissistic grandiosity was positively related to Extraversion, Conscientiousness, and Openness, and negatively related to Neuroticism. The NPI total score was related to high Extraversion and Openness as well as low Neuroticism and Agreeableness. However, the

Exploitativeness/Entitlement subscale of the NPI was positively related to Neuroticism. Saulsman & Page (2004) conducted a meta-analysis of studies comparing personality disorders and FFM traits. Narcissistic Personality Disorder (NPD) was positively related to Extraversion and Openness and negatively related to Agreeableness. In studies using clinical samples, NPD was positively related to Neuroticism and negatively related to Conscientiousness; these relationships were not observed in nonclinical samples. Nonclinical NPD was more strongly positively related to Extraversion and negatively related to Agreeableness. Overall, these studies consistently suggest that narcissism reflects high Extraversion and low Agreeableness, but these relationships depend on the sample and measure of narcissism used.

More recently, researchers have focused on the differences between normal and pathological narcissism and the importance of including narcissistic vulnerability in the construct (Pincus & Lukowitsky, 2010). "Normal" narcissists tend to be satisfied, ambitious, and relatively successful, although they experience disagreeable interpersonal relations. In contrast, pathological narcissism is associated with maladaptive reactions to threats to positive self-image (Pincus & Lukowitsky, 2010). As described in the following section, research suggests that vulnerable and grandiose narcissists may differentially endorse acceptance of sexually aggressive behaviors or engage in different coercion tactics (Zeigler-Hill, Enjaian, & Essa, 2013).

1.1.3.2. Narcissism and Sexual Assault

Like psychopathy, narcissism has been investigated as a predictor of sexual aggression (Baumeister et al., 2002; Bushman, Bonacci, van Dijk, & Baumeister, 2003;

Jones & Olderbak, 2014). As explained in the section discussing psychopathy and sexual assault, one study of 314 college men found that narcissism was significantly correlated with rape perpetration but not sexual assault, whereas the opposite pattern was found for psychopathy (Mouilso & Calhoun, 2012b). Bushman et al. (2003) conducted three studies investigating the theory that narcissism is associated with sexual assault due to reactance in response to being denied a sexual encounter, low empathy towards others, and a sense of entitlement. In the first study, narcissism as measured by the NPI was positively correlated with belief in rape myths and negatively correlated with empathy towards rape victims in a sample of 403 college men.

Study 2 examined reactions of 300 college men to films either depicting a scene of consensual affection (without intercourse), a scene depicting rape after consensual affection, and a scene depicting rape only. High and low narcissists were categorized by a median split on the NPI. High narcissists enjoyed the film depicting consensual affection and rape more compared to low narcissists. High narcissists were more sexually aroused by the consensual affection and rape film. However, high and low narcissists did not differ in their enjoyment of the film depicting a rape scene without affection; the entire sample rated their enjoyment of this film quite low.

Finally, in the third study the researchers examined the responses of high and low narcissists to being denied something sexual. A sample of 120 men was read a passage by a female confederate describing a sexual encounter. Participants were randomly assigned to a condition where the woman eagerly read the passage or refused to the passage. Compared to low narcissists, high narcissists were less likely to want to

participate in an experiment with the female confederate again and indicated that she should be paid less money for her participation in the experiment. There were no differences between high and low narcissists in the condition where participants were eagerly read the passage. The researchers concluded that high narcissists became aggressive in response to being denied a form of sexual stimulation.

Another study examined the associations of normal (measured by the NPI) and pathological (measured by the PNI) forms of narcissism with sexual aggression (Zeigler-Hill et al., 2013). A sample of 170 male students completed these measures and the SES. The SES was scored based on severity of sexually aggressive behavior, with 0 indicating only consensual contact, a score of 1 indicating sexually coercive behaviors, a score of 2 corresponding with attempted rape and a score of 3 indicating rape. The only facet of narcissism that was not associated with sexually coercive behavior was pathological grandiosity (as measured by the PNI). The facets with the strongest correlations with sexual aggression were PNI Vulnerability and NPI Exploitativeness/Entitlement (E/E). Results of a simultaneous multiple regression indicated that NPI E/E and PNI Vulnerability were positively associated with sexual aggression, whereas PNI Grandiosity was negatively associated with these behaviors. The researchers concluded that maladaptive or pathological facets of narcissism reflecting feelings of entitlement and willingness to exploit others are associated with sexual aggression, whereas grandiosity is not (Zeigler-Hill et al., 2013). Collectively, this body of information established that there is likely to be a direct relationship between narcissism, belief in rape myths, and sexually aggressive attitudes.

Research investigating both narcissism and psychopathy in sexual aggression has reported mixed results on whether the two constructs uniquely contribute to perpetration. Figueredo, Gladden, Sisco, Patch, and Jones (2015) measured Machiavellianism, psychopathy, and narcissism (together known as the "Dark Triad;" Paulhus & Williams, 2002) and investigated whether these constructs contributed uniquely to sexual coercion using Multisample Structural Equation Modeling (MSEM). A sample of 324 college men and women (about equally represented in the sample) reported frequency of sexually coercive behaviors they had engaged in and self-report measures of narcissism, psychopathy, and Machiavellianism. Results of the MSEM analyses indicated that a single common factor composed of all Dark Triad traits predicted sexual coercion, without any unique contribution from specific personality traits. The results of these analyses did not differ for men and women, indicating that this relationship between the Dark Triad and coercive behavior does not differ by gender.

However, other studies have reported different associations for narcissism and psychopathy (Jones & Olderbak, 2014; Mouilso & Calhoun, 2012b). A sample of 261 men indicated whether they would use coaxing (defined as persistence and insistence on sexual contact) or coercion (direct harm or threats) techniques in response to a series of scenarios depicting potential sexual encounters (Jones & Olderbak, 2014). The participants were recruited through Amazon Turk to complete measures of narcissism (NPI) and psychopathy (SRP). Psychopathy was positively associated with using coaxing and coercion techniques across all scenarios, although correlations were stronger for coercive tactics. Narcissism was only significantly correlated with the use of

coercive strategies. Analyses using MSEM models indicated that psychopathy was uniquely and directly related to coercive tactics in all scenarios. The only unique contribution of narcissism was a small effect of predicting coaxing tactics in a scenario depicting an expensive date. A common "dark personality" factor was not uniquely related to coaxing or coercion; the model that included the dark personality factor indicated that the only significant path was between psychopathy and coercion tactics.

Notably, the results of these two studies may differ due to the gender composition of the samples and the scales used to measure narcissism. Figueredo et al. (2015) measured narcissism using the MMPI Narcissism Scale (South, Oltmanns, and Turkheimer, 2003), whereas Jones and Olderbak (2014) administered the more commonly used NPI. As demonstrated by the literature in the preceding section, the relationship between narcissism, psychopathy, and sexual aggression may differ depending on the operationalization and measure of these traits. Therefore, it is important to continue to further investigate whether narcissism and psychopathy contribute uniquely to sexually aggressive attitudes, tactics, and behaviors. Alternatively, given the normal-range personality research indicating relationships between narcissism, psychopathy, and the Big Five, it is worthwhile to investigate if a trait common to both constructs (such as low Agreeableness) accounts for these similar relationships with sexual aggression.

Only one study to date has simultaneously examined narcissism, psychopathy, and the Five Factor model in a sample of college students (Mouilso & Calhoun, 2012a). A sample of 235 college men completed the SES, NPI, SRP-III, the 17-item NPD

subscale from the Structured Clinical Interview for DSM Disorders-II Personality Questionnaire (SCID-N; First, Gibbon, Spitzer, Williams, & Benjamin, 1997), and the NEO-FFI (Costa & McCrae, 1992). The SES was scored both categorically (e.g. sexual assault, rape) and based on frequency of any sexual assault perpetration. Perpetration was significantly related to both measures of narcissism and with psychopathy. Frequency of perpetration was also negatively associated with Agreeableness and positively associated with Extraversion. Perpetrators of sexual aggression scored lower on Conscientiousness and Agreeableness and higher on narcissism and psychopathy than non-perpetrators. The only difference reported between sexual assault and rape perpetrators was that rape perpetrators scored higher on psychopathy. Five Factor Model variables did not account for additional variance in predicting sexual aggression when narcissism and psychopathy were included in the model; however, both narcissism and psychopathy uniquely contributed to prediction of perpetration after controlling for the Five Factor Model.

These results suggest that contrary to suggestions (e.g., Lynam & Miller, 2015) that psychopathy self-report measures are primarily measures of antagonism/reversed Agreeableness, psychopathy (and narcissism) contribute to predicting sexual aggression even when accounting for a common underlying trait such as Agreeableness. However, this study did not examine individual facets of the Five Factor Model or specific traits of psychopathy and narcissism. Additionally, this study only examined perpetration of sexually aggressive behavior but did not consider differences in attitudes toward sexually aggressive behavior or acceptance of rape myths. Given the evidence that

different aspects of narcissism and psychopathy contribute uniquely to these behaviors and attitudes, and that endorsement of sexually aggressive attitudes and beliefs is related to assault perpetration, it is important to examine the utility of examining specific personality traits in predicting sexually aggressive attitudes and behaviors.

1.1.4. Summary of Sexual Assault Perpetration Literature

The work cited above provides convincing evidence that personality and sexually aggressive attitudes are relevant factors that contribute to sexual aggression. However, although a relationship between rape myth acceptance and personality has been established, and rape myth acceptance is linked to sexual assault perpetration (Aosved & Long, 2006), research has not yet focused on clarifying the nature of the relationship between psychopathy, rape myths, and sexual assault perpetration. Limited research indicates that rape myth acceptance and psychopathy share significant variance in predicting sexual aggression (Mouilso & Calhoun, 2013). Although these researchers described their analysis as an examination of a possible mechanism leading to sexual assault, the researchers tested their hypothesis using logistic regression analyses. This type of analysis does not allow for examination of a possible causal model, with belief in rape myths mediating the relationship between psychopathy and sexual assault. Therefore, although rape myth beliefs have been suggested as a mediator of the relationship between psychopathy and sexual assault perpetration, this relationship has not yet been empirically tested.

To resolve this problem, I propose to examine possible interactions between these personality traits and attitudes that will explicate the underlying relationship

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between them and their shared relationships with sexually aggressive behavior. In conclusion, the body of work reviewed in this section makes clear that there is a relationship between personality traits (particularly psychopathy), sexually aggressive attitudes, belief in rape myths, and sexual assault perpetration. Additionally, the research indicates that sexual assault remains a significant problem on college campuses, despite the multitude of research findings identifying factors contributing to sexual assault. There is a critical need to establish precisely *how* personality and attitudes contribute to perpetration of sexual assault, because this lack of knowledge is hindering the development of effective rape prevention programs.

1.1.5. Hypotheses

Pathological personality traits such as narcissism and psychopathy are associated with sexually aggressive attitudes and predatory behavior. These traits are also associated with endorsement of rape myths. However, the extent to which the relationship between personality traits and sexual aggression is affected by belief in rape myths has not been established. The *objective* of the study proposed in this section will be to define the precise contributing role of individual beliefs and attitudes in the association between personality and sexually aggressive behavior. To achieve this objective, I will test my primary hypothesis that belief in rape myths will mediate the relationship between personality and behavior, as well as the hypotheses listed below.

> *H1:* Individuals with higher levels of narcissistic and psychopathic traits will be more likely to endorse rape myths and acceptance of sexually aggressive behaviors, and will be more likely to commit sexually aggressive acts**.**

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H2: Narcissistic and psychopathic traits will both significantly predict different types of sexually aggressive behavior. Based on results from previous studies (Jones & Olderbak, 2014; Mouilso & Calhoun, 2012b), I hypothesize that narcissism will be associated with coercive tactics and that psychopathy will predict both coercion and coaxing tactics.

H3: Perpetrators of sexual assault and rape will be lower in Agreeableness and Conscientiousness.

H4: The relationship between Big Five traits and sexual assault will no longer be significant after controlling for narcissistic and psychopathic personality traits. Stated differently, in prediction models including narcissism and psychopathy, the Big Five traits will not contribute significant variance to the prediction of sexual assault perpetration.

H5: Specific traits of narcissism and psychopathy, such as fearlessness or vulnerability, will differ in their relations to sexually aggressive attitudes and tactics for obtaining sex. More specifically, measures of narcissistic entitlement (PNI Vulnerability, NPI E/E) will be positively associated with sexual aggression whereas PNI Grandiosity will be negatively associated with sexual aggression. I further predict that psychopathic fearlessness will not be uniquely related to sexual aggression, but that it will contribute to prediction of sexual aggression through a significant interaction with disinhibition (e.g., Marcus & Norris, 2013).

1.2. Bystander Intervention

The prevalence of sexual assault has led colleges and universities in the United States to develop a number of education and prevention programs (Anderson & Whiston, 2005; Brecklin & Forde, 2001). Evaluation of prevention programs increased dramatically in the early 1990s (Hanson & Gidycz, 1993; Schewe & O'Donohue, 1993). Early programs traditionally focused on educating women on how to avoid being victims of assault (Yeater & O'Donohue, 1999). A review of sexual assault prevention literature spanning 1970 to 2002 identified self-defense trainings and educational programs as the most common categories of programming on college campuses (Sochting et al., 2004). Unfortunately, studies of these educational programs indicate that attitude changes typically revert to previous levels, rape supportive attitudes sometimes increase in men, and perhaps most importantly, there were only weak effects on sexual assault incidences (for a description of these studies, see Burn, 2009). In the early 2000s, recommendations for more effective sexual assault prevention programs began to focus on the role of bystanders in preventing assault (Banyard, Plante, & Moynihan,. 2004; Berkowitz, 2002; Schewe, 2002).

Bystanders are individuals who witness crimes or high-risk situations but are not themselves the perpetrator or victim. The study of bystander behavior was prompted by a number of high-profile cases, particularly the famous case of Kitty Genovese, a woman whose murder was witnessed by multiple witnesses who did not intervene or call for help. Bystander intervention models for sexual assault were modeled after the work of Latané and Darley, who suggested a five-step situational model describing the

complexity of the decision to intervene (Latané & Darley, 1968; Latané & Darley, 1970). Bystanders must notice an event, identify it as an emergency, take responsibility for acting, decide how to act, and choose to act (Banyard & Moynihan, 2011). The bystander intervention approach to sexual assault is one that frames sexual violence as a community issue in which all members can intervene before an assault occurs (Banyard et al., 2004). Furthermore, bystander intervention can take multiple forms, including intervening in a high-risk situation, supporting a survivor, or challenging social norms supportive of sexual aggression (Banyard & Moynihan, 2011).

Banyard et al. (2004) provided the first comprehensive description of an application of the bystander approach to sexual violence on college campuses. In order to intervene, bystanders must have awareness of the problem, see themselves as responsible for helping solve a problem, make a commitment to helping, have the skills to intervene, and have successful intervention behaviors modeled by others. The researchers created a three-session program to facilitate bystander behavior. The first session presents examples of intervention behavior and asks for examples from students. The second session works to build empathy for victims, increase knowledge about sexual assault, and presents case studies. The second session includes interactive exercises that model and teach skills about how to be a successful bystander. Finally, the third session presents information about personal safety and resources available on campus. Participants explore potential bystander strategies, participate in more role-play exercises, and practice as a group (Banyard et al., 2004).

Banyard and colleagues developed a number of scales to examine bystander

intentions and behavior that have been used to evaluate bystander intervention programs

(Banyard, 2008). The researchers generated a list of 51 possible bystander behaviors,

such as indicating displeasure about sexist comments of asking a friend who seems upset

if they need help. An exploratory study of conditions under which individuals will

engage in these prosocial behaviors was conducted in a sample of 389 undergraduates.

Participants reported their knowledge and attitudes about sexual violence, rape myth

acceptance, and willingness and likelihood to act in the 51 bystander scenarios.

Extroversion, perceived interpersonal control, and participants' sense of efficacy were

also measured. The most commonly endorsed bystander behavior was "ask a friend who

seems upset if he or she is okay or needs help." The least endorsed behaviors (endorsed

by less than 50% of the sample) included obtaining verbal consent before sex, indicating

displeasure about sexist comments, and intervening when they believe someone has had

too much to drink to ask if they want to be walked home. Greater efficacy, willingness to

help, and greater numbers of actual bystander behaviors were associated with being

female, having taken a class discussing sexual violence previously, greater knowledge

about sexual violence, higher levels of extroversion, and knowing a survivor of sexual

violence (Banyard, 2008).

Bystander intervention programs have become increasingly present on college

campuses. The White House Task Force Report (2014) highlighted bystander

intervention as a "promising practice" and encouraged universities to use it as a

prevention strategy. A number of studies have examined the effectiveness of bystander

intervention programming for sexual assault on college campuses (Banyard et al., 2005; Banyard, Moynihan, & Plante, 2007; Katz & Moore, 2013). Banyard et al. (2007) conducted an experimental evaluation of their bystander program (described in Banyard et al., 2004.) Two versions of the program (one 90-minute session or three 90-minute sessions) were developed to allow comparisons of the effectiveness of different "dosages" of programming. Participants in these groups were compared to a control group of individuals who did not attend a prevention program. Participants returned two months after the intervention to receive a booster session that consisted of small group discussions. Prior to the intervention, the three groups did not differ on rape myth acceptance, bystander attitudes, or bystander efficacy. Participants completed measures of these constructs at the 2-month follow-up and at a later 4- or 12-month follow-up session. The group that attended the three-session program showed greater increases in knowledge about sexual assault, bystander attitudes, and lower rape myth acceptance than the one-session program group. All groups (including the control group) reported increases in bystander behavior at the 2-month follow-up, but the increases were significantly greater in participants who had attended an intervention. At the longer-term follow-up, however, changes in bystander behavior were not significant. Only knowledge about sexual assault and lower rape myth acceptance persisted at the longer follow-up sessions (Banyard et al., 2007).

Another research group evaluated the effectiveness of the Green Dot active bystander program (Coker et al., 2011). The study included 2,504 participants who had participated in a full Green Dot training, had heard a Green Dot speech, or who had not

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received an intervention. Compared to the control group, students who had attended a Green Dot training reported lower endorsement of rape myths. Both forms of intervention led to greater actual bystander behavior, and the number of bystander behaviors reported was greater in the group that received the full program compared to the group who only attended a speech. A meta-analysis evaluating the effectiveness of bystander education programs for sexual assault in college communities was conducted by Katz and Moore (2013). Bystander efficacy, rape-supportive attitudes, bystander intent to help, rape proclivity, rape perpetration, and bystander actual helping behaviors were examined across 12 studies ($N = 2,926$; 1,474 untrained students and 1,452 bystander trained).

Results of the meta-analysis indicated that students who had attended bystander education programs reported greater bystander efficacy, intent to help others, bystander behaviors and less rape myth acceptance and rape proclivity compared to the control participants. However, students who had attended trainings were no less likely to report sexual assault perpetration behaviors compared to controls. Additionally, the effect sizes of different outcomes suggest that bystander education programming may be more effective in changing attitudes than in promoting actual bystander behavior. Effect sizes were moderate for bystander efficacy and intent to help, but smaller for rape myth acceptance, rape proclivity, and bystander behavior (Katz & Moore, 2013). Overall, studies suggest that bystander education programs are effective at helping bystanders to feel capable of intervention and in increasing positive attitudes and willingness to help.

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However, the evidence is more mixed on whether these programs have a lasting effect on actual bystander intervention behaviors (c.f. Banyard et al., 2007; Coker et al., 2007).

In addition the program evaluation studies described above, a handful of studies have examined the correlates of bystander willingness to intervene in sexual violence situations (Banyard & Moynihan, 2011; McMahon, 2010). One study examined the correlates of "actual helping behavior" in addition to bystander attitudes (Banyard & Moynihan, 2011). Correlates of helping behavior included age of participants, rape myth acceptance, decisions about the pros and cons of intervention, and peer norms supporting coercion and intimate partner violence. The researchers also examined whether bystander behaviors could be classified into subtypes based on the bystander's involvement with the victim or the severity of the situation. Participants were recruited from Greek Life, athletic teams, and residence halls.

A factor analysis revealed four subtypes of bystander behavior – party safety, helping friends in distress, confronting individuals using sexist language, and "dealing with sexual violence and intimate partner violence specifically." More bystander behaviors were reported by individuals who were younger, had a greater sense of personal responsibility for intervening in situations of sexual violence, and reported greater efficacy to be an effective bystander. Revealingly, correlates differed for bystander intent to help compared to actual helping behavior. Willingness to intervene was associated with lower rape myth acceptance, lower peer norms supportive of coercion, and a greater sense of efficacy. However, higher peer norms supporting

coercion and greater rape myth acceptance were related to greater numbers of self-reported bystander behaviors (Banyard & Moynihan, 2011).

The results of this study as well as the meta-analysis by Katz and Moore (2003) suggest that bystander behavior and attitudes may not always be negatively associated with rape supportive attitudes and sexual assault perpetration. The relationship between bystander intervention and sexual assault perpetration should be examined further to identify the factors that moderate this relationship. A handful of studies have reported that acceptance of rape myths was negatively related to willingness to intervene (Banyard & Moynihan, 2011; McMahon, 2010). Additionally, one examination of a bystander intervention program reported reduced acceptance of rape myths after completing the program (Banyard et al., 2005).

McMahon (2010) further examined the relationship between bystander attitudes and belief in rape myths. A sample of 2,338 students completed the IRMA and a scale measure bystander attitudes (the researchers did not examine self-reported actual bystander behaviors). Overall, results were skewed towards lower acceptance of rape myths, and mean scores indicated an overall willingness to intervene in most situations. However, increases in rape myth acceptance predicted significant decreases in bystander attitudes. The strongest predictor of decreases in bystander attitudes was the "It Wasn't Really Rape" subscale of the IRMA, which was the scale with the lowest mean score. McMahon (2010) concluded that bystander education programs should include content about rape myths. Other than the few studies cited previously that have examined rape proclivity and rape myth acceptance, little research has examined the relationship

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between attitudes about sexual aggression and actual bystander intervention behavior. However, as highlighted by McMahon (2010), to effectively prepare bystanders to act, we need a better understanding of what factors facilitate and prevent action. Although the research to date confirms the promise of these programs to reduce sexual assault, we know very little about the individuals who are likely to intervene.

To resolve this problem, I propose here to identify relevant associations between personality traits, attitudes and beliefs, and actual bystander behavior. Although personality has only rarely been examined in studies of bystander intervention and sexual assault (but see Banyard, 2008), there is evidence that a number of personality traits are associated with a variety of helping and bystander behaviors. Extraversion (LaBouff et al., 2012; Freis & Gurung, 2013) and Openness (Baumert et al., 2013; Redmond et al., 2014) are associated with helpfulness in bullying and racism scenarios. Agreeableness has also been proposed as a trait related to helping (Graziano et al., 2013). I propose that the individuals likely to intervene in sexually aggressive situations will report lower acceptance of sexually aggressive attitudes and rape myths (consistent with the research of McMahon, 2010), and that bystander intervention will be associated with extraversion, openness, and agreeableness. Due to the mixed results of studies examining the associations between sexual assault perpetration and bystander attitudes and behavior, I will conduct exploratory analyses of the relationships between these factors.

In conclusion, the body of work reviewed in this section makes clear that there is a critical need to establish which factors predict bystander intervention. Without

establishing the precise relationships between these factors, the effectiveness of bystander intervention programs will be limited. The relationship between personality and bystander intervention should be examined in sexual contexts, particularly given the research evidence indicating relationships between personality traits and *perpetration* of sexual aggression.

1.2.1. Hypotheses

Bystander intervention programs are recommended by policymakers and increasingly used on college campuses. Limited but promising research suggests that bystander intervention programs are effective at increasing bystander efficacy and intentions to help, yet the individual factors that support and inhibit bystander behaviors have not yet been established. The *objective* of this study will be to define the precise contributing role of personality traits and individual beliefs in bystander intervention behaviors. To achieve this objective, I will test my hypothesis that the individuals who report they are likely to intervene in sexually aggressive situations will report lower acceptance of sexually aggressive attitudes and rape myths. Additionally, I will test whether personality traits associated with helping behavior in other contexts are also associated with bystander intervention in sexual assault.

H6: Higher levels of narcissism and psychopathy will be associated with lower endorsement of bystander behavior and behavioral intentions to help.

H7: Lower acceptance of sexually aggressive attitudes and lower endorsement of rape myths will be associated with greater endorsement of bystander behavior and behavioral intentions to help.

H8: The FFM personality traits of openness, extraversion, and agreeableness will

be associated with greater endorsement of bystander behavior and behavioral

intentions to help.

2. METHOD

2.1. Participants

Participants were undergraduate students in the Psychology Department Subject Pool at Texas A&M University. The sample was limited to individuals 18 years and older who identified as men. The decision to limit the sample to men was made to reduce the risk of triggering re-victimization among women who may have experienced sexual assault. Furthermore, this research is focused on the factors related to perpetration of sexual assault by men rather than by women, making men the appropriate participant population. Participants were compensated with research credit or extra credit in their undergraduate psychology courses. Students had the option of an alternative assignment instead of participation in a research study.

To achieve adequate power to detect the total, indirect, and direct effects of the mediation analyses, anticipated effect sizes of the relationships between the variables were considered. For effect sizes ranging from 0.3 to 0.5, a range of 345 to 966 participants is recommended (Kenny & Judd, 2014). Sample size requirements for a mediation model suggested a sample size of at least 500 participants (Wolf et al., 2013).

A total of 552 students participated in the study. Of these participants, 51 were removed for completing less than half of the survey. Another 33 participants were removed for indicating that they did not pay attention and responded randomly while completing the survey, and six were removed for stating that they had not answered the survey questions honestly. An additional 23 participants were removed from the sample

for failing attention check questions. Finally, one participant was removed after reporting that they were 17 years old, resulting in a final sample of 438 participants.

Of these 438 participants, 151 failed to report their age. Ages ranged from 18 to 25 ($M = 18.84$, $SD = 1.37$; $n = 287$). The majority of participants reported they were White (60%) or Hispanic/Latino (21.2%). Regarding gender identity, 3 participants indicated they would "prefer not to say" while the remaining participants identified as men. Most participants were in their first year attending university (70.1%). Most participants reported that they were not a member of a men's organization, ROTC, or a Greek letter organization (40.4%), and the majority stated that they were not a part of a university, community, or intramural sports team (50.9%). Most participants identified as heterosexual (91.3%). Lastly, most participants reported that they were not currently in a romantic relationship (70.5%). More detailed information about sample characteristics can be found in Appendix A.

2.2. Measures

2.2.1. Demographics and Related Information

Participants completed a brief demographics questionnaire that provided information about their gender identity, sexual orientation, age, ethnicity, relationship status, year in school, athletic team participation, and participation in organizations such as fraternities, men's organizations, or the Corps of Cadets. Socioeconomic status (SES) was measured using The MacArthur Scale of Subjective Social Status (Adler et al., 1994; Adler & Stewart, 2007). This one-question measure presents participants with an image of a ladder. Participants were asked to place themselves on the ladder relative to

the rest of their community, with the bottom rung representing those worst off in society and the top rung representing the most successful and wealthy members of society.

A number of attention check questions were included between survey measures. For example, participants were asked to "leave this question blank" or "respond to this question with the answer 'strongly disagree'." Participants who did not correctly answer these questions were excluded from the sample for analysis.

Similar to previous studies of bystander intervention (e.g., Banyard et al. 2005), participants were also asked to indicate their personal experience with sexual violence by answering yes or no to the follow questions: a) Have you ever known someone who was the victim of sexual violence, b) Have you personally experienced sexual violence, and c) Have you ever known someone who engaged in unwanted sexual contact with someone who didn't want it. Finally, students were asked to detail their previous participation in bystander intervention programs.

2.2.2. Personality

2.2.2.1. Big Five Inventory-2 (BFI-2)

The BFI-2 (Soto & John, 2016) is a 60-item self-report measure of Big Five personality domains. The domains measured are labeled as Extraversion, Agreeableness, Conscientiousness, Negative Emotionality, and Open-Mindedness. The BFI-2 provides a hierarchical model of personality with 15 facets (4 items per facet) nested within the five personality domains (12 items per domain). The BFI-2 has advantages over the original measure in that it maintains brevity, focus, and clarity while minimizing item redundancy and the influence of response acquiescence. The BFI-2 was scored on a

Likert-type scale of 1 (*disagree strongly*) to 5 (*agree strongly*). In research samples, Cronbach's alpha for the five domains ranges from .83 to .91. In the present study, the five domain scales demonstrated good reliability ($\alpha = .75 - .88$).

2.2.2.2. Triarchic Psychopathy Measure (TriPM)

The TriPM (Patrick, 2010) is a 58-item self-report measure of the Triarchic conceptualization of psychopathy. It is composed of 3 scales intended to measure Boldness (19 items), Meanness (19 items), and Disinhibition (20 items). Using a 4-point scale, participants rate the degree to which the items apply to them (mostly false, false, mostly true, true). In addition to a total psychopathy score, the measure yields three domain scores. Internal consistency reliability estimates range from .77 to .90 in correctional samples, and between .82 and .88 in college student samples (Sellbom & Phillips, 2012). Internal consistency ranged from .81 to .84 in the current study.

A measure of inconsistent responding designed for the TriPM (the Triarchic Assessment of Inconsistent Responding, TAPIR; Mowle et al., 2016) was used to determine whether participants should be excluded for completing the measure randomly or carelessly. 90% of participants had scores equal to or less than 11 on the TAPIR. However, removing participants with TAPIR scores greater than 11 did not meaningfully affect our results[1]. Therefore, the decision was made to include these participants in our analyses.

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[1] Details about these analyses are available from the author.

2.2.2.3 Narcissistic Personality Inventory-13 (NPI-13)

The NPI-13 (Gentile et al., 2013) was developed as a shorter measure of narcissism as measured by the original Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988). The NPI-13 was developed by selecting items with high factor loadings on the leadership/authority, grandiose exhibitionism, and entitlement/exploitativeness factors of the NPI as well as through expert ratings of whether these items represent prototypical narcissism. The NPI-13 is highly correlated with other measures of narcissism and demonstrates similar relationships as other narcissism measures with other personality traits, including big five traits. Use of the shorter measure combats possible respondent fatigue and time constraints. The NPI-13 measures various content of narcissism including self-ascribed authority, self-absorption, entitlement, and superiority. Participants answer items in a forced-choice format that presents a narcissistic and non-narcissistic response. Participants choose the response they feel best represents them. The NPI-13 demonstrates moderate internal consistency ($\alpha = 0.73$), with subscale reliability ranging from .51 to .66 in the original validation sample. In the present study, subscale reliability ranged from .44 to .62 (NPI-13 Total $\alpha = .72$).

2.2.2.4. Pathological Narcissism Inventory

The PNI (Pincus et al., 2009) was created to include aspects of narcissism from clinical, social-personality, and psychiatric research. The PNI is a 52-item self-report questionnaire that measures seven aspects of pathological narcissism spanning both narcissistic grandiosity and vulnerability. Grandiose PNI subscales are associated with vindictive and domineering interpersonal problems, whereas vulnerable PNI subscales

are associated with cold and socially avoidance interpersonal problems. Items are endorsed on a scale of 1 (*not at all like me*) to 6 (*very much like me*). The PNI demonstrates good internal consistency in college students ($\alpha = .95$). In the present study, subscale reliability ranged from .70 to .93.

2.2.3. Attitudes and Beliefs

2.2.3.1. Illinois Rape Myth Acceptance Scale (IRMA)

The IRMA (McMahon & Farmer, 2011), an updated version of the original Illinois Rape Myth Acceptance Scale (Payne et al., 1999), consists of 22 items tapping rape myths grouped into five categories: She Asked For It, It Wasn't Really Rape, He Didn't Mean To, She Lied, and Alcohol. The scale provides a total score and scores for each of the four subscales. The scale demonstrates acceptable reliability (Cronbach's $\alpha = 0.87$) and correlates as expected with measures of traditional sex role stereotypes, hostile attitudes towards women, and acceptance of violence in general. The IRMA is scored on a Likert-type scale of 1 (*strongly disagree*) to 5 (*strongly agree*). Higher IRMA scores indicate greater rape myth acceptance. The IMRA demonstrated strong internal consistency in the present sample ($\alpha = 90$).

2.2.3.2. Attitudes Towards Sexually Predatory Behavior Scale – Revised (ATSPB-R)

The ATSPB-R (O'Connell & Marcus, 2016) consists of 24 vignettes presenting a range of sexually coercive tactics. The gender of the hypothetical perpetrator matches the gender of the participant. Participants are asked to rate the acceptability of each tactic on a scale of 1 (*completely unacceptable*) to 7 (*completely acceptable*), as well as the probability they would engage in each tactic on a scale of 0 to 100. Due to the different

metrics for scoring acceptability and probability ratings, item responses were converted to T-scores before a total score was computed. Therefore, the total score was in the form of a T-score. Tactics range from relatively benign (e.g., lying about a breakup to gain sympathy) to severe (e.g., drugging a woman's drink). In the current study, the scale demonstrated good reliability for questions related to both acceptance ($\alpha = .92$) and probability ($\alpha = .89$).

2.2.4. Sexual Aggression

2.2.4.1. Tactics to Obtain Sex Scale (TOSS)

To measure sexual coaxing (e.g., persistence or making up a story) and coercion (e.g., threatening behaviors), the *TOSS* (Camilleri et al., 2009) was administered. The TOSS is a 35-item questionnaire that provides a total score and scores on two factors, sexual coercion and sexual coaxing behavior. Respondents were asked how they would respond to a hypothetical situation. For each item, likelihood of using a tactic and effectiveness of that tactic were rated on a Likert-type scale of 0 (*definitely not*) to 4 (*definitely*). TOSS total scores were calculated by summing composite scores, which were scored by summing individual responses to likelihood and effectiveness questions. In research samples, internal consistency is high for the TOSS total score, coerce factor, and coax factor, Cronbach's $\alpha = .91, .92$, and $.89$, respectively. Previous studies indicate that psychopathy is more strongly related to the coerce factor than the coax factor (Camilleri et al., 2009; Jones & Olderbak, 2014). In the current sample, internal consistency reliability estimates ranged from .94 to .97.

2.2.4.2. Sexual Experiences Survey Short Form Perpetration (SES-SFP)

The SES-SFP (Koss et al., 2006), a gender-neutral 10-item measure that assesses perpetration of unwanted sexual behaviors, was used to measure sexual assault perpetration. The SES-SFP avoids the use of terms such as "rape" and instead uses behaviorally specific descriptions of sexual acts and tactics (e.g., "I had oral sex with someone or had someone perform oral sex on me without their consent by using force"). The SES-SFP asks participants about the frequency of specific coercive and violent sexual behaviors and is scored categorically by calculating prevalence percentages on the basis of the most serious sexual act committed, regardless of the overall number of affirmative responses to items (Koss et al., 2007). The SES-SFP can also be scored by category prevalence (e.g., attempted coercion, coercion, rape) or by scoring mutually exclusive categories (placing participants into groups such as "non-perpetrator", attempted rape, rape, etc.). In the current study, the SES-SFP was scored in two ways. First, the frequency of total sexually aggressive acts was summed for each participant. Secondly, participants were placed in categories based on their most severe (e.g., rape scored as more severe than sexual assault) self-reported behavior in order to create mutually exclusive groups. The SES-SFP items demonstrated strong internal consistency ($\alpha = .92$).

2.2.5. Bystander Behavior

2.2.5.1. Bystander Intention to Help Scale – Short Form

This measure (Banyard, 2008) consists of 12 items that assess participants' self-reported likelihood of helping by engaging in bystander behaviors specific to sexual

assault. Statements include *"Think through the pros and cons of different ways I might help if I see an instance of sexual violence"* and *"Let a friend I suspect has been sexually assaulted know that I am available for help and support."* Participants reported their likelihood of engaging in these behaviors using a 5 point scale (1 = *not at all likely*, 5 = *extremely likely*). Scores were created by summing responses across the items; higher scores indicate greater likelihood of helping. The scale demonstrated high internal consistency in prior research (Cronbach's α = .85; Banyard & Moynihan, 2011). The scale was highly reliable both for intent to help friends (α = .92) and intent to help strangers (α = .90).

2.2.5.2. Bystander Behavior Scale

The Bystander Behavior Scale (Banyard, 2008) assessed self-reported bystander behaviors participants engaged in during the last two months. The scale consists of 51 items, including the 12 items from the Bystander Intention to Help – Short Form. Participants answered "yes" or "no" to indicate whether they had engaged in that behavior. For the purposes of this project, a "no opportunity to do so" response option was added to differentiate between individuals who chose not to intervene and individuals who had not been in that situation to intervene. A total score was created by summing the number of "yes" responses, resulting in a total score that reflected the number of bystander behaviors a participant endorsed. Additionally, the measure was scored to identify mutually exclusive groups of participants who had participated in any bystander behavior versus not having intervened. In the present study, the scale items were highly reliable (α = .99).

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2.3. Procedure

  Participants were recruited from the psychology department undergraduate subject pool to complete self-report measures on the survey website Qualtrics. Participants were provided with a brief description of the study and asked to provide informed consent. After the informed consent process, participants were presented with the study measures in random order to control for order effects and effects of respondent fatigue. After completing the study, participants were debriefed and provided with research credit. Participants were also provided with contact information for the primary investigator as well as a list of counseling resources and emergency phone numbers, due to the possibly upsetting nature of the questionnaire content. Analyses for Specific Aim 1 were conducted with the same sample as for Specific Aim 2.

2.4. Analytic Approach

2.4.1. Specific Aim #1

  First, data was examined for the need to transform positively or negatively skewed data. To explore the associations between the predictor variables (belief in rape myths, personality traits, sexually aggressive attitudes, and sexual tactics), possible covariates (age, SES), and assault perpetration, Pearson product-moment correlation correlations were calculated. Perpetration was measured through a continuous variable measuring frequency of any assault perpetration. Relative contributions of different personality traits and beliefs to sexual assault perpetration were examined using multiple hierarchical linear regression. For example, to determine the predictive contribution of Big Five personality traits to sexual assault perpetration, a model with psychopathy

entered in the first step and the Big Five traits entered in the second step was tested. Similar analyses were conducted for narcissism, as well as for the contribution of sexually aggressive attitudes rather than Big Five traits.

A series of series of multivariate analyses of variance (MANOVAs) were also used to determine whether assault perpetrators and non-perpetrators differed across specific personality traits. Each MANOVA and regression analysis was conducted a second time with possible covariates (e.g., SES) included in the model to determine if the relationship between personality traits and beliefs and sexual assault was moderated by these variables.

Further analyses for this study were conducted using structural equation modeling. Particularly relevant to this project, structural equation modeling can be used to examine mediation effects among the factors and between the factors and the outcome variable (Gunzler et al., 2013). Mediation considers intermediate variables to explain associations between the independent and outcome variables. More generally, a mediator can be thought of as a carrier in a chain of putatively causal effects. For example, structural equation modeling allows for examination of the possible mediating effect of sexually aggressive attitudes and belief in rape myths on the relationship between personality traits and sexually aggressive behavior.

In this study, a number of hypothesized models were tested. A model with psychopathic boldness, meanness, and disinhibition predicting rape myth acceptance, which in turn predicts sexual assault perpetration, was compared to a model in which rape myth acceptance, boldness, meanness, and disinhibition have a direct relationship

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with perpetration. A path diagram representing these hypothesized models is shown in

Figures 2 and 3. Similar models were examined with narcissism. Statistical tests of

model fit were used to determine whether the hypothesized model is appropriate. Model

fit was assessed using chi-square, root mean square error of approximation (RMSEA;

Steiger, 1990), and the Comparative Fit Index (CFI; Bentler, 1990). Acceptable model

fit is reflected by a non-significant chi-square, a CFI value above .95, and RMSEA

values between .05 and .08 (Kline, 2016). Analyses were conducted in RStudio (RStudio

Team, 2015) using the lavaan package (Rosseel, 2012).
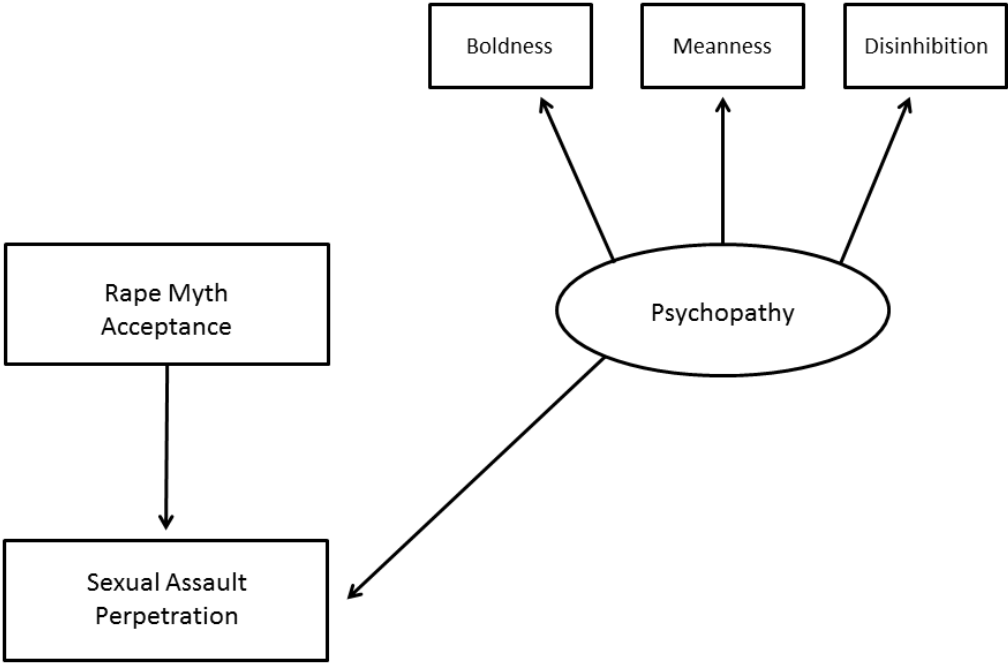
**Figure 2. Path diagram displaying a basic model to predict sexual assault
perpetration**
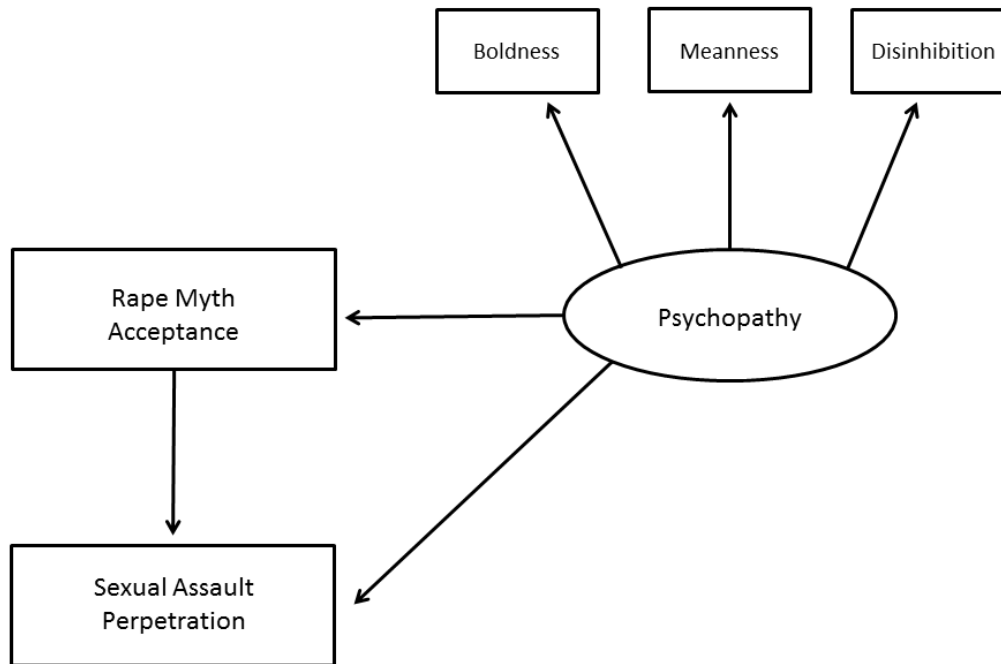
Figure 3. Path diagram displaying a mediation model to predict sexual assault perpetration

2.4.2. Specific Aim #2

Initial exploratory analyses involved examination of Pearson product-moment correlations to investigate relationships between the Big Five, narcissism, psychopathy, belief in rape myths, bystander intentions, and bystander behavior. Relative contributions of different personality traits and beliefs to bystander behavior were examined using multiple hierarchical linear regression. Each regression analysis was conducted a second time with possible covariates (e.g., SES) included in the model to determine if the relationship between personality traits and beliefs and sexual assault is moderated by these variables.

3. RESULTS

3.1. Sample Characteristics

Means and standard deviations for all outcome variables are presented in Table 1. Approximately half the sample ($n = 214$) reported that they have ever known a victim of sexual violence. Eight participants reported that they had personally experienced sexual violence. Approximately 25% of the sample ($n = 120$) stated that they knew a perpetrator of sexual violence. A total of 40 participants indicated that they had initiated or attempted any non-consensual sexual contact (including sexual assault and sexual coercion) since age 14. Two participants reported that they think they may have committed rape.

Table 1. Means and standard deviations of outcome variables.

	M	*SD*
TriPM	64.59	16.15
Boldness	34.00	8.70
Meanness	15.25	7.94
Disinhibition	15.34	7.81
NPI-13	9.23	2.84
Leadership Authority	2.72	1.42
Grandiose Exhibitionism	5.67	1.44
Entitlement/Exploitativeness	0.85	0.99

Table 1 Continued

	M	*SD*
<u>PNI</u>	13.96	4.47
Grandiosity	9.79	2.65
Grandiose Fantasy	23.67	7.20
Exploitativeness	2.60	0.99
Self-Sacrificing Self Enhancement	3.11	0.83
Vulnerability	18.13	7.22
Contingent Self-Esteem	26.39	13.99
Hiding the Self	20.08	6.63
Devaluing	12.28	7.23
Entitlement Rage	13.76	6.88
<u>Extraversion</u>	3.42	0.76
Sociability	3.11	1.13
Assertiveness	3.41	0.86
Energy Level	3.75	0.77
<u>Agreeableness</u>	3.69	0.55
Compassion	3.84	0.68
Respectfulness	4.02	0.65
Trust	3.22	0.76
<u>Conscientiousness</u>	3.54	0.65
Organization	3.59	0.90

Table 1 Continued

	M	*SD*
Productiveness	3.40	0.79
Responsibility	3.62	0.67
Negative Emotionality	2.57	0.77
Anxiety	3.04	0.91
Depression	2.39	0.92
Emotional Volatility	2.27	0.92
Open-Mindedness	3.65	0.67
Intellectual Curiosity	4.01	0.70
Aesthetic Sensitivity	3.26	1.03
Creative Imagination	3.68	0.80
Total Bystander Behaviors	16.23	16.77
Friends	10.49	9.58
Strangers	6.06	7.85
Intent to Help	21.09	4.62
Friends	40.30	7.90
Strangers	2.32	0.96
IRMA	83.21	13.93
ATSPB	49.61	5.30
TOSS	52.79	30.56
Coaxing	43.47	24.16

Table 1 Continued

	M	*SD*
Coercion	9.52	13.43
SES-SFP	0.75	3.81
Past Year Perpetrations	0.31	1.83

Note: *n* ranges from 350 to 438. TriPM = Triarchic Psychopathy Measure; NPI-13 = Narcissistic Personality Inventory 13; PNI = Pathological Narcissism Inventory; IRMA = Illinois Rape Myth Acceptance Scale; ATSPB = Attitudes Towards Sexually Predatory Behavior; TOSS = Tactics to Obtain Sex Scale; SES-SFP = Sexual Experiences Survey – Short Form Perpetration.

Regarding participation in bystander intervention training, 74 participants stated they had participated in campus programming about sex and consent. Most of these participants reported completing trainings that specifically include bystander intervention components, such as Green Dot (Alteristic, 2006), Haven (EverFi, 2018), and Step In Stand Up (Texas A&M University, 2017) (*n* = 52).

3.2. Bivariate Relationships[2]

3.2.1 Personality Traits

Bivariate relationships between Triarchic psychopathy, narcissism, and the Big Five are presented in Tables 2-5. The TriPM was positively correlated with the NPI-13 and its subscales (Table 2). When examining the NPI-13 subscales, the strongest

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[2] Age and socioeconomic status (SES) were examined as possible covariates. Age had a significant negative correlation with TriPM disinhibition ($r = -.12$, $p = .04$). SES was positively correlated with TriPM boldness ($r = .14$, $p = .003$). Given the amount of missing data for age, age was not included as a covariate. Except when noted otherwise, examining SES as a covariate did not alter the results.

relationship was with Leadership Authority, which measures self-ascribed leadership ability, social potency, and dominance.

Table 2. Bivariate relationships (Pearson's *r*) between the NPI-13 and TriPM.

	TriPM	Bold	Mean	Dis	NPI-13	LA	GE
Bold	.60**						
Mean	.80**	.26**					
Dis	.58**	-.14**	.35**				
NPI-13	.52**	.41**	.41**	.19**			
LA	.48**	.47**	.33**	.12*	.80**		
GE	.27**	.22**	.19**	.11*	.74**	.31**	
EE	.40**	.16**	.41**	.23**	.67**	.40**	.22**

Note: **p < .01, *p < .05. TriPM =TriPM total score, Bold = TriPM Boldness, Mean = TriPM Meanness, Dis = TriPM Disinhibition, LA = Leadership/Authority, GE = Grandiose Exhibitionism, EE = Entitlement/Exploitativeness

TriPM total scores were not related to pathological narcissism or Vulnerability as measured by the PNI; however, narcissistic Vulnerability was negatively related to Boldness and positively related to Disinhibition. TriPM total scores were positively correlated with PNI Grandiosity. Psychopathy was most strongly related to PNI subscales measuring entitlement and tendency to exploit others (Table 3).

Table 3. Bivariate relationships (Pearson's *r*) between the PNI and TriPM.

	PNI	Vulnerability	Grandiosity	CSE	Exp	SSSE	HS	GF	D	ER
Vulnerability	.97**									
Grandiosity	.74**	.55**								
CSE	.88**	.91**	.50**							
Exp	.18**	.10*	.34**	-.02						
SSSE	.64**	.58**	.60**	.55**	.17**					
HS	.72**	.71**	.49**	.51**	.17**	.43**				
GF	.72**	.52**	.99**	.49**	.21**	.53**	.47**			
D	.76**	.82**	.35**	.60**	.12**	.41**	.52**	.33**		
ER	.78**	.81**	.44**	.64**	.18**	.46**	.44**	.41**	.65**	
TriPM Total	.08	.05	.14**	-.06	.50**	-.03	.06	.09	.07	.22**
Boldness	-.28**	-.35**	.03	.03	.57**	-.09	-.19**	-.03	-.26**	-.15**
Meanness	.09	.10*	.04	.04	.32**	-.15**	.09	.02	.13**	.23**
Disinhibition	.39**	.40**	.21**	.38**	.06	.20**	.24**	.20**	.30**	.38**

Table 3 Continued

As expected, psychopathy total scores were negatively associated with both Agreeableness and Conscientiousness (Table 4). Additionally, psychopathy was strongly positively related with Extraversion. Boldness was positively associated with Extraversion, Open-mindedness, and Conscientiousness, and negatively related to Negative Emotionality. Meanness was strongly negatively associated with Agreeableness, and had a moderate positive correlation with Extraversion. Lastly, Disinhibition was positively related to Negative Emotionality and strongly negatively related to Conscientiousness.

Table 4. Bivariate relationships (Pearson's *r*) between the BFI-2 and TriPM.

	Extraversion	Agreeableness	Conscientiousness	Negative Emotionality	Open Mindedness
Agreeableness	.03				
Conscientiousness	.21**	.14**			
Negative Emotionality	-.38**	-.27**	-.29**		
Open-Mindedness	.17**	.14**	.12*	-.07	
TriPM	.44**	-.46**	-.18**	-.11*	.02
Boldness	.69**	-.03	.24**	-.55**	.26**
Meanness	.16**	-.63**	-.11*	-.01	-.13**
Disinhibition	-.03	-.28**	-.52**	.41**	-.13**

**p < .01, *p < .05

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At the facet level, Boldness was strongly positively associated with Sociability, Assertiveness, Energy Level, and Productiveness (Table 5). Boldness was strongly negatively correlated with all three Negative Emotionality facets: Anxiety, Depression, and Emotional Volatility. Meanness was moderately positively correlated with Assertiveness and strongly negatively related to all facets of Agreeableness (Compassion, Respectfulness, and Trust). Lastly, Disinhibition was positively associated with all three Negative Emotionality facets, displaying the strongest relationship with Emotional Volatility. Disinhibition was also negatively associated with all Agreeableness and Conscientiousness facets, particularly Responsibility and Productiveness.

Table 5. Bivariate relationships (Pearson's *r*) between BFI-2 facets and TriPM.

	TriPM	Boldness	Meanness	Disinhibition
Sociability (E)	.39**	.54**	.12*	.06
Assertiveness (E)	.46**	.70**	.22**	-.07
Energy Level (E)	.24**	.47**	.04	-.08
Compassion (A)	-.38**	-.09*	-.55**	-.13**
Respectfulness (A)	-.51**	-.08	-.57**	-.38**
Trust (A)	-.22**	.09	-.37**	-.17**
Organization (C)	-.13**	.10*	-.06	-.32**
Productiveness (C)	-.03	.37**	-.03	-.45**
Responsibility (C)	-.30**	.12*	-.20**	-.56**

Table 5 Continued

	TriPM	Boldness	Meanness	Disinhibition
Anxiety (N)	-.19**	-.50**	-.10*	.26**
Depression (N)	-.15**	-.54**	-.02	.31**
Emotional Volatility (N)	.07	-.36**	.09*	.46**
Intellectual Curiosity (O)	.04	.27**	-.09	-.14**
Aesthetic Sensitivity (O)	-.07	.05	-.15**	-.04
Creative Imagination (O)	.10*	.36**	-.05	-.14**

** p < .01, * p < .05

3.2.2. Sexual Aggression

Bivariate relationships between belief in rape myths, sexually aggressive attitudes, and sexually aggressive behavior are presented in Table 6. Higher endorsement of common myths about rape was associated with more sexually aggressive attitudes and likelihood of using coaxing and coercion tactics to obtain sex. However, rape myth beliefs were unrelated to sexual assault perpetration. Positive attitudes towards sexually predatory behavior were associated with a stronger likelihood of using coaxing, and to a lesser extent, coercion tactics to obtain sex. These attitudes were also positively related to sexual assault perpetrations, both total and in the past year. Finally, self-reported likelihood of using coaxing tactics to obtain sex was mildly associated with sexual assault perpetration.

Table 6. Bivariate relationships between sexually aggressive attitudes and behaviors.

	IRMA	ATSPB	TOSS	Coaxing	Coercion	Total Perpetrations
ATSPB	-.25**					
TOSS	-.30**	.30**				
Coaxing	-.25**	.30**	.90**			
Coercion	-.23**	.11*	.64**	.25**		
Total Perpetrations	-.08	.12*	.15*	.13*	.10	
Perpetrations in Past Year	-.06	.13**	.11*	.10	.07	.97**

Note: Pearson's *r.* **$p < .01$, * $p < .05$

Next, relationships between personality traits and sexually aggressive attitudes and behaviors were examined (Table 7). Individuals with higher total psychopathy scores, Boldness, and Meanness were associated with beliefs in common myths about rape, greater acceptance of sexually predatory behaviors, and greater endorsement of coaxing tactics to obtain sex. Disinhibition was unrelated to these beliefs or attitudes. Psychopathy scores were associated with sexual assault perpetration in the past year. Meanness and Disinhibition were positively correlated with sexual assault perpetration. NPI-13 total scores, PNI Vulnerability, and PNI Grandiosity were also associated with belief in rape myths and endorsement of coaxing tactics to obtain sex. NPI-13 scores were moderately correlated with positive attitudes towards sexually predatory behavior.

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Table 7. Bivariate relationships between personality traits and sexual aggression.

	IRMA	ATSPB	TOSS	Coaxing	Coercion	Total Perpetrations	Past Year
TriPM Total	-.21**	.30**	.15**	.16**	.04	.14**	.11*
Boldness	-.14**	.21**	.08	.12*	-.03	.06	.06
Meanness	-.19**	.28**	.10	.11*	.04	.11*	.10
Disinhibition	-.09	.09	.10	.09	.07	.11*	.07
NPI-13	-.16**	.20**	.09	.13*	-.02	.05	.06
PNI Vulnerability	-.16**	-.002	.13*	.12*	.07	.14**	.12*
PNI Grandiosity	-.14**	.05	.12*	.19**	-.06	.08	.05
Extraversion	-.09	.08	-.01	.04	-.09	.02	.02
Agreeableness	.12*	-.21**	-.08	-.06	-.09	-.12*	-.12*
Conscientiousness	-.04	-.09	-.09	-.05	-.12*	-.05	-.04
Negative Emotionality	.001	-.13**	-.02	-.05	.05	.01	.001

Table 7 Continued

	IRMA	ATSPB	TOSS	Coaxing	Coercion	Total Perpetrations	Past Year
Open-Mindedness	.08	.02	-.14**	-.08	-.16**	-.01	-.02

Note: Pearson's *r*. **$p < .01$, *$p < .05$

Associations between the Big Five and sexually aggressive attitudes and behaviors were also calculated (Table 7). Agreeableness was associated with being less likely to endorse common myths about rape and lesser acceptance of sexually predatory behavior. Sexual assault perpetration was negatively related to Agreeableness. Conscientiousness and Open-mindedness were negatively associated with use of coercion tactics to obtain sex, and Negative Emotionality was associated with lower acceptance of sexually predatory behavior.

3.2.3. Bystander Behavior

Tables 8 and 9 display the correlations between bystander intentions and behaviors and personality traits. Intent to help friends and strangers were positively associated with actual self-reported bystander behavior in the previous two months. Contrary to predictions, bystander behavior was positively associated with psychopathic Boldness and Disinhibition. However, Meanness was negatively associated with behavioral intent to intervene as a bystander. NPI-13 narcissism also mildly correlated with bystander intervention behaviors towards both friends and strangers. PNI Grandiosity was also associated with intent to help friends as a bystander.

Table 8. Bivariate relationships between personality traits and bystander behavior.

	Total Bystander Behavior (BB)	BB-Friends	BB-Strangers	Intent to Help (ITH)	ITH-Friends	ITH-Strangers
BB - Friends	.97**					
BB – Strangers	.96**	.87**				
Intent to Help	.19**	.19**	.19**			
ITH – Friends	.19**	.19**	.18**	.99**		
ITH – Strangers	.22**	.19**	.25**	.46**	.41**	
TriPM Total	.20**	.22**	.15**	.002	-.09	.02
Boldness	.21**	.22**	.18**	.13**	.18**	.07
Meanness	.01	.02	-.03	-.17**	-.19**	-.11*
Disinhibition	.16**	.17**	.13*	.06	-.03	.07
NPI-13	.13*	.12*	.10*	-.01	-.02	.001
PNI Vulnerability	.01	.03	-.02	-.05	-.08	-.02
PNI Grandiosity	.05	.07	.02	.10*	.12*	.04

Table 8 Continued

	Total Bystander Behavior (BB)	BB-Friends	BB-Strangers	Intent to Help (ITH)	ITH-Friends	ITH-Strangers
Extraversion	.20**	.19**	.20**	.20**	.23**	.09
Agreeableness	-.03	-.04	.01	.21**	.22**	.15**
Conscientiousness	-.01	-.01	-.01	.12*	.17**	.09
Negative Emotionality	-.01	-.01	-.01	-.05	-.07	.01
Open-Mindedness	. 13**	.13*	.13*	.18**	.18**	.13**

Note: Pearson's *r*. **$p < .01$, *$p < .05$

As hypothesized, Big Five Extraversion and Open-mindedness were positively associated with self-reported bystander intervention behavior. Intent to help friends was associated Extraversion, Agreeableness, and Conscientiousness. Intent to help strangers positively correlated with Conscientiousness and Open-mindedness. At the facet level, bystander behavior was positively associated with Sociability, Assertiveness, Energy Level, Aesthetic Sensitivity, and Creative Imagination. Intention to intervene was related to multiple facets of Extraversion (Assertiveness, Sociability, and Energy Level), Agreeableness (Compassion, Respect, and Trust), and Conscientiousness (Productiveness, Responsibility). Negative Emotionality and its facets were unrelated to behavioral intent to intervene and bystander behavior.

Table 9. Bivariate relationships between BFI-2 facets and bystander behavior.

	Total Bystander Behavior (BB)	BB - Friends	BB - Strangers	Intent to Help (ITH)	ITH - Friends	ITH - Strangers
Sociability (E)	.22**	.21**	.22**	.17**	.19**	.09
Assertiveness (E)	.15**	.15**	.12*	.12*	.17**	.05
Energy Level (E)	.10*	.10	.12*	.20**	.21**	.10*
Compassion (A)	-.04	-.04	-.01	.25**	.24**	.17**
Respectfulness (A)	-.08	-.07	-.07	.14**	.14**	.05
Trust (A)	.04	.01	.09	.12**	.13**	.13**
Organization (C)	-.03	-.04	-.01	.07	.10*	.05
Productiveness (C)	.05	.05	.04	.13**	.17**	.11*
Responsibility (C)	-.04	-.04	-.05	.11*	.15**	.08
Anxiety (N)	-.06	-.06	-.06	-.02	-.02	.01
Depression (N)	.004	.005	-.003	-.05	-.07	.02
Emotional Volatility (N)	.03	.03	.04	-.06	-.08	-.004

Table 9 Continued

	Total Bystander Behavior (BB)	BB - Friends	BB - Strangers	Intent to Help (ITH)	ITH - Friends	ITH - Strangers
Intellectual Curiosity (O)	.09	.09	.08	.14**	.18**	.12*
Aesthetic Sensitivity (O)	.11*	.09	.13*	.10*	.12*	.11*
Creative Imagination (O)	.10*	.10*	.08	.15**	.14**	.07

** $p < .01$, * $p < .05$. E = Extraversion, A = Agreeableness, C = Conscientiousness, N = Negative Emotionality, O = Open-mindedness

Correlations between bystander intervention intent and behavior and sexually aggressive attitudes were also calculated (Table 10). Behavioral intent to intervene was negatively associated with endorsement of sexually predatory behavior and use of coercion tactics to obtain sex. Bystander variables were unrelated to rape myth beliefs and coaxing tactics.

Table 10. Bivariate relationships between bystander behaviors and sexually aggressive beliefs.

	IRMA	ATSPB	TOSS	Coaxing	Coercion
Total Bystander Behavior (BB)	.05	.003	-.07	-.04	-.11
BB – Friends	.03	.01	-.05	-.01	-.11
BB – Strangers	.08	-.02	-.10	-.07	-.07
Intent to Help (ITH)	.09	-.11*	-.03	.03	-.11*
ITH – Friends	.09	-.13**	-.01	.06	-.13*
ITH – Strangers	.12*	-.05	-.08	-.05	-.09

Note: Pearson's *r*. ** *p* < .01, **p* < .05

3.3. Sexual Aggression

3.3.1. Sexual Attitudes and Tactics

3.3.1.1. Belief in Rape Myths

Hypothesis 1 predicted that individuals with higher levels of narcissistic and psychopathic traits would be more likely to endorse rape myths. Multiple hierarchical linear regression analyses[3] were conducted to determine the unique and additive contribution of psychopathic and narcissistic traits to the prediction of IRMA scores (Table 11). Higher IRMA scores indicated less endorsement of common myths about rape.

Table 11. Multiple hierarchical linear regression results for models predicting attitudes towards rape myths.

	F	df	p	R^2	ΔR^2	ΔF	$p \Delta F$
TriPM							
Model 1: TriPM[a]	8.07	3, 429	< .001	.053			
Model 2: BFI[b]	4.01	8, 424	< .001	.07	.017	1.55	.17
NPI-13							
Model 1: NPI-13[c]	4.67	3, 429	.003	.032			
Model 2: TriPM	4.44	6, 426	< .001	.059	.027	4.11	.007
PNI							

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[3] [3] All analyses met the assumptions of independence of residuals, linearity, homoscedasticity, normality, and collinearity necessary to conduct a regression analysis, unless noted otherwise.

Table 11 Continued

	F	*df*	*p*	R^2	ΔR^2	ΔF	*p* ΔF
Model 1: PNI[d]	6.14	2, 430	.002	.028			
Model 2: TriPM	7.35	5, 427	.001	.079	.052	.80	< .001
<u>BFI</u>							
Model 1: BFI	2.88	5, 427	.014	.033			
Model 2: TriPM	4.013	8,424	< .001	.070	.038	5.75	.001

Note: Rape myth acceptance measured by the Illinois Rape Myth Acceptance scale (McMahon & Farmer, 2011). [a]TriPM = Triarchic Psychopathy Measure – Boldness, Meanness, Disinhibition; [b]BFI = Big Five Inventory-2 – Extraversion, Agreeableness, Conscientiousness, Negatively Emotionality, Open-Mindedness; [c]NPI-13 = Narcissistic Personality Inventory – Leadership Authority, Grandiose Egocentricity, Entitlement/Exploitativeness; [d]PNI = Pathological Narcissism Inventory – Vulnerability and Grandiosity.

Triarchic psychopathy significantly predicted rape myth beliefs; higher levels of Boldness (B = -.17, p = .037) and Meanness (B = -.28, p = .003) were associated with greater endorsement of rape myths. An exploratory analysis testing the effect of adding the Big Five to the model was not significant. NPI-13 narcissism was also a significant predictor of rape myth beliefs; however, when Triarchic psychopathy was added in the second model, Meanness was the only significant predictor (B = -.23, p = .021). Pathological narcissism (PNI) was also a significant predictor of rape myth beliefs. In a model with both PNI and TriPM subscales, narcissistic Vulnerability (B = -.39, p = .002), Boldness (B = -.27, p = .003), and Meanness (B = -.23, p = .013) were significant predictors, suggesting that narcissistic vulnerability is not well-captured by the TriPM.

Higher scores on narcissistic vulnerability and psychopathic boldness and meanness were associated with greater endorsement of common myths about rape.

An exploratory analysis was conducted to determine if the BFI-2 could similarly predict IRMA scores, testing the hypothesis that psychopathy can be accurately measured by using only Big Five traits. While the model with the BFI-2 was significant, adding the TriPM to the second model accounted for significant additional variance in the prediction of rape myth beliefs. Open-mindedness ($B = 2.14$, $p = .043$), Boldness ($B = -.29$, $p = .021$), and Meanness ($B = -.26$, $p = .028$) were significant predictors. While higher Boldness and Meanness were associated with greater endorsement of rape myths, higher scores on Open-mindedness predicted lower belief in rape myths.

3.3.1.2. Attitudes Toward Sexually Aggressive Behavior

Hypothesis 5 stated that specific traits of narcissism and psychopathy, such as fearlessness or vulnerability, would differ in their relations to sexually aggressive attitudes. Multiple linear regression analyses were used to examine the relationships of the TriPM, NPI-13, and PNI with attitudes towards sexually predatory behavior (ATSPB-T). Triarchic psychopathy significantly predicted positive attitudes towards sexually predatory behavior, $F (3, 433) = 16.08$, $p < .001$, $R^2 = .10$. Boldness ($B = .09$, $p = .002$) and Meanness ($B = .16$, $p < .001$) were significant predictors of these attitudes. NPI-13 narcissism also significantly predicted sexually aggressive attitudes, $F (3, 432) = 6.39$, $p < .001$, $R^2 = .04$, with Entitlement/Exploitation as the only significant subscale ($B = .64$, $t = 2.29$, $p = .02$). Pathological narcissism (PNI) did not significantly predict these attitudes, $F (2, 433) = .75$, $p = .47$.

I also predicted that an interaction between Boldness and Disinhibition would significantly predict sexually aggressive attitudes. The hierarchical linear regression model with Boldness and Disinhibition at Step 1 was significant, $F (2, 434) = 13.39, p <$ .001, $R^2 = .06$. However, adding the interaction between Boldness and Disinhibition at Step 2 did not contribute significant additional variance to the prediction of sexually aggressive attitudes ($\Delta R^2 = .00, \Delta F = .09, p = .76$).

3.3.1.3. Tactics to Obtain Sex

To test whether tactics to obtain sex differed based on levels of narcissism and psychopathy, additional multiple linear regression analyses were conducted. Prior to analyses, the total score for the Coercion subscale was log transformed due to strong negative skew. Triarchic Boldness significantly predicted coaxing tactics, $F (3, 351) =$ 3.29, $p = .021, B = .32, p = .041, R^2 = .03$. However, when perceived socioeconomic status was included in the model, psychopathy no longer predicted coaxing tactics ($F (4, 349) = 2.26, p = .06$). Psychopathic traits did not predict coercion tactics, $F (3, 241) =$ 2.06, $p = .11$. Narcissism as measured by the NPI-13 did not predict the use of coaxing ($F (3, 350) = 2.36, p = .072$) or coercion ($F (3, 241) = .95, p = .42$) tactics. Pathological Grandiosity as measured by the PNI significantly predicted coaxing tactics, $F (2, 351) =$ 6.33, $p = .002, B = 1.51, p = .008, R^2 = .04$. PNI Vulnerability ($B = .015, p = .01$) and Grandiosity ($B = -.029, p = .03$) significantly predicted the use of coercion tactics to obtain sex, $F (2, 241) = 4.22, p = .02, R^2 = .03$.

3.3.2. Sexual Assault

3.3.2.1. Comparisons of Perpetration Categories

One scoring approach for the SES-SFP is to place participants in mutually exclusive categories based on the severity of their offense (Table 12 shows the number of participants in each category). Multivariate analysis of variance (MANOVA) was used to test predicted differences in personality traits between types of perpetrators (Table 13). For the purposes of this research question, as the primary interest was whether sexual assault perpetrators differed in psychopathy and narcissism, all narcissism subscales (NPI-13 and PNI) were examined in the same analysis.

Table 12. Number of participants in SES-SFP mutually exclusive categories based on severity of behavior ($N = 434$).

Category	n
Non-perpetrator	386
Sexual contact (non-consensual)	14
Attempted coercion	8
Coercion	13
Attempted rape	5
Rape	8

A MANOVA examining differences in TriPM psychopathy between types of perpetrators was conducted first. Box's test of equality of covariance matrices indicated that there was homogeneity of variance-covariances matrices ($p = .39$). There was a

significant difference in Disinhibition scores between the assault categories. Tukey post-hoc tests showed that participants who reported coercion ($M = 20.62$, $SD = 9.23$) had statistically significantly higher mean Disinhibition scores than non-perpetrators ($M = 14.61$, $SD = 7.22$).

Table 13. MANOVA results comparing SES-SFP mutually exclusive categories.

	Wilks' Λ	F (df)	p	partial η^2
TriPM Psychopathy	.94	1.85 (15, 1165)	.025	.021
Disinhibition		4.29 (5, 424)	.001	.048
Narcissism	.90	1.79 (25, 1569)	.01	.021
Grandiose Exhibitionism[a]		2.74 (5, 426)	.019	.031
Vulnerability[b]		3.65 (5, 426)	.003	.041
Big Five	.93	1.22 (25, 1576)	.21	.014
Sexual Attitudes	.94	2.57 (10, 848)	.005	.029
IRMA		4.47 (5,426)	.001	.050

Note: [a]NPI-13; [b]PNI

A second MANOVA was conducted examining whether perpetrator categories differed in narcissistic traits. Before conducting this analysis, NPI-13 Entitlement/Extraversion was square root transformed due to positive skew. Box's test indicated equality of variance-covariance matrices ($p = .021$). There were significant differences in Grandiose Exhibitionism and Vulnerability between perpetrator categories. Tukey's tests revealed that individuals who had attempted rape ($M = 7.60$,

SD = 1.14) were significantly higher in Grandiose Exhibitionism than non-perpetrators

(*M* = 5.66, *SD* = 1.54). Individuals who had attempted rape were also marginally higher

in Grandiose Exhibitionism than individuals who had committed rape (*M* = 5.25, *SD* =

1.04). Finally, individuals who had committed rape (*M* = 26.69, *SD* = 2.52) were higher

in PNI Vulnerability than non-perpetrators (*M* = 17.73, *SD* = 0.36).

I predicted that perpetrators of sexual assault and rape would be lower in

Agreeableness and Conscientiousness. Differences in Big Five traits between perpetrator

categories were examined using MANOVA. The difference between the perpetration

categories on the combined dependent variables was not statistically significant,

indicating that perpetrators of rape and sexual assault did not differ from non-

perpetrators on any of the Big Five traits. MANOVA was also used to investigate

differences in sexual attitudes (ATSPB and IRMA) between perpetrator categories.

There was a significant difference in IRMA between categories. Tukey's tests revealed

that individuals who had attempted rape (*M* = 62.00, *SD* = 17.42) and who had raped (*M*

= 69.50, *SD* = 12.99) someone were significantly higher in rape myth beliefs than non-

perpetrators (*M* = 83.85, *SD* = 13.50). People who had attempted rape were also

marginally higher in rape myth beliefs than those who had nonconsensual sexual contact

(*M* = 82.43, *SD* = 10.05; *p* = .048).

Exploratory analyses examined whether perpetrator categories differed in

bystander intervention outcomes. The difference between the perpetration categories on

total bystander behavior and intent to help was not statistically significant, *F* (10, 770) =

0.74, *p* = .69.

Given the low frequency of certain types of perpetration, a series of one-way ANOVAs were also conducted to compare non-perpetrators to any participants who had attempted or committed sexual assault. Perpetrators had significantly higher TriPM scores ($M = 72.28$, $SD = 15.82$) than non-perpetrators ($M = 63.58$, $SD = 15.72$), $F (1, 432) = 13.03$, $p < .001$. Non-perpetrators had lower Meanness scores ($M = 14.90$, $SD = 7.77$) compared to perpetrators ($M = 17.74$, $SD = 7.95$), $F (1, 432) = 5.67$, $p = .018$, and lower Disinhibition scores ($M = 14.80$, $SD = 7.53$) than perpetrators ($M = 19.77$, $SD = 8.15$), $F (1, 432) = 18.29$, $p < .001$. When examining NPI-13 narcissism, the only significant difference between groups was for Entitled Exploitativeness, $F (1, 432) = 7.10$, $p = .008$. Perpetrators were significantly higher in this trait ($M = 1.21$, $p = 1.34$) than non-perpetrators ($M = 0.81$, $SD = 0.93$). For pathological narcissism, perpetrators had significantly higher score PNI total scores ($M = 15.90$, $SD = 4.08$) than non-perpetrators ($M = 13.72$, $SD = 4.48$), $F (1, 432) = 10.30$, $p = .001$, and had higher Vulnerability scores ($M = 21.44$, $SD = 6.55$) compared to non-perpetrators ($M = 17.73$, $SD = 7.21$), $F (1, 432) = 11.47$, $p = .001$. On the Big Five, the only significant difference between perpetrators and non-perpetrators was on Conscientiousness, $F (1, 432) = 9.09$, $p = .003$. Non-perpetrators were higher in Conscientiousness ($M = 3.57$, $SD = 0.64$) than perpetrators ($M = 3.27$, $SD = 0.64$). Finally, non-perpetrators endorsed fewer beliefs in rape myths ($M = 83.85$, $SD = 13.50$) than perpetrators ($M = 77.23$, $SD = 15.90$), $F (1, 429) = 9.65$, $p = .002$.

3.3.2.2. Prediction of Sexual Behavior

The SES-SFP can also be scored by summing the total perpetration of non-consensual sexual contact between age 14 and start of the prior year, and the number of perpetrations in the past year. The number of perpetrations since age 14 ranged from 0 to 44, while the number of perpetrations in the past year ranged from 0 to 23 (Table 14).

Table 14. Perpetrations of attempted or completed non-consensual sexual contact.

Frequency	Total since age 14	Frequency	Past Year
0	325	0	376
1	6	1	9
2	12	2	7
3	5	3	2
4	6	4	2
5	1	5	1
6	2	7	1
8	2	10	1
9	1	11	1
15	1	12	1
22	1	18	1
25	1	23	1
29	1	-	-
30	1	-	-

Table 14 Continued

Frequency	Total since age 14	Frequency	Past Year
44	1	-	-

The vast majority of participants reported zero perpetrations since age 14 ($n =$ 325) and in the past year ($n = 376$). Other participants reported one perpetration since age 14 ($n = 6$), two perpetrations ($n = 12$), three perpetrations ($n = 5$), and four perpetrations ($n = 6$). One participant reported attempting or completing non-consensual sexual contact 44 times since age 14. As such, the total perpetration variable was extremely positively skewed.

Hypothesis 4 stated that in prediction models including narcissism and psychopathy, Big Five traits would not contribute significant variance to the prediction of sexual assault perpetration. Although multiple hierarchical linear regressions were the proposed analysis to test this hypothesis, the perpetration data did not meet the assumptions of linear regression. For a count score (e.g., number of perpetrations) where "0" is a meaningful value – in this case, no attempt or perpetration of non-consensual sex – the most appropriate analysis is negative binomial regression (Hilbe, 2011). In addition to providing regression coefficients, negative binomial regression models display incident rate ratios, exp(B) (UCLA Institute for Digital Research and Education). For predictors with p-values less than .05, adjusted odds ratios with associated 95% confidence intervals below 1 suggest a decrease in the outcome variable, whereas adjusted odds ratios with confidence intervals greater than 1 indicate an increase in the

predicted outcome. Hierarchical models can be compared by examining fit indices such as the Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), and deviance goodness-of-fit test. Lower values indicate a better fitted model. Table 15 displays the results of negative binomial regression models with psychopathy and the Big Five predicting sexual assault perpetration.

Table 15. Negative binomial regression models for psychopathy and the Big Five predicting sexual assault perpetration (_n_ = 366).

Variable	Model 1				Model 2			
	B	Exp(B)	SE	95% CI Wald χ^2	B	Exp(B)	SE	95% CI Wald χ^2
Boldness	.047	1.05***	.012	1.02-1.07	.063	1.07**	.019	1.03-1.11
Meanness	.035	1.04***	.012	1.01-1.06	-.017	.98	.016	.95-1.02
Disinhibition	.085	1.09**	.013	1.05-1.12	.088	1.09***	.015	1.06-1.12
Extraversion					-.27	.76	.18	.54-1.08
Agreeableness					-1.32	.27**	.27	.16-.46
Conscientiousness					-.17	.84	.16	.62-1.15
Negative Emotionality					-.36	.70*	.17	.50-.97
Open-Mindedness					.13	1.14	.15	.85-1.53

Table 15 Continued

	Model 1	Model 2
Likelihood-ratio χ^2	96.13***	127.31***
Log likelihood	-390.61	-375.01
AIC	789.22	768.03
BIC	804.83	803.15
Deviance	578.91	547.72

Note: *p < .05, ** p < .01, *** p < .001

Comparisons of fit indices showed the model that included the Big Five was a better fit than the model with psychopathy only. The model with psychopathy and the Big Five predicting sexual assault perpetration was statistically significant. Boldness, Disinhibition, Agreeableness, and Negative Emotionality were significant predictors of sexual assault perpetration. For a unit change in Boldness scores, the odds of sexual assault perpetration are expected to change by a factor of 1.07, holding all other variables constant. Similarly, for a unit change in Disinhibition scores, the odds of perpetration are expected to increase by a factor of 1.09, holding all other variables constant. For a unit change in Agreeableness and Negative Emotionality, the odds of sexual assault perpetration are expected to decrease by factors of .27 and .70, respectively. The pattern of results was similar for analyses with the Big Five examined first and psychopathy added in the second model: Boldness and Disinhibition increased the odds of sexual assault, whereas Agreeableness and Negative Emotionality decreased the odds. Including socioeconomic status in the model resulted in similar results, with the exception that negative emotionality was no longer a significant predictor of decreased perpetration ($\exp(B) = .72$, $p = .06$).

The results of negative binomial regression models with narcissism and the Big Five predicting sexual assault perpetration are displayed in Table 16. Similar to the MANOVA analyses, the NPI-13 and PNI subscales were examined simultaneously. Again, the model that included the Big Five was a better fit and was statistically significant. Grandiose Egocentricity, Entitlement/Exploitativeness, Vulnerability, Agreeableness, and Negative Emotionality were significant predictors of sexual assault

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perpetration. For a unit increase in Entitlement/Exploitativeness, the odds of sexual

assault perpetration are expected to increase by a factor of 1.56; for a unit increase in

Vulnerability, the odds are expected to increase by a factor of 1.13, holding all other

variables constant. However, for a unit increase in Grandiose Egocentricity, the odds of

sexual assault perpetration are expected to *decrease* by a factor of .83. Unit changes in

Agreeableness [exp(*B*) = .30] and Negative Emotionality [(exp(*B*) = .61] are similarly

expected to decrease the odds of sexual assault perpetration. The pattern of results was

the same for analyses with the Big Five examined first and the narcissism subscales

added in the second model.

Table 16. Negative binomial regression models for narcissism and the Big Five predicting sexual assault perpetration ($n = 365$).

Variable	Model 1				Model 2			
	B	Exp(B)	SE	95% CI Wald χ^2	B	Exp(B)	SE	95% CI Wald χ^2
LA[a]	.091	1.10	.079	.94-1.28	-.19	.83	.10	.68-1.02
GE[a]	-.20	.82**	.070	.72-.94	-.18	.83*	.077	.72-.97
EE[a]	.48	1.62***	.093	1.35-1.94	.45	1.56***	.10	1.28-1.90
Vulnerability[b]	.11	1.12***	.017	1.08-1.16	.12	1.13***	.021	1.08-1.18
Grandiosity[b]	.012	1.02	.039	.94-1.09	.001	1.00	.048	.91-1.10
Extraversion					.35	1.42	.19	.97-2.08
Agreeableness					-1.19	.30***	.23	.19-.48
Conscientiousness					-.20	.82	.17	.59-1.14
Negative Emotionality					-.50	.61**	.15	.45-.82

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Table 16 Continued

	Model 1				Model 2			
Variable	B	Exp(B)	SE	95% CI	B	Exp(B)	SE	95% CI
				Wald χ^2				Wald χ^2
Open-Mindedness					.055	1.06	.16	.77-1.45
Likelihood-ratio χ^2	133.03***				175.44***			
Log likelihood	-371.59				-350.39			
AIC	755.19				722.77			
BIC	778.59				765.67			
Deviance	540.88				498.46			

Note: *$p < .05$, ** $p < .01$, *** $p < .001$

Finally, structural equation modeling was used to test models with psychopathic traits, narcissistic traits, and belief in rape myths predicting sexual assault perpetration. Rape myth beliefs were further examined as a possible mediator of the relationship between personality traits and sexual assault perpetration.

A model with psychopathic boldness, meanness, and disinhibition predicting rape myth acceptance, which in turn predicts sexual assault perpetration, was compared to a model in which rape myth acceptance, boldness, meanness, and disinhibition have a direct relationship with perpetration. The input data used in these analyses is presented in Table 17.

Table 17. Input Data (Correlations, Standard Deviations) for Structural Equation Model of Psychopathy, Rape Myth Beliefs, and Sexual Assault Perpetration.

Variable	1	2	3	4	5
Psychopathy					
1. Boldness	1.00				
2. Meanness	0.27	1.00			
3. Disinhibition	-0.15	0.34	1.000		
Rape Myth Beliefs					
4. IRMA	-0.13	-0.21	-0.10	1.00	
Sexual Assault					
5. SES-SFP	0.062	0.11	0.11	-0.078	1.00
SD	8.70	7.94	7.81	13.93	3.81

Although the basic model was a better fit for the data than the mediational model, examination of fit indices suggested that neither hypothesized model was a good fit for the data (Table 18). In order to diagnose the misspecification of these models, correlation residuals were examined to identify parameters that might be removed from the models. Correlation residuals suggested the removal of rape myth acceptance from the hypothesized model[4].

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[4] When removing parameters from a model, it is also important to consider whether the change to the model is logical and justifiable based on theory. Removal of rape myth acceptance from the model is consistent with prior analyses that suggested no correlation between rape myth beliefs and sexual assault perpetration.

Table 18. Values of Selected Fit Statistics for Structural Equation Models Predicting Sexual Assault Perpetration.

Model	χ^2	df	p	RMSEA (90% CI)	CFI	SRMR
Psychopathy						
TriPM + IRMA	26.60	5	< .001	0.11 (.07-.15)	0.82	.082
Mediation Model	59.02	5	< .001	0.17 (.13-.21)	0.54	.088
TriPM Model*	8.11	2	.017	0.091 (.033-.16)	0.94	.054
Narcissism						
NPI, PNI, + IRMA						
Mediation Model						
Narcissism Model 1	107.93	9	<.001	0.17 (0.15-0.20)	0.61	0.11
Narcissism Model 2*	8.57	5	0.13	0.044 (0.00-0.093)	0.97	0.034

Note: Narcissism model 1 narcissism latent variable was defined by NPI-13 leadership authority, grandiose egocentricity, entitlement/exploitativeness, and PNI vulnerability and grandiosity. In narcissism model 2, vulnerability was removed from the narcissism latent variable. *Retained final models

Kline (2012) recommends χ^2 p-values greater than .05, RMSEA lower 90%

confidence intervals < 0.05, a CFI greater than 0.90, and standardized root mean square

residual (SRMR) value less than 0.10. The final model (Figure 4) demonstrated

acceptable fit for the data, $\chi^2 = 8.11$, $p = .017$, RMSEA = 0.09, CFI = 0.94. Although the

χ^2 p-value was less than .05, this test is often significant in models with sample sizes

larger than 300. Factor loadings and variances for this model are presented in Table 19.

The results of this model indicate that latent levels of psychopathy, as defined by TriPM

Boldness, Meanness, and Disinhibition, did not significantly predict total number of

sexual assault perpetrations (est = -0.01, $p = 0.82$).
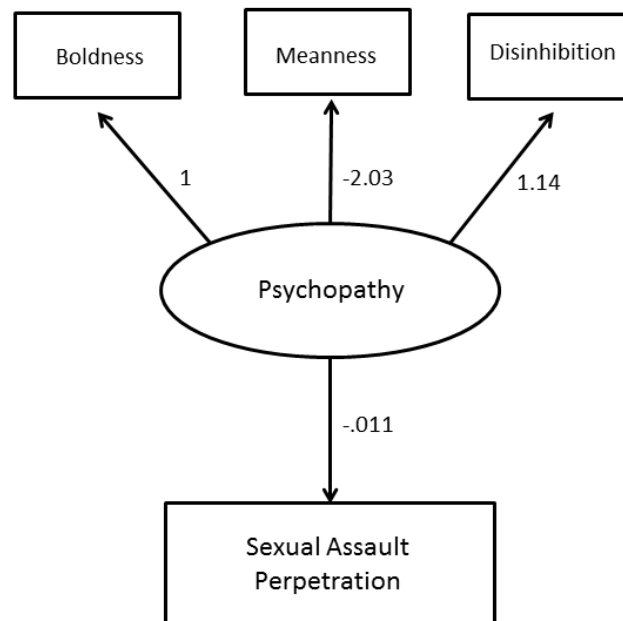
Figure 4. Final SEM model for psychopathy with estimated unstandardized parameters

Table 19. Structural Equation Model estimates for one-factor model of psychopathy and sexual assault perpetration.

Parameter	Unstandardized est	SE	*p* value
	Factor Loadings		
Boldness	1.00	–	–
Meanness	-2.03	0.84	0.02
Disinhibition	1.14	0.31	<.001
	Measurement Error Variances		
Boldness	84.45	7.82	<.001
Meanness	99.65	20.69	<.001
Disinhibition	72.44	8.12	<.001
	Measurement Error Variances		
Boldness	84.45	7.82	<.001
Meanness	99.65	20.69	<.001
Disinhibition	72.44	8.12	<.001
Perpetration Total Score	14.47	1.07	<.001
	Factor Variances		
Psychopathy LV	-8.97	3.79	0.02
	Regressions		
Perpetration Total ~	-0.01	0.05	0.82
Psychopathy LV			

Note: LV = latent variable; est = loading estimate

Another model with NPI Leadership Authority, Grandiose Egocentricity,

Entitlement/Exploitativeness, and PNI Vulnerability and Grandiosity predicting rape

myth acceptance, which in turn predicts sexual assault perpetration, was compared to a

model in which rape myth acceptance and the narcissism subscales have a direct

relationship with sexual assault perpetration. The input data for these analyses is

presented in Table 20. Once again, neither the basic or mediational model adequately fit

the data, and examination of residual correlations suggested the removal of rape myth

acceptance from the model. The model with latent narcissism predicting perpetration

was also not a good fit for the data. Further examination of residual correlations

indicated that PNI Vulnerability might be removed as a parameter.

Table 20. Input Data (Correlations, Standard Deviations) for Structural Equation Model of Narcissism, Rape Myth Beliefs, and Sexual Assault Perpetration.

Variable	1	2	3	4	5	6	7
Narcissism							
1. NPI-13 LA	1.00						
2. NPI-13 GE	0.32	1.00					
3. NPI-13 EE	0.38	0.22	1.00				
4. PNI Vulnerability	0.016	0.019	0.23	1.00			
5. PNI Grandiosity	0.20	0.081	0.20	0.53	1.00		
Rape Myth Beliefs							
6. IRMA	-0.15	-0.096	-0.21	-0.19	-0.15	1.00	

Table 20 Continued

Variable	1	2	3	4	5	6	7
<u>Sexual Assault</u>							
1. SES-SFP	0.036	-0.29	0.12	0.14	0.080	-0.09	1.00
SD	1.42	1.44	0.99	7.22	2.65	13.9	3.82

A final model (Figure 5) with latent levels of narcissism, as indicated by NPI

Leadership Authority, Grandiose Egocentricity, Entitlement/Exploitativeness, and PNI

Grandiosity, demonstrated acceptable fit for the data $\chi^2 = 8.57$, $p = .13$, RMSEA = 0.04,

CFI = 0.97. Parameter estimates for this model are presented in Table 21. The results

indicate that latent levels of narcissism did not significantly predict total number of

sexual assault perpetrations (est = .35, $p = 0.26$).
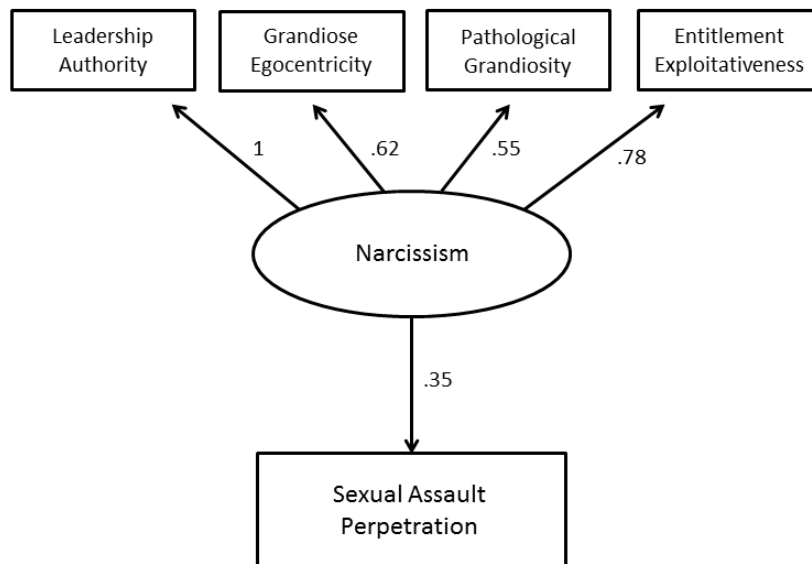
Figure 5. Final SEM model for narcissism with estimated unstandardized parameters

Table 21. Structural Equation Model estimates for one-factor model of narcissism and sexual assault perpetration.

Parameter	Unstandardized est	SE	*p* value
	Factor Loadings		
Leadership Authority	1.00	–	–
Grandiose egocentricity	0.62	0.13	<.001
Entitlement/exploitativeness	0.55	0.10	<.001
PNI grandiosity	0.78	0.20	<.001
	Measurement Error Variances		
Leadership Authority	1.02	0.19	<.001
Grandiose egocentricity	1.69	0.15	<.001
Entitlement/exploitativeness	0.68	0.075	<.001
PNI grandiosity	6.41	0.50	<.001
Perpetration Total	14.43	1.08	<.001
	Factor Variances		
Narcissism LV	0.99	0.22	<.001
	Regressions		
Perpetration Total ~	0.35	0.26	0.17
Narcissism LV			

3.4. Bystander Behavior

3.4.1. Personality Traits

3.4.1.1. Categorical Differences

      MANOVA was used to examine whether individuals who had intervened as a bystander differed from those who had not in psychopathy, narcissism, and the Big Five (Table 22). Before conducting these analyses, participants who indicated they had no opportunity to engage in any bystander behaviors were removed from the sample ($n = 44$). Notably, only 15 participants reported they had the option to intervene as a bystander but chose not to. Interveners and non-interveners differed significantly in psychopathic boldness. Individuals who had intervened as a bystander were significantly higher in Boldness ($M = 34.21$, $SD = 8.43$) than those who had not intervened ($M = 28.59$, $SD = 10.09$). Interveners and non-interveners did not differ in narcissism or the Big Five. The bystander groups also did not differ in self-reported intent to help others as a bystander.

Table 22. MANOVA results comparing bystander behavior categories.

	Wilks' Λ	*F (df)*	*p*	partial η^2
TriPM Psychopathy	.98	3.06 (3, 390)	.028	.023
Boldness		6.31 (1, 392)	.012	.016
Narcissism	.98	1.37 (5, 387)	.23	.017
Big Five	.98	1.63 (5, 387)	.15	.021
Sexual Attitudes	.99	2.78 (2, 338)	.063	.014

Table 22 Continued

	Wilks' Λ	F (df)	p	partial η^2
Intent to Help	.99	2.56 (2, 387)	.079	.013
Sexual Aggression[a]	.99	1.18 (3, 263)	.32	.013

Note: Participants who had intervened as a bystander $n = 379$; participants who had the opportunity to intervene but chose not to $n = 15$. [a]Exploratory analysis comparing bystanders on sexual assault perpetration and TOSS coercion and coaxing scores.

3.4.1.2. Intent to Help

Multiple linear regression results for personality traits predicting self-reported intent to help are displayed in Table 23. Triarchic psychopathy significantly predicted intent to help. Boldness ($B = .12$, p < .001), Meanness ($B = -.17$, $p < .001$), and Disinhibition ($B = .10$, $p = .002$) were all significant predictors. Meanness was associated with lower intent to help others, whereas Disinhibition and Boldness predicted greater intent to help.

Table 23. Personality traits predicting intent to help others and total bystander behavior.

	F	df	p	R^2
Intent to Help				
TriPM	12.81	3, 433	< .001	.082
NPI-13	2.12	3, 433	.098	.014
PNI	5.34	2, 432	.005	.024
BFI	10.05	5, 430	< .001	.12

Table 23 Continued

	F	df	p	R^2
Total Bystander Behavior				
TriPM	16.81	3, 390	< .001	.12
NPI-13	4.10	3, 390	.007	.031
PNI	1.20	2, 390	.30	.006
BFI	5.96	5, 387	< .001	.072

Note: TriPM = Triarchic Psychopathy Measure – Boldness, Meanness, Disinhibition; BFI = Big Five Inventory-2 – Extraversion, Agreeableness, Conscientiousness, Negatively Emotionality, Open-Mindedness; NPI-13 = Narcissistic Personality Inventory – Leadership Authority, Grandiose Egocentricity, Entitlement/ Exploitativeness; PNI = Pathological Narcissism Inventory – Vulnerability and Grandiosity.

NPI-13 narcissism was not a significant predictor of intent to help. However, PNI narcissism significantly predicted intent to help as a bystander. Grandiosity (B = .31, p = .002) predicted greater intent to help and Vulnerability (B = -.09, p = .011) predicted lower intention. The Big Five also significantly predicted intent to help. Extraversion (B = 1.20, p < .001), Agreeableness (B = 1.78, p < .001), Negative Emotionality (B = .66, p = .035), and Open-Mindedness (B = .70, p = .03) predicted greater intent.

3.4.1.3. Total Bystander Behaviors

Prediction of total bystander behaviors was also examined using multiple linear regression analyses (Table 24). Prior to these analyses, total bystander behavior was square root transformed due to negative skew; most participants reported a large amount

of bystander intervention. Again, psychopathy predicted bystander behavior; Boldness ($B = .07, p < .001$) and Disinhibition ($B = .06, p < .001$) predicted more bystander behavior while Meanness ($B = -.03, p = .02$) predicted fewer bystander interventions. NPI-13 Leadership Authority ($B = .17, p = .018$) also predicted more bystander behavior. PNI narcissism did not significantly predict bystander behavior. Big Five Extraversion ($B = .59, p < .001$) and Open-mindedness ($B = .29, p = .036$) predicted more bystander intervention behavior.

Table 24. Sexual attitudes predicting intent to help others and total bystander behavior.

	F	df	p	R^2
Intent to Help				
IRMA	3.63	1, 431	.057	.008
ATSPB-T	5.29	1, 434	.022	.012
Total Bystander Behavior				
IRMA	.70	1, 389	.40	.002
ATSPB-T	.30	1, 391	.58	.001

Note: IRMA = Illinois Rape Myth Acceptance Scale; ATSPB-T = Attitudes Towards Sexually Predatory Behavior *T*-score

3.4.2. Attitudes and Beliefs

3.4.2.1. Categorical Differences

A MANOVA was conducted to compare interveners and non-interveners in sexual attitudes – rape myth beliefs and attitudes toward sexually predatory behavior (Table 22). Results indicated that bystander groups did not differ in these traits. As an exploratory analysis, a MANOVA was conducted to investigate whether interveners and non-interveners differed in sexually aggressive *behavior*. Again, the bystander groups did not differ in these outcomes.

3.4.2.2. Intent to Help

Belief in rape myths and attitudes towards sexually predatory behavior were also examined as possible predictors of bystander intent to help (Table 24). Sexually aggressive attitudes significantly predicted while rape myth beliefs only marginally predicted ($p = .057$) intent to help.

3.4.2.3. Total Bystander Behaviors

Table 24 also presents results for analyses using attitudes and rape myth beliefs to predict total self-reported bystander intervention behavior. Neither sexually aggressive attitudes nor belief in rape myths significantly predicted total bystander behaviors.

4. DISCUSSION

4.1. Prevalence of Sexual Assault and Bystander Behavior on Campus

The findings of the present research confirm that sexual assault is prevalent within university populations. Although it is encouraging that the large majority of the sample reported no instances of non-consensual sexual contact, coercion, attempted assault, or rape, 40 participants reported some form of perpetration and 8 reported they had committed rape. It was common for perpetrators of non-consensual sexual contact to have perpetrated more than once. Only six of the 48 participants classified as perpetrators reported a single instance of non-consensual sexual behavior. However, students may not be aware that the behavior they committed is legally considered rape; only two participants reported thinking they may have raped someone. These findings are consistent with previous research that reports high rates of sexual assault prevalence on college campuses (Fisher & Cullen, 2000; Krebs et al., 2007; Mellins et al., 2017). Although the incidence of rape perpetration was lower (1.8% vs. 7%), self-reported sexual assault perpetration was consistent with prior research (7.5 vs. 6%; Voller & Long, 2010). Also consistent with prior research (Fedina, Holmes, & Backes, 2018), sexual assault was the most common form of perpetration in this sample, and completed rape was the least common form of perpetration.

Within this sample, personally knowing both (a) survivors of sexual assault and (b) perpetrators of sexual assault was common. Additionally, 8 participants reported that they personally were survivors of sexual assault. Prevalence of sexual assault

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victimization was comparable to, albeit somewhat lower (~2% vs. 3%) than previous studies (Coulter et al., 2017; Dario & O'Neal, 2018; Forsman, 2017). Awareness of sexual violence is clearly common among college men.

Given the prevalence of sexual violence on campus, it is encouraging that the majority of participants reported engaging in some sort of bystander intervention behavior and indicated they were likely to help others. In fact, only 15 participants reported having the opportunity to intervene as a bystander and failing to do so. Individuals may choose not to intervene for a number of reasons, including fear, worry about embarrassment, failure to recognize situations that require intervention, and feeling like they lack the knowledge or skills to help (Burn, 2009; Bennett, Banyard, & Garnhart, 2013; McMahon & Banyard, 2012). Common bystander intervention programs focus on removing these barriers to intervention. Unfortunately, fewer than 20% of this sample reported completing an educational program with a bystander intervention component. Greater participation in these programs could improve bystander sense of efficacy. Increasing students' knowledge of situations that may require interventions would also be a benefit of increased participation in these programs. Of the 44 students who reported they had no opportunity to engage in bystander intervention, it is possible that some were in relevant situations but did not recognize the situation required intervention.

4.2. Nomological Net of Psychopathy

Overlap between the constructs of narcissism and psychopathy has been consistently reported in the literature (Marcus, Preszler, & Ziegler-Hill, 2018; Paulhus,

2014; Vize, Lynam, Collison, & Miller, 2018). Callousness (Paulhus, 2014), interpersonal manipulation (Marcus et al., 2018), and grandiosity (Grigoras & Wille, 2017) have been proposed as core traits common to both personality constructs. Similarly, in the present study psychopathic traits significantly correlated with narcissistic traits. Specifically, psychopathy was positively related to more grandiose aspects of narcissism, providing further evidence for grandiosity being a trait common to both psychopathy and narcissism. Vulnerable narcissism was positively related to disinhibition but negatively related to boldness. Overall, the extent to which psychopathy is reflected in scales measuring narcissism varies, and despite sharing some common traits (callousness, grandiosity), the two constructs are empirically distinguishable (Paulhus & Williams, 2002; Paulhus, 2014). The results of this study suggest that psychopathy is associated with subscales measuring traits such as entitlement, exploitation, social potency, and dominance. However, narcissistic vulnerability appears to be not well captured by measures of psychopathic traits.

The current project found interrelations between the Big Five and psychopathy that are similar to previous research (Lilienfeld et al., 2015; Vize et al., 2018). As expected, psychopathy was negatively related to agreeableness and conscientiousness. Psychopathic boldness and meanness were positively associated with extraversion. As boldness proposes to measure social potency, the correlation with extraversion is unsurprising; the relationship between meanness and extraversion emerges from the association between meanness and assertiveness. However, these findings also underscore the importance of examining personality as the facet level; psychopathy

subdimensions often relate to personality constructs in opposing directions (Lilienfeld et al., 2015). For example, TriPM Boldness was negatively related to BFI-2 Negative Emotionality whereas Disinhibition was positively associated with this trait. To the extent that psychopathy can be characterized by dominance (Assertiveness), social potency (Extraversion), callous disregard for others (-Agreeableness), and impulsivity (-Conscientiousness), there is overlap between the traits measured by the BFI-2 and the TriPM. However, as detailed below, these measures clearly provide unique information and the predictive validity of the TriPM cannot be entirely accounted for by the Big Five.

4.3. Sexual Attitudes and Beliefs

A significant body of research has reported that attitudes and beliefs about gender roles, sex, and rape (e.g., hostile masculinity, rape myth acceptance) predict attitudes about consent (Shafer, Ortiz, Thompson, & Huemmer, 2018) and sexual assault perpetration (Abbey et al., 2001; Abbey & McAuslan, 2004; Casey et al., 2017; Murnen, Wright, & Kaluzny, 2002). Rape myth acceptance is also associated with both psychopathy and narcissism (Watts, Bowes, Latzman, & Lilienfeld, 2017). Overall, these findings are consistent with the results of the current project. As hypothesized, psychopathy and narcissism were associated with greater endorsement of common myths about rape. Considering the TriPM alone, Boldness and Meanness significantly predicted greater endorsement of rape myths. When NPI-13 narcissism and psychopathy were examined simultaneously, Meanness was the only significantly predictor of rape myth beliefs. In contrast, when pathological narcissism was examined alongside

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psychopathy, Boldness, Disinhibition, and Vulnerability predicted greater belief in rape myths. These results suggest that callousness and grandiosity are important common factors explaining the relationship between narcissism, psychopathy, and rape myth acceptance.

I hypothesized that specific psychopathic and narcissistic traits would differ in their relations to sexually aggressive attitudes and tactics for obtaining sex. Although the hypothesis that narcissistic entitlement would be positively associated with sexual aggression was confirmed, trait grandiosity was unrelated to these attitudes and behaviors. Consistent with previous research, psychopathic boldness and meanness (Marcus & Norris, 2013; O'Connell & Marcus, 2016) and narcissistic entitlement (Mowle, Donnellan, & Edens, under review) predicted greater acceptance of sexually aggressive behavior. However, inconsistent with previous research, disinhibition was not related to acceptance of sexually aggressive attitudes. Additionally, psychopathic boldness and PNI Grandiosity predicted use of coaxing tactics to obtain sex, and PNI Vulnerability was associated with both coaxing and coercion tactics. Psychopathy was unrelated to coercive tactics to obtain sex. These results are somewhat consistent with the hypothesized findings and previous research that reported associations between narcissism and coercive tactics, and between psychopathy and both coaxing and coercive behaviors (Jones & Olderbak, 2014; Mouilso & Calhoun, 2012b). Jones and Olderbak (2014) reported that an antagonist factor common to both psychopathy and narcissism predicted coaxing behaviors, but only psychopathy predicted coercion. Therefore, it is surprising that aspects of psychopathy were only related to coaxing while vulnerable

narcissism was associated with coercion tactics. Differences in our results may be attributable to use of different measures; Jones and Olderbak (2014) used the SRP while the current study measured psychopathy using the TriPM. Additionally, these results are not the first to indicate that narcissism rather than psychopathy may be associated with more severe sexually aggressive behaviors. Mouilso and Calhoun (2012b) reported that narcissism was associated with rape perpetration but psychopathy only predicted sexual assault perpetration, not rape.

The hypothesis that boldness would only contribute to the prediction of sexually aggressive attitudes through an interaction with disinhibition (e.g., Marcus & Norris, 2013) was not confirmed. In fact, boldness was significantly positively associated with acceptance of sexually predatory behavior, belief in rape myths, and coaxing tactics for obtaining sex. While some researchers have argued that boldness is irrelevant to the construct of psychopathy (Miller & Lynam, 2011) due to correlations with positive traits and adaptive outcomes, the present study affirms that high levels of boldness can predict negative attitudes, beliefs, and behaviors. Other researchers have reported on the importance of measuring boldness for differentiating psychopathy from antisocial personality disorder (Venables, Hall, & Patrick, 2014; Wall, Wygant, & Sellbom, 2015). It appears that boldness may also be important for understanding sexually aggressive attitudes (e.g., Marcus & Norris, 2013).

In the present study, self-reported likelihood of coaxing someone to participate in sex and acceptance of sexually predatory attitudes and behaviors were associated with number of sexual assault perpetrations. Furthermore, perpetrators of attempted rape and

rape were higher in rape myth beliefs than non-perpetrators. However, although belief in common myths about rape was associated with sexually predatory attitudes and self-reported likelihood of using coaxing or coercion to obtain sex, rape myth beliefs were not associated with frequency of sexual assault perpetration. Mouilso and Calhoun (2013) reported that rape myth acceptance predicted perpetration status in logistic regression analyses. However, McDaniel & Rodriguez (2017) found that perpetrators did not differ from non-perpetrators in acceptance of rape myths. Further research is needed to determine whether rape myth acceptance significantly predicts sexual assault perpetration. One possible explanation for these results could be the influence of peer norms (Bohner et al., 2006). Low peer norms supportive of rape myths could attenuate the relationship between self-reported rape myth beliefs and actual assault perpetration.

4.4. Sexual Assault

The primary aim of this research was to explicate the underlying relationship between personality traits, sexual attitudes and beliefs, and sexual assault. Specifically, I hypothesized that perpetrators of sexual assault and rape would be lower in agreeableness and conscientiousness. Mouilso & Calhoun (2012a) found that low conscientiousness and agreeableness differentiated between perpetrators and non-perpetrators, and predicted frequency of perpetration. However, although low agreeableness predicted perpetration frequency, perpetrators and non-perpetrators did not significantly differ in any Big Five trait. The current results are consistent with Voller and Long (2010) who reported that personality patterns were remarkably consistent for sexual assault perpetrators and non-perpetrators. In fact, the authors

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proposed that sexual assault perpetrators were more similar to non-perpetrators than to rape perpetrators. The relative frequency of sexual assault compared to rape perpetration in the current sample may explain the lack of differences in Big Five traits between perpetrators and non-perpetrators.

I further hypothesized that individuals with higher levels of narcissism and psychopathy would be more likely to commit sexually aggressive acts. When differentiating between types of perpetrators, individuals who reported coercing others into sex were higher in psychopathic disinhibition than non-perpetrators. Individuals who had attempted rape were also higher in grandiosity than non-perpetrators. The results of the current project confirm that narcissistic and psychopathic traits are associated with sexually aggressive behavior. When predicting frequency of sexual assault perpetration, higher levels of psychopathic boldness and meanness, and of narcissistic entitlement and vulnerability, increased the odds of sexual assault perpetration.

However, the hypothesis that any association between Big Five traits and sexual assault would no longer be significant after controlling for psychopathic or narcissistic traits was not supported. Big Five agreeableness and negative emotionality were important predictors of decreased likelihood of committing sexual assault. Conscientiousness – a trait positively associated with psychopathy – was not a significant predictor in models including psychopathy, suggesting the construct may be well-captured by measuring disinhibition. However, agreeableness was a significant indicator of decreased odds of sexual assault in models that included psychopathic

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meanness. Unlike the results of Mouilso and Calhoun (2013), this study suggests that the Big Five traits add important information to the prediction of sexually violent behavior. Furthermore, these results provide further evidence that psychopathy or narcissism cannot be entirely captured by measuring Big Five traits.

One objective of this research was to define the contributing role of individual beliefs in the relationship between personality and sexual assault. Despite relationships at the bivariate level between beliefs in rape myths, psychopathic and narcissistic traits, and sexual assault, belief in rape myths did not significantly predict sexual assault behavior. Furthermore, structural equation models with rape myth beliefs as a proposed mediator of the relationship between personality and sexual assault were not a good fit for the data. Mouilso & Calhoun (2013) similarly reported that in the presence of psychopathy, rape myth acceptance did not contribute uniquely to the prediction of sexual assault. It appears that the variance contributed by rape myth beliefs in the prediction of sexual assault is accounted for by an individual's level of psychopathic traits.

Although psychopathic and narcissistic traits increased the odds of sexual assault perpetration, results of structural equation models indicate that *latent* constructs of psychopathy or narcissism were not significant predictors of sexual assault. This outcome is supported by the negative binomial regression results. Psychopathic boldness and disinhibition, but not meanness, significantly predicted sexual assault. Similarly, aspects of narcissism including pathological grandiosity, dominance, social potency, and self-ascribed leadership ability did not predict sexual assault. These results highlight the

importance of examining personality facets and subdimensions. Some research has proposed that psychopathy is not a classical syndrome (Lilienfeld, 2013) or single latent construct (Lilienfeld et al., 2015), particularly when assessed using the TriPM (Lilienfeld, 2018). Importantly, the Triarchic model does not propose that its subdimensions are factors that combine to create psychopathy; rather, the model is a descriptive framework for traits that may be combined to define different "types" of psychopathy (Patrick et al., 2009).

If Triarchic psychopathy is not a single latent construct, it could explain why the structural equation models proposed in this research were not a good fit for the data. Another possibility is that although our sample was sufficiently large to use structural equation modeling, the base rate of assault behavior may have been too low to detect an effect. Particularly given the large body of research finding relationships between psychopathy, narcissism, and sexual assault, further research is needed before conclusions could be drawn that these personality constructs are unrelated to sexual violence.

4.5. Bystander Intervention

The other objective of this research was to identify the relationship between personality traits, sexual attitudes and beliefs, and bystander intervention behaviors. Understanding the personality of individuals likely to intervene as a bystander requires examination of other personality traits. BFI-2 Agreeableness and Extraversion, and to a lesser extent, Negative Emotionality and Open-mindedness, were associated with increased intent to help others. Extraversion and Open-mindedness predicted greater

bystander intervention behavior. These results are consistent with my hypothesis that openness, agreeableness, and extraversion would be associated with bystander intervention. Individuals who intervene as bystanders in situations with potential for sexual violence are likely to be sociable, assertive, compassionate, and responsible. Other recent research has found that bystander intervention during the course of discriminatory and immoral behavior, including intimate partner violence and sexual harassment, is associated with extraversion, altruism, and social responsibility (Frankling, Brady, & Jurek, 2017; Moisuc, Brauer, Fonseca, Chaurand, & Greitemeyer, 2018). Continued investigation of individual differences in interveners and non-interveners could allow for the creation of specific tailored programming to increase bystander intervention.

The hypothesis that higher levels of narcissism and psychopathy would be negatively associated with bystander behavior and intentions to help others was only partially supported. Once again, the relationship between these personality constructs and behavior varied at the trait level. Psychopathic boldness and disinhibition predicted increased endorsement of bystander behavior and behavioral intentions to help, whereas meanness was negatively associated with these variables. At the group level, individuals who intervened as a bystander were significantly higher in boldness than participants who reported they had the opportunity to intervene but chose not to. For narcissism, pathological grandiosity also predicted higher bystander intent to help while vulnerability was associated with lower intent to help. Narcissistic dominance was also associated with increased bystander behavior and behavioral intentions.

These results may initially appear surprising, given the relationships psychopathy and narcissism also displayed with likelihood of committing sexual assault. However, grandiosity and boldness are also associated with traits such as extraversion, assertiveness, and to some extent, sociability. These traits are in turn associated with increased bystander behavior. The unexpected positive relationship between disinhibition and bystander intervention may be due to lower behavioral restraints and greater impulsivity (Decuyper, De Pauw, De Fruyt, De Bolle, & De Clercq, 2009; Miller & Lynam, 2011); individuals lower in these traits may hesitate before deciding to intervene. Similarly, boldness is correlated with low internalizing symptoms, such as anxiety (Miller & Lynam, 2011), which may also decrease hesitation or worry about intervening. As the prior research in this area is limited, more research is needed to further understand the relationship between specific psychopathic and narcissistic traits and bystander intervention.

Based on prior research (Katz & Moore, 2013; McMahon, 2010), it was hypothesized that bystander intention to help and intervention behavior would be associated with lower acceptance of sexually aggressive attitudes and belief in rape myths. However, this hypothesis was not supported. Although intent to help others was associated with lower acceptance of sexually aggressive attitudes, acceptance of these attitudes and belief in rape myths were unrelated to actual self-reported bystander behavior. McMahon (2010) reported that rape myth acceptance predicted lower bystander willingness to intervene. However, Banyard and Moynihan (2011) found that greater rape myth acceptance was associated with greater self-reported bystander

behaviors. Researchers should continue to investigate the contribution of rape myth acceptance to bystander behavior and attitudes, particularly willingness to intervene. Because greater likelihood or intent to intervene as a bystander is a significant predictor of self-reported bystander behavior (Banyard & Moynihan, 2011), traits and attitudes that decrease bystander willingness to intervene are particularly important.

If bystander intervention behavior is in fact unrelated to these attitudes and beliefs, this finding is encouraging. These results suggest that holding negative attitudes and beliefs about sexual violence does not preclude someone from intervening as a bystander. Bystander intervention is therefore a technique that could be taught to college students without concern for their preconceived notions of what "counts" as rape. Of course, these attitudes would be important to target for other reasons, particularly given their relationship with use of coaxing and coercion tactics for obtaining sex and sexual assault behavior.

4.6. Strengths and Limitations

There are several limitations to this research. The results of this study rely on the premise that participants were honest in reporting about sexual attitudes and sexual behavior, some of which may be illegal. While safeguards were included to remove participants who may have answered dishonestly, randomly, or carelessly, it is possible that some participants did not admit to carelessness or lying and were therefore not removed from the sample. Participants may also have stated that they lied at the end of the survey due to not wanting their data included in the final sample. Participants were

informed that stating they lied would provide them with research credit but would result in their data being removed from the study.

It is also possible that self-selection may have biased our results. Participants were able to quit the survey at any time and still receive research credit, and students who recognized the content of the questions may have elected not to complete it. Attempts to eliminate this problem included retaining data from participants who completed at least half of the study questionnaires and randomizing the presentation of questions. Still, we are unable to determine whether individuals chose to exit the survey because they did not want to report their own potentially criminal behaviors.

Participants were primarily White or Hispanic/Latinx students at one public 4-year university, and findings may not generalize to other settings. For example, further investigation is needed to understand sexual assault and bystander intervention experiences at trade schools, community colleges, and other institutions of higher education (for an example of a study that included vocational schools and nonresidential campuses, see Sinozich & Langton, 2014). Researchers have also begun to investigate bystander attitudes and behaviors outside of the United States (Kamimura et al., 2016). Whether the personality traits that predict bystander behavior are the same across cultures should be investigated in future research. Like much of the research in this area (Fedina et al., 2018) our sample consisted of primarily White heterosexual students, and our findings are therefore limited to that population. There is a dearth of research examining more diverse student populations, despite the potential for increased risk of victimization in these populations (Coulter et al., 2017).

Although measures of random and careless responding were included, this research did not account for the effect of social desirability responding. In addition to potential effects on willingness to report about sexually aggressive attitudes, socially desirable responding may impact reporting of bystander attitudes and behavior (Labhardt, Holdsworth, Brown, & Howat, 2017). This research used a convenience sample of undergraduate students rather than population-based sampling (see Mellins et al., 2017, for an example of this approach). Because these data are cross-sectional rather than longitudinal, we are unable to identify causal pathways. Longitudinal studies are especially important in this area of research so that targets for intervention can be identified. Finally, while this study focused on perpetration of sexual aggression by college males, it is important to emphasize that college men can also be victims of sexual assault and women may be perpetrators. Correlates and predictors of sexual assault perpetration by college women should be investigated in future research.

This research also has a number of strengths. Several safeguards were included to reduce the impact of dishonest, careless, or random responding. The survey was made available to more participants in waves across two semesters to maximize the time spent on campus, including time to have the opportunity to intervene as a bystander, which is especially important for research surveying primarily college freshmen to ask about campus experiences. The study asked about a wide range of acts and used behaviorally specific questions about types of sexual assault and methods of perpetration. Studies that use this approach to measuring sexual assault perpetration tend to yield more accurate estimates of sexual assault prevalence (Koss et al., 2007).

5. CONCLUSIONS

This research confirms that while the majority of students do not perpetrate rape, there are multiple incidences of sexual coercion, coaxing, and non-consensual sexual contact on campus. The results also suggest diversity in methods of perpetration, with strategies ranging from sexual assault to coercion and rape. Acceptance of sexually aggressive attitudes, belief in common myths about rape, and a variety of personality traits are associated with these behaviors. Some personality traits, such as agreeableness and negative emotionality, are associated with decreased odds of perpetration. Psychopathic boldness and disinhibition, and narcissistic vulnerability and entitlement, are associated with perpetration likelihood. Negative attitudes such as rape myth acceptance are also associated with aspects of psychopathy and narcissism, particularly boldness, meanness, and pathological narcissism.

This work also reveals that students are willing to intervene as bystanders, and often intervene in risky and potentially sexually violent situations. Personality traits and individual attitudes are also associated with bystander attitudes and behaviors. Traits such as grandiosity, extraversion, openness, and agreeableness predicted intent to help others and frequency of bystander intervention. The results further suggest that holding negative attitudes, such as acceptance of rape myths or sexually aggressive behavior, does not prevent an individual from intervening as a bystander.

These results confirm that college students regularly intervene as bystanders. Research to date suggests that bystander education programming is an important

component of addressing sexual assault on college campuses. However, research in this area is still developing and there remains a dearth of research investigating individual differences in those who intervene and those who do not. Focus on specific populations of potential bystanders and victims would improve our understanding of those who do not intervene and allow for more specifically tailored programming. Furthermore, since bystander intervention programming at least partially emerges from the theory that removing barriers to intervention will increase behavior, research investigating the connection between personality traits and perceived barriers to intervention is needed. Emerging research has focused on areas such as the impact of race of the potential victim (Katz, Merrilees, Hoxmeier, & Motisi, 2017), alcohol use by the potential bystander (Leone, Haikalis, Parrott, & DeLillo, 2017), moral motivations of bystanders (Gable, Lamb, Brodt, & Atwell, 2017), and membership in groups such as athletic teams and Greek Letter organizations (Hoxmeier, Acock, & Flay, 2017).

Future research into the causes and correlates of sexual assault on college campuses should focus on using consistent, behaviorally specific definitions of sexual assault and rape. Diversity in types of perpetration has important implications for education and prevention strategies. Consistent use of behaviorally specific measures would improve the field's understanding of the relationship between perpetrator characteristics and type of assault, which in turn could improve prevention strategies. Individuals who have never committed an act that could be defined as rape may feel that sexual assault education programming does not apply to them. While the prevention of rape is important, the frequency of coercion and sexual assault suggests that intervention

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and prevention efforts would benefit by focusing on consent and the potential problems with using coaxing and coercion to gain sex.

This research is not the first to investigate narcissism and psychopathy as potential predictors of sexual assault perpetration. Yet, these results highlight the importance of examining facets and subdimensions of personality constructs to further our understanding of individuals who perpetrate. Of particular note, narcissistic entitlement was a significant predictor of sexually aggressive attitudes, belief in rape myths, sexual coercion, and frequency of sexual assault perpetration. Previous research suggests that narcissistic entitlement is the best predictor of aggression among multiple narcissistic traits (Rasmussen, 2015; Reidy, Zeichner, Foster, & Martinez, 2008). Narcissistic entitlement has also been implicated in rape supportive attitudes and behaviors that are in turn predictive of sexual aggression (Bouffard, 2010). Building upon studies that have worked to identify a core trait common to members of the Dark Triad, future research should investigate whether entitlement is the trait common to predictors of sexual assault perpetration.

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PARTICIPANT DEMOGRAPHICS

	M	*SD*	Min	Max
Age	18.84	1.37	18	35
SES	6.87	1.58	1	10

Note: SES = MacArthur Scale of Subjective Social Status; scores range from 1 to 10

Ethnicity

	White Non-Hispanic	Hispanic /Latino	African American	Asian or Pacific Islander	Native American	Other
n	263	93	16	45	1	10

Campus Involvement

	IFC Fraternity	Academic GLO	Local Men's Group	Corps of Cadets /ROTC	Other	None
n	27	5	23	31	159	177

Note: IFC = Interfraternity Council; GLO = Greek Letter Organization

Year in school

	1	2	3	4	5
n	307	90	25	12	1

Participation in athletics

	None	University athletics team	University sports club	University intramural sports	Community sports team	Multiple	Other
n	223	7	32	108	8	26	28

Sexual Orientation

	Heterosexual	Homosexual	Bisexual	Asexual	Other	Prefer not to say
n	400	14	9	4	1	7

Relationship Status

	Single	In a monogamous relationship	Married	Prefer not to say
n	309	118	2	6