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Kaylee Richmond

University of Missouri-St. Louis, kpr8wf@umsystem.edu

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**What's Religion Got to Do with It?: Differing Religiosity Domains'
Association with College Students' Sexual Consent During First-Time
Intercourse**

Kaylee P. Richmond

Ph.D., Clinical Psychology, University of Missouri – St. Louis, 2022
B.S., Psychology, University of Florida, 2014

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Advisory Committee

Ann Steffen, Ph.D.
Chairperson

Bettina J. Casad, Ph.D.

Emily Gerstein, Ph.D.

Zoë D. Peterson, Ph.D.

Abstract

Within the U.S., 36% of women and 17% of men report experiencing sexual assault (Smith et al., 2017). The absence of sexual consent is often regarded as a defining component of sexual assault (Beres, 2014); thus, a potential area to examine to decrease rates of perpetration and victimization. To date, there has been a lack of research on contextual factors that are likely related to sexual consent, with a general focus on external consent (i.e., verbal/behavioral indicators; Muehlenhard et al., 2016). The present study examined the role of a contextual factor, religiosity, on sexual consent processes during the context of first-time sexual intercourse. Participants were 979 undergraduate college students from three universities who participated in a larger study designed to examine first-time intercourse (FTI) experiences. Canonical correlation analysis was used to examine the relation between multidimensional constructs of religiosity and sexual consent during first intercourse. Multiple dimensions of religiosity included (1) intrapersonal religious commitment, (2) interpersonal religious commitment, and (3) religious fundamentalism. The multiple dimensions of sexual consent included 6 domains of internal and external consent: (1) direct nonverbal behavior, (2) passive behaviors, (3) communication/initiator behaviors, (4) safety/comfort, (5) agreement/wantedness, and (6) readiness signals. This study hypothesized that fundamentalism would be associated with sexual consent over and above intrapersonal religious commitment and interpersonal religious commitment. This study explored assigned sex as a moderating factor in the relation between domains of religiosity and sexual consent. Intrapersonal religious commitment, interpersonal religious commitment, and religious fundamentalism were not found to be a significant factor in the canonical correlation with sexual consent processes. No support was found for the hypotheses that fundamentalism would be associated with sexual consent processes, over and above intrapersonal religious commitment and interpersonal religious commitment. Some support for assigned sex as a moderator was found. For men, higher religiosity was associated with lower levels of external consent processes. Findings suggest, for men, that religiosity may be a risk factor for less consent communication, and therefore more negative sexual outcomes. Results of the present study highlight the complexity of sexual consent and the need to continue to examine other contextual factors.

Keywords: sexual consent, religiosity, first-time intercourse

What's Religion Got to Do with It?: Differing Religiosity Domains' Association with College Students' Sexual Consent During First-Time Intercourse

The decision to engage in sexual activity is complex and influenced by a variety of individual, social, and cultural factors (Hawes et al., 2010; Madkour et al., 2014; Marston & King, 2006; Pinquart, 2010). These factors impact how adolescents and young adults are socialized and taught about what is sexually normative for their respective culture as well as shape and develop norms on how to behave sexually. Throughout history, religious institutions and doctrines have heavily regulated and set norms regarding sexual behavior (Regnerus et al., 2007). Accordingly, there has been a vast amount of research on religiosity, which is the role and importance of religion in one's life (Cowden & Bradshaw, 2007), and its relation to sexual attitudes and behaviors (e.g., Burdette & Hill, 2009; Davidson et al., 2004; Meier, 2003).

An essential aspect of sexuality is sexual consent, which can be defined as freely given verbal and/or nonverbal agreement without pressure or coercion to engage in sexual activity with an equally consenting partner or partners (Beres, 2007, 2010; Hickman & Muehlenhard, 1999). The examination of sexual consent is essential; consent is both a necessary component in being able to successfully communicate with partners during sexual activity and contributes to the development of sexually healthy relationships. Moreover, the majority of sexual assault prevention programs focus on consent promotion to reduce sexual violence (Donat & White, 2000; Schewe, 2006). Sexual assault can be defined as sexual penetration and/or sexual touching obtained through force, incapacitation, or coercion (Basile et al., 2014). In a national U.S. sample, 36% of women and 17% of men have experienced some form of sexual assault (Smith et

al., 2017). Being a victim of sexual assault can have long-term and wide-ranging consequences (for a review, see Dworkin et al., 2017). Given the profound adverse associations of sexual assault, it is critical to work to understand factors associated with prevention of sexual assault. As the absence of sexual consent is often regarded as a defining component of sexual assault (Beres, 2014), examining sexual consent has the potential to decrease rates of sexual assault perpetration and victimization.

To date, there has been a lack of research on contextual factors that are likely related to sexual consent, with a general focus on how individuals behaviorally communicate and interpret consent (Muehlenhard et al., 2016). As religiosity has been shown to be associated with influencing what is sexually normative (Vasilenko et al., 2013), it possible that religiosity is a contextual factor that may be related to sexual consent for an individual engaging in sexual intercourse. Sexual consent is particularly important during one's first-time sex as religious doctrines have set norms around virginity loss (e.g., occur only during marriage). Thus, the context of first-time sex is likely a salient experience in which to examine the relationship between religiosity and sexual consent. Further, examining an individual's sexual consent during first-time intercourse is important as first-time sex has been associated with later sexual functioning (Reissing et al., 2012; Smith & Shaffer, 2013). Surprisingly, there has been minimal research examining the relationship between religiosity and sexual consent. It is likely that religiosity would play a role in the sexual consent process as religious institutions and doctrines have been powerful authorities on what is sexually normative and acceptable for centuries.

This paper aims to examine a macrolevel factor that likely impacts sexual consent and provides context to sexual consent by utilizing the sexual scripting theory as a guiding framework. As such, the purpose of the current paper is to investigate domains of religiosity, including intrapersonal religious commitment, interpersonal religious commitment, and religious fundamentalism, on domains of sexual consent, both internal and external, in order to better delineate which domains of religiosity are associated with which components of sexual consent. Of note, this paper examines first-time sex that is heteronormative in nature as the general literature on first-time sex is almost exclusively within the framework of heterosexual sex. A more nuanced understanding of religiosity and sexual consent may aid in informing both efforts to decrease sexual assault perpetration and understanding how victims of sexual assault conceptualize their experiences, which may have bearing on their sexual and overall functioning.

Contextualizing Sexual Consent

In general, research on sexual consent has been focused on sexual consent as a behavioral act (for a review, see Muehlenhard et al., 2016), and has demonstrated that sexual consent is communicated through verbal cues (i.e., “I want sex”), nonverbal cues (i.e., unzipping pants, removing clothes), and passive non-resistance (i.e., by doing nothing, not resisting; Beres, 2010, 2014; Hickman & Muehlenhard, 1999; Jozkowski, Sanders, et al., 2014). Gender differences have emerged, with men using more nonverbal cues than women to indicate sexual consent (Jozkowski, Peterson, et al., 2014), although both men and women are more likely to use nonverbal than verbal cues (e.g., Hall, 1998; Hickman & Muehlenhard, 1999; Jozkowski & Wiersma, 2015). To the author’s knowledge, only two studies have been conducted to date that have explicitly examined

same-sex sexual consent (Beres et al., 2004; McLeod, 2015). In one study sexual consent behavior was found to be similar to heterosexual relationships, with individuals in same-sex relationships using more nonverbal behaviors than explicit verbal behaviors to indicate consent and ask for sex (Beres et al., 2004). The other study found that same-sex relationships had significantly greater explicit verbal consent compared to heterosexual relationships (McLeod, 2015). This finding was hypothesized to be due to lack of sexual scripts to guide behavior. Although research on the behavioral aspects of sexual consent are useful, there needs to be an examination of contextual factors as sexual consent is nuanced and complex.

One example of the complexity of consent is consent can be viewed as a discrete event (e.g., receiving a 'yes' when consent is asked verbally) or as a continuous process (Muehlenhard et al., 2016). Conceptualizing consent as a discrete event implies that once consent is obtained, it is assumed through the entirety of the sexual encounter unless otherwise revoked. Conversely, conceptualizing consent as a continuous process implies consent is continually occurring throughout the sexual encounter. To add to the complexity of consent, consenting to sex and wanting sex can both be present in a sexual encounter but is not a necessity. That is, sexual consent can be present even when sexual activity is not wanted (Muehlenhard & Peterson, 2005; Peterson & Muehlenhard, 2007). Individuals may consent to unwanted sexual activity for a myriad of reasons such as to prevent relationship problems or to avoid conflicts (Impett & Peplau, 2003; Morgan et al., 2006; O'Sullivan & Allgeier, 1998). To complicate matters further, sex can be wanted, and the individual can indicate consent, but is legally nonconsensual. Examples include but are not limited to being a minor or in cases where an individual requires a

guardian (e.g., intellectual disability), therefore making them legally unable to consent. There can also be ambivalence and/or uncertainty about the wantedness of a sexual encounter (Muehlenhard & Peterson, 2005; Peterson & Muehlenhard, 2007). For instance, individuals can be ambivalent about the wantedness of sex due to cultural prescriptions of gender roles. Specifically, a woman may want sex but be ambivalent out of fear of negative evaluations (e.g., ‘slutty’) due to a sexual double standard (Muehlenhard et al., 2015). Further, it is likely that one may be ambivalent about engaging in sex due to religious beliefs. It is possible to want and desire sexual activity, while also feeling guilt/shame because religion has prescribed what is sexually allowed. This has been evidenced within research showing that religious individuals are more restrictive in terms of their sexual behaviors and engage in sexual intercourse for the first time at an older age. Taken together, sexual consent has been defined and conceptualized in various ways, which adds to the complexity and difficulties of fully understanding sexual consent. Thus, sexual consent must be examined along multiple dimensions of consent and not just the behavioral aspects of consent.

Multiple Domains of Sexual Consent

Sexual consent as multidimensional has been theorized as something that is both behaviorally expressed as well as something that is internally experienced (Muehlenhard, 1995, 1996). Examining sexual consent as a multidimensional construct allows for a more accurate and richer understanding. Jozkowski and colleagues (2014) developed a measure to examine both externally used behavioral aspects of consent, or the external consent subscale, as well as internal feelings (i.e., wantedness) of consent, or the internal consent subscale, which captures one’s feelings related to the willingness to engage in

sexual acts. This measure allows for sexual consent to be more fully examined in relation to multiple dimensions that are not just behavioral. Specifically, the five domains of external consent include (1) direct nonverbal behaviors (e.g., “I increased physical contact between myself and my partner”), (2) passive behaviors (e.g., “I did not say no or push my partner away”), (3) communication/initiator behavior (e.g., I initiated sexual behavior and checked to see if it was reciprocated), (4) borderline pressure (e.g., “I took my partner somewhere private”), and (5) no response signals (e.g., “I did not say anything”). The five domains of internal consent include (1) physical response (i.e., rapid heart rate), (2) safety/comfort (i.e., secure), (3) arousal (i.e., turned on), (4) agreement/wantedness (i.e., desired), and (5) readiness (i.e., sure).

The small amount of research that has examined contextual factors related to multiple domains of sexual consent, highlights the importance of continued research in this area. For example, alcohol consumption has been negatively associated with internal consent, specifically safety/comfort and readiness, even after controlling for relationship status, gender, rape myth acceptance, and alcohol expectancies (Jozkowski & Wiersma, 2015). In addition, a recent qualitative study that examined the situational context of sexual consent communication found differences between men and women depending on the environmental setting (Jozkowski et al., 2018). Specifically, results suggested that men may view sexual consent as occurring in social settings, whereas women may view sexual consent as a process that may occur in both social and private settings. Taken together, these studies provide evidence of the need to examine both contextual factors and multiple dimensions of sexual consent.

Sexual consent is inherently an interpersonal discourse and interaction between individuals, and therefore cannot be devoid of social and historical context (Harris, 2018). Unfortunately, there is a general dearth of research examining contextual factors that likely influence sexual consent. Sexual consent must be consequently considered using multiple aspects of consent as well as within the socio-cultural context, one of which is how religious institutions have shaped and influenced consent. To date, this author was only able to find one qualitative study that examined sexual consent and religiosity. Moon and Reger (2014) utilized a content analysis to examine how Evangelical authors have discussed rape and sexual assault utilizing four religious (Christian) dating books. The authors coded for instances of rape myth acceptance or rejection; acceptance or rejection of sexism, gender roles, and dehumanization; and instances of consent. Results indicated that sexual consent was largely absent from discussions in all four books. One main theme that emerged was called “an illusion of consent”, meaning that when consent was discussed it was presented as only one option to women. That option was to say “no” to sex before marriage and to say “yes” to sex after marriage. The authors also proposed that the lack of discussion about sexual consent led to a blurring of discussions of rape and sex. This study underscores the need to examine the relationship between religiosity and sexual consent.

Sexual Scripting Theory

The nature of sexual consent inherently is an interpersonal process and is impacted by social context. Sexual scripting theory (Gagnon & Simon, 1973) has the ability to explain how multiple processes and factors, from a micro to macro level, influence sexual consent. Scripting theory is the leading theoretical approach to

explaining human sexuality within the literature and was developed in response to the biological explanation for sexual activity (Gagnon & Simon, 1973). There are two versions of this theory with one based in sociology (Gagnon & Simon, 1973; Simon & Gagnon, 1986) and one from social psychology in the subarea of social cognition (e.g., Abelson, 1981; Mandler, 1984; Markus & Zajonc, 1983). The version by Simon and Gagnon has explicitly dealt with issues of sexuality and has been most cited with the sexual consent literature (e.g. Edgar & Fitzpatrick, 1993; Hyde & Oliver, 2000; Kelly & Kalichman, 1995; Reed & Weinberg, 1984).

A sexual script is thought to be a cognitive script that guides and influences behavior in social and sexual situations. Scripting theory posits that sexual encounters are shaped by the culture and norms of their respective society. Scripts are established throughout an individual's development and are shaped/formed through social norms garnered from peers, media, parents, religious institutions, etc. Sexual scripts act as a guideline for how people should act in a dating or sexual situation (Metts & Spitzberg, 1996; Rose & Frieze, 1989) and influence how, when, where, and why individuals have sex (Gagnon & Simon, 1973; Laumann et al., 2000). In addition, this theory posits that sexuality is social in nature and that individuals have these internal scripts they follow on how to behave sexually from start to finish (e.g., from kissing to intercourse).

These scripts occur on three dimensions: (1) cultural scenarios, (2) interpersonal scripts, and (3) intrapsychic scripts (Simon & Gagnon, 1986). The cultural level of sexual scripts is the broadest level that outlines the specific roles of how an individual should behave, feel, and think in sexual situations. The cultural scenarios level are the norms that exist at the broadest level and result from institutional sources that prescribe beliefs about

what is valued and appropriate when it comes to sexuality and even what counts as “sexual” behavior. Cultural scripts provide the rules for sexual behavior, such as which sex acts are appropriate, when sex is appropriate, with whom one can have sex, and how one should feel about sex (Laumann et al., 2000; Mahay, 2001). Interpersonal scripts are context-specific and within a cultural scenario that dictate an individual’s expectation of how a sexual interaction should unfold. They represent a dyadic process between partners, where the individuals within the sexual encounter are negotiating sex within the constraints of societal expectations of sexual behavior. Intrapsychic scripts come from one’s internal dialogue of what a sexual script looks like and are influenced by both the environment and individual history. These intrapsychic scripts may include our wishes, desires, and fantasies; they are influenced by cultural scripts but may also deviate from those scripts.

A major institution that has greatly influenced what is sexually normative in society is religion. Religious institutions contribute to scripts related to when it is or is not appropriate to engage in sex. Religious individuals are more likely to hold sexual scripts about the sinful nature of pre-marital sex and the need for sex to be avoided than non-religious individuals (Bassett et al., 2002; Luquis et al., 2012). Religious adolescents and young adults who engage in sexual intercourse outside of what has been deemed as sexually allowed by their religion, may feel guilty or believe themselves to have sinned, which is likely to have negative psychological and physical consequences. This illustrates how broader cultural scripts can contribute to intrapsychic scripts. The extent to which an individual is religious may determine how likely they follow religious sexual scripts. As

such, some religious individuals may internalize and live by a restrictive sexual script (Uecker, 2008), which may play a role in sexual consent processes.

Sexual scripting theory is able to provide a more comprehensive understanding of the broader context of sexual consent and provides a conceptual framework to understand influences on consent at a cultural level. Sexual scripting theory will be used as the lens in which to view the relationship between religiosity and sexual consent. Specifically, this study will utilize the cultural level as a guiding framework for how religious institutions may have guided and shaped sexual consent within in the context of first-time sexual intercourse.

First-Time Sexual Intercourse

Engaging in sexual intercourse for the first time is generally considered a momentous event that is filled with various meanings (e.g., transition from adolescence to adulthood) and usually holds personal significance for that individual. The majority (75%) of individuals engage in first-time sex by age 20 (Abma & Martinez, 2017). First-time penile-vaginal intercourse is generally equated with losing one's virginity (Barnett et al., 2017; Bersamin et al., 2007; Trotter & Alderson, 2007). Virginity is a value-laden construct that has been typically defined from a heteronormative perspective with young adults indicating that penetrative intercourse as what constitutes as sex (Bersamin et al., 2007; Holland et al., 2000) with other sexual activities (e.g., oral sex) being considered a buildup to penile-vaginal intercourse. Although it is outside the scope of this paper, it is important to note that there are some discrepancies as what counts as virginity loss (Barnett et al., 2017), especially for sexual minority individuals. For instance, sexual minority individuals are more likely than heterosexual individuals to consider non-

penetrative sex (e.g., oral-genital contact) as sex (Horowitz & Spicer, 2013) and identify a noncoital experience as virginity loss (Carpenter, 2001). Despite this, first-time sexual intercourse (i.e., virginity loss) has still been associated with penetrative sex for LGBT individuals (Averett et. al., 2014).

Due to its cultural and societal importance, there has been considerable research on first-time sexual intercourse. An individual's engagement in sexual intercourse for the first time has been associated with future sexual behaviors (Heywood et al., 2015; Lantos et al., 2016), sexual well-being and adjustment (Reissing et al., 2012; Smith & Shaffer, 2013), and general well-being (Vasilenko et al., 2011). In general, the majority of research on first time sex has typically examined first-time sex through a negative lens, which stems from the belief that sex during adolescence is deviant and problematic and associated with risk (Hawes et al., 2010). For instance, studies have consistently found that early first intercourse is associated with negative outcomes such as STIs and teen pregnancies (for a review, see Heywood et al., 2015). In addition, the majority of research on first-time sex has focused on the age of first-intercourse and how timing factors relate to first time sex (Heywood et al., 2015; Young et al., 2018; Zimmer-Gembeck & Helfand, 2008), with again a focus on how younger age at first sex is related to worse outcomes.

More recently, there has been a call for research on first-time sex to move away from examining demographic factors and a push for the examination of contextual factors of first-time sexual experience (Palmer et al., 2017). There has also been a call for research on adolescent sexuality to be viewed as a normative aspect of development (Tolman & McClelland, 2011), which has led to examination of some positive contextual

factors. For example, first-time sex that occurs within the context of a loving and committed relationship has been associated with less feelings of guilt and more physical and psychological satisfaction at first sex (Higgins et al., 2010). Of note, men in this study experienced significantly more psychological and physical pleasure than women (Higgins et al., 2010), which highlights gender differences related to sexual experiences. There is also evidence to suggest that contextual factors of first-time sex are related to current sexual satisfaction. Specifically, positive affect at first-time sex has been associated with later positive sexual health outcomes and psychological well-being (Else-Quest et al., 2005; Reissing et al., 2012; Symons et al., 2014). For instance, Reissing and colleagues (2012) found that how one feels about their first sexual intercourse experience, sexual self-efficacy (i.e., belief in one's ability to accomplish behaviors of a sexual nature), sexual aversion (i.e., sexual avoidance), and age at first intercourse were all related to current sexual adjustment/satisfaction. Sexual self-efficacy mediated the relation between the positive feelings towards first sexual intercourse and current sexual adjustment. In other words, positive feelings towards first-time sex may contribute to current sexual satisfaction possibly because of a greater level of self-confidence gained from the first-sex experience. Taken together, first-time sexual intercourse is generally an influential event in an adolescent's or young adult's life that may shape future general sexuality and sexual health, and experiences of first-time intercourse appears to be impacted by contextual factors surrounding the event.

Cultural Factors in First-Time Sex

Engagement in sexual activity is largely shaped by cultural norms of a society. A major influencer that has dictated what is sexually normative and acceptable has been and

continues to be religious institutions (Wiesner, 2005). Historically, religious institutions have taken a significant role in setting standards for what is acceptable when it comes to an individual's sexuality, with great value placed on remaining celibate until marriage (Blank, 2008). Religious teachings typically sanction restrictive sexual scripts that exert control over one's sexual behavior (Rostosky et al., 2003). The Judeo-Christian doctrine posits that the purpose of sex is for reproduction has significantly influenced Americans sexual attitudes and behaviors (DeLamater, 1981). As one would expect, religiosity has been associated with an individual's first-time sexual intercourse through delaying one's engagement by adolescents and young adults (Hardy & Raffaelli, 2003; Vasilenko & Lefkowitz, 2014).

Adolescents and young adults' initial sexual experiences that are positive and healthy are influential in future sexual functioning and relationship development. As sexual consent is often considered a crucial factor in healthy and satisfying sex, it is an essential to examine. Further, religion has greatly influenced and shaped sexual norms, attitudes, and behaviors. It is likely that religiosity may be connected with sexual consent feelings and behaviors, especially within the context of first-time sex. To the author's knowledge, there is no research on sexual consent and religiosity within the context of first-time consensual sex. Despite this lack of research, there has been evidence to suggest that the degree to which individuals are ready and willing to engage in sex (both components of internal consent) are critical factors in influencing subsequent sexual outcomes. Sexual competence, which includes (1) the use of contraception, (2) autonomy of decision, (3) both partners being equally willing, and (4) the timing is "right" (Wellings et al., 2001), has been associated with later sexual health outcomes (Palmer et

al., 2017). Specifically, within first-time sexual intercourse, a lack of sexual competence has been associated with HPV and low sexual functioning in the past year. For women, lower sexual competence was significantly associated with STI diagnoses, unplanned pregnancy, and experiencing nonconsensual/coerced sex (Palmer et al., 2017). It is plausible that religiosity may impact an individual's readiness, willingness, or another domain of sexual consent as religiosity has been found to be linked with a host of other sexual behaviors and attitudes. As such, it is possible that sexual consent during first-time sex may impact later sexual functioning and well-being, with religiosity being another important factor. Therefore, it is essential to examine the relationship between religiosity and sexual consent within the context of first-time sex.

Religiosity

In 2020, approximately 75% of individuals in Canada and 81% of individuals in the U.S. were affiliated with a religion (Pewforum, 2020). As previously mentioned, religious institutions are a socializing agent of sexuality and typically teach that developmentally normative sexual behaviors, such as feelings of sexual desire, masturbation, and sexual activity is sinful and should be avoided (Luquis et al., 2012). Typically, Western religions reinforce the repression of sexual urges or use of sex solely for pleasure (Leeming, 2003). It is important to note that not all religions foster anti-sex values. For instance, the Universalist Unitarian Association and United Church of Christ have assisted in the development of a comprehensive and sex-positive sexuality education curriculum (Our Whole Lives). Even within religions that promote anti-sex values, there is great variability across individuals' beliefs towards sexuality because one's sexuality is influenced by a host of factors (e.g., media, peers). Thus, religiosity's

impact on sexual attitudes and beliefs is likely both positive and negative to at least some degree.

There is a vast amount of research on religiosity and its impact on sexuality (e.g., Burdette & Hill, 2009; Davidson et al., 2004; Meier, 2003). Religiosity generally has been negatively associated with sexual behaviors (Kirk & Lewis, 2013; Vasilenko & Lefkowitz, 2014), with the majority of research highlighting the protective nature of religiosity on sexual outcomes. For example, higher religiosity is related to later age of first-time sexual intercourse, fewer lifetime sex partners, and less engagement in casual sex (Fielder et al., 2013; Moore et al., 2013; Penhollow et al., 2005, 2007; Young et al., 2015). Additionally, longitudinal research has found religiosity to be negatively associated with having intercourse within one year (Hardy & Raffaelli, 2003). Religiosity is also associated with sexual attitudes. Adolescents with greater religiosity are associated with significantly less permissive views regarding premarital sex as well as general sexuality (Lefkowitz et al., 2004; Sheeran et al., 1993).

The majority of the literature on religiosity and sexual behavior is based on single item measures of religiosity, such as the frequency of religious attendance or affiliation (Adamczyk & Hayes, 2012; Davidson et al., 2004; Lefkowitz et al., 2004; Rostosky et al., 2004). This is problematic because attending religious services and religious affiliation fails to capture the multiple domains of religiosity or the importance of religiosity in guiding morals and daily living. Additionally, a single item measure often has lower validity and reliability than multi-item measures and validated measures. When a more robust measure is used, studies still utilize single constructs (Rostosky et al., 2004; Yonker et al., 2012), despite the knowledge that religiosity is a multidimensional

construct (Gorsuch, 1984; Levin et al., 1995). Although a single item or measure of religiosity has been informative to some extent, more comprehensive measurement of religiosity, along multiple dimensions, may deepen our understanding of religiosity on sexual outcomes and attitudes.

Multiple Domains of Religiosity

The use of a multidimensional model of religiosity allows researchers to examine which dimensions of religiosity are the most and least related to different kinds of behaviors or attitudes (i.e., sexual behaviors and attitudes). A recent paper theorized five dimensions of religiosity for adolescents, pulling from psychology and sociology frameworks, which included religious beliefs (i.e., doctrine component), religious exclusivity (i.e., doctrinal orthodoxy), external practice (i.e., service attendance), personal practice (i.e., religious behaviors done on one's own), and religious salience (i.e., importance and influence of religion on one's life; Pearce et al., 2017). The five-dimensional model was compared to four alternative models (i.e., one-dimensional model) of religiosity. Results suggested support for the five-dimensional model over the other four models. Additionally, the authors found support for the five-dimensional model over time.

Domains of religiosity have also been differently related to sexual behaviors and romantic relationships. Vasilenko and Espinosa-Hernández (2019) found that examining multiple facets of religiosity simultaneously is essential in understanding how religiosity is related to sexual behavior. The domains of religiosity included affiliation, beliefs, importance of religion, prayer, and religious service attendance. The authors used latent class analysis to discover five class model which included (1) multidimensional religious,

(2) primarily private, (3) not religious, (4) primarily affiliation, and (5) primarily public.

The authors then examined how class membership predicted sexual behavior and relationship status. Results suggested that there is a differential relation of religiosity and sexual behavior dependent on which aspects of religiosity were endorsed. Results also indicated that the multidimensional class had lesser odds of engaging in sexual behaviors compared to the other classes, which suggests that being highly religious in multiple domains is associated with less sexual behavior. Taken together, these studies highlight the importance and need to examine multiple domains of religiosity simultaneously to better understand how religiosity is associated with sexual consent. Therefore, examining domains of religiosity, including intrapersonal religious commitment, interpersonal religious commitment, and religious fundamentalism, may provide a more nuanced/clear understanding of the relationship between religiosity and sexual consent.

Intrapersonal and Interpersonal Religious Commitment. Religious commitment is defined as the level to which an individual follows their religious values, beliefs, and practices and uses them in daily life (Worthington, 1988) and is measured through assessing one's beliefs, church or religious service attendance, and internal experiences (Hill & Hood, 1999). There are two dimensions of religious commitment - intrapersonal and interpersonal religious commitment. The intrapersonal religious commitment domain can be conceptualized as how an individual internalizes religiosity and uses it to guide morals, values, and life meaning (Worthington et al., 2003). The interpersonal religious commitment domain can be conceptualized as the level of activity and participation in one's religious organization (Worthington et al., 2003). These two

constructs, intrapersonal and interpersonal religious commitment, has been viewed as synonymous with intrinsic and extrinsic religious orientations (Joshi & Kumari, 2011).

It has been theorized that intrinsic religiosity is more internalized than extrinsic religiosity (Rowatt & Schmitt, 2003). This suggests individuals high in intrinsic religiosity or intrapersonal religious commitment may be more likely to follow and adhere to religious teachings than individuals high on only extrinsic or interpersonal religiosity. As religious doctrines typically adhere to restrictive sexual norms and beliefs it would make sense that intrinsic religiosity is more sexually restrictive than extrinsic religiosity, which has been evidenced throughout the literature. For instance, intrinsic religiosity has been associated with more restricted sexuality and desire (Rowatt & Schmitt, 2003) as well as more conservative sexual attitudes (Ahrold et al., 2011; Reed & Meyers, 1991). Specifically, intrinsic religiosity has been associated with less willingness to partake in casual sex, fewer desired sexual partners, and lower likelihood of engagement in a sexual relationship (Rowatt & Schmitt, 2003). Conversely, extrinsic religiosity has been positively associated with unrestricted sexuality and desire (Rowatt & Schmitt, 2003) as well as more liberal sexual attitudes (Reed & Meyers, 1991). Specifically, extrinsic religiosity has been associated with less sexual restraint, less sexual exclusivity, higher likelihood of engaging in sexual activity in the context of infidelity, and higher sociosexuality (Rowatt & Schmitt, 2003). In a longitudinal study, intrinsic religiosity was found to have protective effects against risky sexual behaviors, whereas extrinsic religiosity increased the likelihood of engaging in risky sexual behavior for Hispanic adolescents and young adults (Smith, 2015). Extrinsic religiosity has also been positively related with sexual attitudes and behaviors. For instance, extrinsic

religiosity has been related to positive attitudes about sexual fantasy, masturbation, premarital sexual intercourse, oral sex, and mutual masturbation (Wulf et al., 1984). Neither intrapersonal nor interpersonal religious commitment has been examined in relation to sexual consent. Despite the lack of research in this area, both domains have been associated with sexual behaviors and attitudes which suggests that these religious domains may be related to internal and external consent.

Fundamentalism. Another domain of religiosity that would be useful to examine is religious fundamentalism. Fundamentalism is distinct from any specific religion and instead is conceptualized as aspect of religiosity that is defined as extreme adherence to one's faith (Ysseldyk et al., 2010) and belief that their faith holds the one and only true set of religious teachings (Altemeyer & Hunsberger, 2004). Religious fundamentalism may be unique and differentially related to sexual outcomes compared to other domains of religiosity. Religions with fundamentalist beliefs have rules related to sexual behaviors (Emerson & Hartman, 2006) and have been associated with conservative sexual attitudes (Ahrold & Meston, 2010; Bassett et al., 1999). Specifically, religious individuals who hold religiously conservative beliefs and hold stricter views about sex are more likely to engage in sexual restraint (Penhollow et al., 2005). Religious fundamentalism has also been positively associated with traditional gender role expectations (Bang et al., 2005; Carr, 2006), rape myth acceptance (Mulliken, 2005), and negative attitudes towards sex before marriage (Bassett et al., 1999). Taken together, engaging in sex during adolescence and outside of marriage may go against a religious fundamentalist's sexual script that sex should only occur during marriage. Thus, it is possible that sexual consent processes may look different for individuals high in fundamentalism. It seems plausible

that individuals higher in fundamentalism may have lower internal consent due to restrictive sexual scripts. In relation to external consent, it seems possible that individuals higher in fundamentalism may exhibit more passive behaviors, more no response signals, less direct nonverbal behaviors, and less communication/initiator behaviors due to guilt and/or negative emotionality regarding being actively engaged in sexual act that goes against their belief.

Ahrold and colleagues (2011) examined four domains of religiosity, specifically intrinsic religiosity, spirituality, fundamentalism, and paranormal belief, and their relation to sexual attitudes and sexual fantasy. Results indicated that all four dimensions of religiosity were uniquely related to sexual attitudes and fantasy. Fundamentalism was found to be the strongest predictor of attitudes towards masturbation, specifically with conservatism towards masturbation. Another study examined multiple dimensions of religiosity on a liberal to conservative continuum and their relation to a variety of sexual behaviors (e.g., masturbation, oral sex; Farmer et al., 2009). The dimensions examined were paranormal belief, spirituality, intrinsic religiosity, and fundamentalism. Results indicated that fundamentalism was negatively correlated with the majority of sexual behaviors for women. Specifically, 19 out of 25 sexual behaviors were negatively correlated with fundamentalism for women, whereas only 3 of 26 sexual behaviors were negatively correlated with fundamentalism for men. This suggests that fundamentalism may be differentially correlated with sexual behavior by gender. Lastly, in a study of European Canadian and East Asian women, it was found that sex guilt mediated the relationship between religiosity and sexual desire (Woo et al., 2012). Again this study examined multiple domains of religiosity – intrinsic religiosity, spirituality, and

fundamentalism. Fundamentalism was found to be negatively correlated with sexual desire. For European Canadians, sex guilt mediated the relationship between fundamentalism and sexual desire but did not mediate the relationship between intrinsic religiosity and sexual desire. For East Asians, sex guilt mediated the relationship between all three religiosity domains and sexual desire. Taken together, these studies highlight the importance of measuring different domains of religiosity as they generally were related to the sexual outcomes uniquely. The studies also underscore differences by gender and ethnicity. As such, it is important to examine interactions for these significant demographics. The relationship of fundamentalism on sexual consent, both internal and external, has not been explored. As religious fundamentalism has been found to be associated with sexual behavior and attitudes, it is possible that fundamentalism may also be related to internal and external sexual consent.

Race/Ethnicity Differences

Although this paper will not examine race/ethnicity as it was not a variable within the secondary dataset, it is important to discuss as race/ethnicity is likely an important factor in the relation between religiosity and sexual consent processes. In general, Black individuals tend to be more religious than White individuals, Hispanics tend to have similar levels of religiosity with White individuals, and Asians tend to be the least religious (Christerson et al., 2010). Although Blacks tend to be more religious than other race/ethnicities, religion has been found to be less associated with risk outcomes compared to White individuals (Yonker et al., 2012), suggesting that religiosity may play a bigger role for White individuals in reducing risk behaviors. In relation to sexual outcomes, research has found significant interactions between race/ethnicity and

religiosity (e.g., Ahrold & Meston, 2010; Woo et al., 2012). For example, intrinsic religiosity, spirituality, and religious fundamentalism have been found to be differentially associated with sexually conservative attitudes (Ahrold & Meston, 2010). For Asians and Euro-Americans, intrinsic religiosity and fundamentalism were significant main predictors for sexual conservative attitudes. Spirituality was a main predictor for Asians only and Asians had more conservative attitudes related to casual sex and homosexuality compared to European-Americans and Hispanics.

Currently, our understanding and conceptualization does not account for how race/ethnicity may play a role in sexual consent processes. Sexual scripts differ according to culture (Frith & Kitzinger, 2001) and likely influence how sexual consent occurs (e.g., Bay-Cheng & Eliseo-Arras, 2008; Conroy, Krishnakumar, & Leone, 2015; Humphreys, 2007). There is some evidence to suggest that historical views of Black women have impacted Black women's sexuality (e.g., Davis & Tucker-Brown, 2013; Townsend, Neilands, Thomas, & Jackson, 2010). For example, the endorsement of the Modern Jezebel stereotype has been associated with the perception that risky sexual behaviors were less harmful in a study with Black girls (Townsend et al., 2010). Black men have been historically viewed as hypersexual and sexually promiscuous (Thomas & Sillen, 1972) and there is evidence these stereotypes continue to persist (Miller, 2019), which may influence their sexual scripts. In an ethnographic study examining social dimensions of sexual consent, within the sexual citizenship dimension, Black men described detailed consent practices, noting the racialized risk of sexual assault accusations, especially if with a White woman. These authors also suggest that it is possible for Black men to have

more respect for others' bodies due the absence of racial privilege. In sum, sexual scripts vary by race/ethnicity; thus, it is likely that sexual consent processes vary as well.

In general, the vast majority of research on sexual consent has been conducted with White individuals and fails to consider how race and ethnicity impact how individuals negotiate sexual consent (e.g., Beres et al., 2004; Hust, Rodgers, & Bayly, 2017; Jozkowski & Wiersma, 2015). To the author's knowledge, only one study has examined the relation between race/ethnicity and sexual consent. This study examined the associations between internal/external sexual consent and racial/ethnic differences between Hispanic/Latina, Black, and White women (Willis et al., 2019). Their results suggested that internal feelings of consent (i.e., physical response, safety/comfort, arousal, agreement/wantedness and readiness) were similar across all racial/ethnic groups. There was a weak, but significant, association that Black and Hispanic/Latina women had greater feelings of safety and comfort compared to White women. Even though their results suggest that there may only be minimal differences between racial/ethnic groups, these results may not generalize to other samples, such as for men, individuals in casual sexual encounters (88.3% of sample was in exclusive relationships), or same-sex relationships (86.4% of sample heterosexual). Taken together, the role of race and ethnicity should be examined as potential factors that differentially relate to sexual consent. Unfortunately, this study will not examine race/ethnicity differences and will be discussed in the limitations section.

Gender Differences

A key tenet of sexual scripting theory is that men and women learn (are socialized into) different scripts, and thus follow a pattern of gendered behavior, otherwise known

as the traditional sexual script (Bay-Cheng & Eliseo-Arras, 2008; Jozkowski, Peterson, et al., 2014; Ryan, 2011). Aspects of sexual scripts for men suggest they should be dominant, want sex at all times, treat sex as a conquest, be uncontrollable once aroused, avoid commitment, and objectify women sexually. For women, these scripts include that women should be passive, desire affection or love, use their physical appearance to get men, and desire to please men (Luria & Rose, 1979; Kim et al., 2007; Tolman et al., 2007). In addition, traditional scripts include men as the sexual initiators, who request or simply start sex, and women as the gatekeepers, who either stop the men from proceeding or consent to allow him to continue (Byers, 1996; Carpenter, 1998). These traditional gender roles create unequal power relationships between men and women.

Power imbalances and gender roles may contribute to men preferring to assume consent until they hear non-consent and for women to prefer for men to ask for consent (Jozkowski & Humphreys, 2014; Kitzinger & Frith, 1999). Further, scripts create a sexual double standard where men are rewarded and praised (i.e., consider “players”) for heterosexual sexual contacts, whereas women are stigmatized and devalued (i.e., labeled promiscuous) for similar sexual behavior. This may influence sexual consent communication, as women cannot express sexual desire or be sexually assertive without being labeled as promiscuous. In sum, the traditional sexual script can contribute to an increased risk for victimization for both women and men. Specifically, as women are seen as the gatekeepers of sex, the burden is placed on women to “stop sex” while simultaneously being required to passive/not assertive, which may play a role in women’s victimization as they may not be able to resist strongly enough. For men, the traditional sexual script contributes to the assumption that men always want sex, thus are always

consenting to sex (Beres, 2007). Consequently, this enforces the assumption that men cannot be raped, which may play a role in men's victimization as well as lower disclosure rate. In addition, due to the traditional script, if men say no to sex, their masculinity might be questioned (Pascoe, 2005; Sweeney, 2014; Wiederman, 2005). As a result, these gendered scripts produce poor consent communication, which may be a risk factor for sexual coercion and rape (Jozkowski & Peterson, 2013).

In addition, sexual scripts for men may lead to men having overall better and more positive first-sex experiences. For instance, in a study examining contextual factors, specifically age, relationship status, experience of orgasm, use of drugs and alcohol, and practicing a religion, of first-intercourse the authors concluded that male adolescents and young adults were less impacted by contextual factors than female adolescents with males generally reporting positive reactions to first-sex (Reissing et al., 2012). These authors hypothesized that it may be due to scripts which prime men to attend to biological and physical aspects of sexual intercourse.

In general, there is evidence to suggest that religious individuals are associated with more traditional gender role attitudes (Sheeran et al., 1996) and that conservative religious views are associated with refraining from sexual activity (Schmitt & Fuller, 2015). There is also evidence to suggest gender differences and script differences that are specific to religious individuals. Religious institutions have restricted both men and women's sexuality, although more control has been placed on women's sexuality and desire (Rose, 2005). As such, religious institutions have differentially shaped men and women's sexual attitudes and behaviors as well as have contributed to gender socialization and gender norm development. For example, religiosity has been found to

be associated with young women's sexual behavior more than young men's (Rostosky et al., 2004). In addition, women are less likely to engage in risky sexual behavior than men due to their religious values (Baumer & South, 2001; Rostosky et al., 2004). In addition, within religious institutions there is a sexual double standard that places a higher value on female virginity before marriage than on male virginity before marriage (Burdette & Hill, 2009; Jones et al., 2005). This remains true within even fundamentalist doctrines as premarital sex for men is viewed more leniently than for women (Strasser, 2004). Ahrold and colleagues (2011) found that religiosity accounted for more variance in women than in men's sexual attitudes and fantasies along multiple domains of religiosity (i.e., spirituality, intrinsic religiosity, paranormal beliefs, fundamentalism). The authors suggested this may be due to the fact that fundamentalism and intrinsic religiosity may play a bigger role in women's sexual behavior and attitudes than men's due to the responsibility placed on women to be the teacher and keeper of faith, which indicates that it is a women's job to manage sexuality for both themselves and men. Taken together, the relationship between religiosity domains and sexual consent domains are likely different for men and women as they have been differentially influenced by religious institutions, gender roles/socialization, and sexual scripts regarding how they should behave, feel, and think sexually. Thus, assigned sex will be explored as a moderator in this study.

Current Study Rationale and Aims

The purpose of this study was to determine the relations between the multidimensional constructs of religiosity and sexual consent during first-time sex. For religious adolescents and young adults, sexual scripts may indicate first-time sex should occur within the context of marriage (Bassett 2002). Given that religiosity has been

influential in shaping sexual attitudes (Lefkowitz et al., 2004; Sheeran et al., 1993) and behaviors (Kirk & Lewis, 2013; Vasilenko & Lefkowitz, 2014), it seems likely that religiosity may also play a role in sexual consent. Sexual scripting theory provides a framework for understanding how cultural influence of domains of religiosity may be linked to sexual feelings and behaviors.

The majority of research has focused on behavioral indicators of sexual consent which misses how contextual factors, such as religiosity, may be related to sexual consent. The limited recent studies that have considered context of sexual consent (i.e., Drouin et al., 2019; Jozkowski et al., 2018; Willis & Jozkowski, 2019) highlight the importance of examining contextual factors. In addition, the majority of research on religiosity and sexual behaviors and attitudes have utilized unidimensional, often one or two item, measures of religiosity (e.g., Moore et al., 2013; Kirk & Lewis, 2013; Schmitt & Fuller, 2015). It has also been suggested to use multiple dimensions of religiosity when examining how religiosity is related to sexual behavior (Vasilenko & Espinosa-Hernández, 2019). To date, there are no studies examining univariate or multivariate relationship between religiosity and sexual consent.

Research Aim 1

Specifically, sexual scripting theory will be applied with the aim of examining, via multivariate canonical correlation analysis, the relationships between pair(s) of latent religiosity variables and latent sexual consent variables. Generally, within the literature on external sexual consent, it has been found that individuals are less likely to use verbal or direct (verbal or nonverbal) cues and more likely to exhibit passive (e.g., indirect nonverbal) behaviors to indicate consent (Beres, 2010; Beres et al., 2004; Jozkowski &

Wiersma, 2015; Jozkowski, Peterson, et al., 2014; Marcantonio et al., 2018). The borderline pressure subscale has not been found to be associated with sexual outcomes (e.g., Jozkowski & Wiersma, 2015; Marcantonio et al., 2018). Further, utilizing borderline pressure as a consent cue is ambiguous and could potentially be coercive. In addition, the no response subscale exhibited poor factor loading in a recent confirmatory factor analysis of the ICS and ECS (Walsh et al., 2019). Within the general literature on internal sexual consent, safety/comfort, agreement/wantedness, and readiness have been found to be significantly associated with sexual activity and outcomes (Jozkowski & Wiersma, 2015; Marcantonio et al., 2018), whereas physical response and arousal have not been associated with relevant sexual outcomes. In sum, the direct nonverbal behavior, passive behaviors, and communication/initiator behaviors has been the most strongly associated with the sexual consent literature as relevant to construct of external consent. For internal consent, safety/comfort, agreement/wantedness, and readiness have the most support for internal consent. Thus, only (1) direct nonverbal behaviors, (2) passive behaviors, (3) communication/initiator behaviors, (4) safety/comfort, (5) agreement/wantedness, and (6) readiness will be added into the canonical correlation analysis.

These aforementioned subscales of sexual consent may be particularly related to religious individuals because they are more likely to hold traditional scripts. For instance, research has found that religious individuals are more likely to hold sexual scripts about the sinful nature of pre-marital sex and the need for sex to be avoided (Bassett et al., 2002; Luquis et al., 2012). This script may potentially negatively relate to internal feeling towards sexual consent (i.e., have lower readiness to engage in sex) such that highly

religious individuals may have lower internal consent. Fundamentalism has been found to be negatively correlated with sexual desire (Woo et al., 2012), which is a component of internal consent, specifically the agreement/wantedness subscale.

Research question 1. How are multiple dimensions of religiosity, specifically (1) intrapersonal religious commitment, (2) interpersonal religious commitment, and (3) religious fundamentalism, associated with multiple dimensions of sexual consent, specifically the six domains of internal and external consent which includes (1) direct nonverbal behavior, (2) passive behaviors, (3) communication/initiator behaviors, (4) safety/comfort, (5) agreement/wantedness, and (6) readiness during first intercourse.

Research Aim 2

The second aim of this study is to further explore a specific domain of religiosity, religious fundamentalism, and its relation to internal consent. To date, this relationship has not been considered and this study aims to bridge that gap. Religiosity is a broad concept with a lot of heterogeneity in the way it may influence an individuals' life (Ammerman, 2013; Chaves, 2010; Edgell, 2012). Thus, it is possible that different domains of religiosity may differentially drive the relationship between religiosity and sexual attitudes and behaviors. Religious fundamentalism may be one religious domain that may differentially associated with sexual consent. For instance, individuals who hold religious fundamentalist beliefs have been found to have more conservative sexual attitudes than mainline Protestant Christians and Catholics (Thornton & Camburn, 1989). In addition, religious fundamentalism has been associated with traditional gender roles (Carr, 2006) and disagreement with pre-marital sex (Maret & Maret, 1982). In sum, religious fundamentalism may have a stronger association with sexual consent than the

other domains of religiosity (i.e., intrapersonal religious commitment and interpersonal religious commitment).

Hypothesis 1. Fundamentalism, as measured by the item “what the texts and stories of my religion tell me is absolutely true and must not be changed” will be associated with sexual consent, specifically (1) lower levels of direct nonverbal behavior, (2) higher levels of passive behaviors, (3) lower levels of communication/initiator behaviors, (4) lower levels of safety/comfort, (5) lower levels of agreement/wantedness, and (6) lower levels of readiness, over and above intrapersonal religious commitment and interpersonal religious commitment.

Secondary Exploratory Research Question

It is possible that the association between domains of religiosity and sexual consent might be differentially associated by assigned sex. Thus, assigned sex will be explored as a moderator. Specifically, is assigned sex a moderating factor in the relation between domains of religiosity (i.e., intrapersonal religious commitment, interpersonal religious commitment, and religious fundamentalism) and domains of sexual consent (i.e., direct nonverbal behavior, passive behaviors, communication/initiator behaviors, safety/comfort, agreement/wantedness, and readiness)?

Method

Source of the Data

The first-time sexual intercourse (FTI) data were chosen for a multitude of reasons. The availability of public data on sexual consent was virtually nonexistent as it is a specialized area of research. In addition, first-time sexual intercourse is a particularly important/relevant event to examine as consent during FTI may be influential in shaping

expectations and intrapsychic scripts related to sexual consent, which in turn may be related to future sexual behavior and outcomes. Additionally, the FTI sample was large and captured a range of participants from three different geographical locations, with one university in Canada and the other two in different locations within the U.S.—one of which is an urban midsize commuter university and the other is a large university in a rural college town. Moreover, the inclusion of both religiosity and sexual consent variables contributes new knowledge to the research field as there is no known existing research on the relation between religiosity and sexual consent or within the context of first-time sexual intercourse.

Procedures of Obtaining the Original Dataset

FTI data were obtained through Zoë D. Peterson, Ph.D., Professor of Counseling and Educational Psychology and Director of the Kinsey Institute Sexual Assault Research Initiative at Indiana University. Data were approved for use by all researchers on the project. The study was approved by the University of Missouri – St. Louis' Institutional Review Board for analyses of the existing data.

Procedures of Data Collection in the Original Dataset

Participants were recruited from University of Arkansas, Trent University, or University of Missouri-St. Louis (UMSL), through either the subject pool or general health and elective courses. Eligibility requirements included: being over the age of 18, being enrolled as an undergraduate student at one of the three institutions, and having access to the internet. Students received course credit in exchange for participation. Participants accessed an online study. The participants were asked to provide informed consent. Participants were informed that the survey was designed to examine facets of

first-time sexual intercourse experiences, which was defined as “the first time you engaged in vaginal/penile penetration.” Participants then completed questions related to religiosity, the context of the first sexual intercourse experience, virginity frameworks, sexual assertiveness, sexual satisfaction/pleasure, labels of the FTI experience, and demographics.

Participants

The FTI data were collected as part of an online study assessing first-time sexual intercourse experiences. The initial dataset set included 1456 participants. Two participants were removed for indicating that they were under the age of 18 years old. Individuals who indicated never engaging in penile-vaginal intercourse ($n = 227$) were excluded from the study. Based on the goals of this study participants ($n = 12$) were excluded whose experiences qualified as child sexual abuse, as defined as being aged 10 or younger at the time of first intercourse or under the age of 18 and having first time intercourse with a partner who was 10 or more years older than them (Finkelhor, 1979; Gilmore et al., 2015). This study used the same definition of child sexual abuse as the other published paper from this FTI dataset, which examined women’s nonconsensual sex during first-time sex (Marcantonio et al., 2019). This study also excluded participants ($n = 163$) who indicated their experience was nonconsensual. Nonconsensual intercourse was classified as participants who checked the box “I did not indicate consent or willingness to participate in sexual intercourse in this situation” when asked about how they communicate the willingness or consent to engage in sexual activity. This criteria was chosen as it was the most parsimonious estimate of nonconsensual intercourse within the study. Another 50 cases were removed due to participants completing less than 75%

of items on the variable of interest (i.e., intrapersonal religious commitment, interpersonal religious commitment, religious fundamentalism, external consent, internal consent). Lastly, 30 outliers were removed as they were identified as outside the acceptable range on a test of multivariate outliers described below. A total of 477 cases were deleted from the dataset. The final eligible sample were 979 undergraduate college students ($M = 21.63$ years, $SD = 5.21$; 81% female).

Materials

Demographics

Information was collected on age, age of first-sex, assigned sex, sexual identity, year in university, degree program, current relationship status, and virginity status.

Intrapersonal Religious Commitment

Intrapersonal religious commitment was measured through the intrapersonal religious commitment subscale within the Religious Commitment Inventory-10 (RCI-10; Worthington et al., 2003), which is a 10-item questionnaire. The subscale has six items which assesses commitment to religion in one's own life as a vehicle for values, beliefs, and meaning. Responses to the items were rated on a 5-point Likert type scale ranging from 1 (*not at all true of me*) to 5 (*totally true of me*), with higher scores indicating greater levels of intrapersonal religious commitment. An example of an item on the subscale is "my religious beliefs lie behind my whole approach to life." The intrapersonal religious commitment subscale has been validated on undergraduate students of a variety of faiths (i.e., Buddhist, Hindu, Christian, Muslim). Internal consistency for the intrapersonal religious commitment subscale in this study was good ($\alpha = .95$).

Interpersonal Religious Commitment

Interpersonal religious commitment was measured through the interpersonal religious commitment subscale within the Religious Commitment Inventory-10 (RCI-10; Worthington et al., 2003). The subscale has four items which assesses the behavioral, emotional, and social commitments within a religious organization. Responses to the items were rated on a 5-point Likert type scale ranging from 1 (*not at all true of me*) to 5 (*totally true of me*), with higher scores indicating greater levels of interpersonal religious commitment. An example of an item on the subscale is “I enjoy working in the activities of my religious organization.” The interpersonal religious commitment subscale has been validated on undergraduate students of a variety of faiths (i.e., Buddhist, Hindu, Christian, Muslim). Internal consistency for the interpersonal religious commitment subscale in this study was good ($\alpha = .90$).

Religious Fundamentalism

Religious fundamentalism was measured using a single item that asks, “what the texts and stories of my religion tell me is absolutely true and must not be changed.” This item is on a 5-point Likert type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with a higher score indicating religious fundamentalism. This domain-specific item is from the Religious Schema Scale (Streib et al., 2010), specifically the truth of texts and teachings subscale. Religious fundamentalism has been measured in a multitude of ways in the research, with a key component of fundamentalism being the perceived infallibility of the biblical canon (Altemeyer & Hunsberger, 1992). Although this item does not fully capture religious fundamentalism as defined as the belief in one’s religious principles and teaching provide a universal truth that must be followed exactly

(Altemeyer & Hunsberger, 1992), it is the most representative option within the dataset. Additionally, other researchers (Brandt & Reyna, 2010, 2014) have used two item measures to capture the construct of religious fundamentalism.

Sexual Consent

Sexual consent was measured through the Internal (ICS) and External (ECS) Consent Scale (Jozkowski, Sanders, et al., 2014). The ICS measures the internal feelings that aid in informing the decision to engage in consensual sexual acts. The ICS consists of five subscales totaling 25 items, which include (1) physical response (i.e., rapid heart rate), (2) safety/comfort (i.e., secure), (3) arousal (i.e., turned on), (4) agreement/wantedness (i.e., desired), and (5) readiness (i.e., sure). The instructions read, “people may have different feelings associated with their willingness or consent to engage in sexual activity. Think about the first time you engaged in sexual intercourse. Please indicate the extent to which you agree or disagree that you felt the following during the first time you engaged in sexual intercourse.” Responses to the items were rated on a 4-point Likert type scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*), with higher scores indicating stronger feelings associated with the subscale. These subscales were intended to be scored separately and should not be used as a total score. Only the (1) safety/comfort, (2) agreement/wantedness, and (3) readiness subscales of the ICS were used in this study. Internal consistency for the safety/comfort ($\alpha = .95$), agreement/wantedness ($\alpha = .95$), and readiness ($\alpha = .89$) subscales in this study were good.

The ECS measures the communication of consensual sexual acts through behaviors (i.e., verbal and nonverbal). The ECS also consists of five subscales totaling 18

items, which include (1) direct nonverbal behaviors (i.e., “I removed mine and/or my partner’s clothing”), (2) passive behaviors (i.e., “I did not say no or push my partner away”), (3) communication/initiator behavior (i.e., “I used verbal cues such as communicating my interest in sexual behavior or asking if he/she wanted to have sex with me”), (4) borderline pressure (i.e., “I took my partner somewhere private”), and (5) no response signals (i.e., “I did not say anything”). The instructions read: “People communicate their willingness or consent to engage in sexual activity in a variety of ways. Think about the first time you engaged in sexual intercourse (i.e., vaginal/penile sex). Which, if any, of the following behaviors did you engage in to indicate your consent or agreement?” Responses to these items were check all that apply. These subscales were also intended to be scored separately and should not be used as a total score. Only the (1) direct nonverbal behaviors, (2) passive behaviors, and (3) communication/initiator behavior subscales of the ECS were used in this study. Internal consistency for the direct nonverbal behaviors ($\alpha = .73$) and passive behaviors ($\alpha = .71$) subscales in this study were adequate. Communication/initiator behaviors ($\alpha = .60$) subscale in this study was acceptable.

Prospective Covariates

Prospective covariates were as follows: (1) early age of first sex (15 and younger), (2) assigned sex, (3) age, (4) sexual identity, (5) nature of first-time sex relationship, and (6) university.

Early Age. The variable early age of first sex was derived from the original continuous variable age of first sex and dichotomized and coded into 0 = engagement in sex aged 15 or younger or 1 = engagement in sex aged 16 or older. We chose to

dichotomize this variable as the literature suggests that early age of first-time sex is significantly associated with negative health outcomes and other researchers have dichotomized this variable (e.g., Wellings et. al., 2013, Wellings et. al., 2001).

Assigned Sex. The assigned sex variable asked “Sex” with the options to endorse “female, male, or other.” As no participants endorsed other, the variable was dichotomized and coded into 0 = female and 1 = male.

Age. Age was a continuous variable.

Sexual Identity. The sexual identity variable originally included five options: (1) heterosexual/straight, (2) homosexual/gay/lesbian, (3) bisexual, (4) uncertain, and (5) other. As approximately 95% of participants identified as heterosexual, sexual identity was dichotomized and coded into 0 = heterosexual or 1 = another identity.

Nature of First-Time Sex Relationship. To increase statistical power, relationship status at first sex categories were recoded to combine categories with few participants. Participants who endorsed their relationship status as just met or acquaintance were coded into a “unfamiliar” category (N = 58). Participants who endorsed their relationship status as friend but not dating or dating but not boy/girlfriend were recoded into “casual” category (N=221). Lastly, participants who endorsed their relationship as boyfriend/girlfriend or fiancée/spouse were recoded into “committed” category (N=688). The participants who selected “other” (N=10) were removed to ensure statistical clarity. The categories were recoded as 1 = unfamiliar, 2 = casual, and 3 = committed. The categorical variable was dummy-coded (Not endorsed=0; Endorsed=1) in analyses, with relationship status-unfamiliar as the reference group.

University. Participants were from one of the following three universities: University of Arkansas, Trent University, or UMSL. The universities are coded as follows: 1 = University of Arkansas, 2 = Trent University, and 3 = UMSL. The categorical variable was dummy-coded (Not endorsed=0; Endorsed=1) in analyses, with UMSL as the reference group

Results

Analyses were conducted using the Statistical Packages for the Social Sciences (SPSS). A priori power analysis was conducted using the G*Power program (Faul et al., 2009) to evaluate the suitability of the available sample size to detect a medium effect size ($f^2 = .30$) at the 95% power with $\alpha = .05$ for the above hypotheses. A correlation requires a sample size of 134. In addition, it has been recommended to use at least a variable ratio of 10:1 for canonical correlation (Leach & Henson, 2014). Given that there were nine variables in this study, a sample size of at least 90 individuals was required to lessen the bias of squared canonical coefficient results. All analyses used a $p < .05$ significance level. As there were approximately 1000 participants in this dataset, all above analyses were sufficiently powered.

Data Preparation

Eligibility for Study

Individuals were required to be over the age of 18 and engaged in penile-vaginal intercourse. Cases were removed if the first-time sexual experience was CSA or was nonconsensual.

Missing Data

First, participants were removed if they completed less than 75% of items on the variables of interest ($n = 50$). To determine the pattern of missingness within the dataset, Little's MCAR test (at the item-level) was performed to see if the data could be considered missing completely at random (MCAR). Little's MCAR was found to be significant at the item-level ($\chi^2 (1,3532) = 4315.14, p < .0001$); thus, missing data did not occur in a completely random fashion. Variables that had over 2.0% missing include the following variables: 1) "At the time, did you desire to have intercourse with this partner again (after the first time)?" with the choice of selecting "yes" or "no" (5.0% missing); 2) "Was your first intercourse your partner's first intercourse as well?" with choice of selecting "yes" or "no" (2.1% missing); and 3) "Right now, how would you describe your first sexual intercourse experience?" with choices from 1 (Worthless) to 7 (Very Valuable). Listwise deletion is acceptable and unlikely to bias the sample so long as variables contain missing data on fewer than 5% of cases (Tabachnick & Fidell, 2007). There was less than 5% of data missing on all items of interest; thus, no imputation was performed on this dataset.

Outliers

The presence of univariate outliers was assessed by examining Z-scores for each measure's total score. Z-scores greater than the absolute value of 3.29 were considered outliers (Tabachnick & Fidell, 2007). Z-scores for intrapersonal religious commitment, interpersonal religious commitment, fundamentalism, all three domains of external consent (i.e., (1) direct nonverbal behaviors, (2) passive behaviors, and (3) communication/initiator behavior), and internal consent - safety/comfort all fell within

the acceptable range (i.e., $|\leq 3.29|$). Sixteen outliers were found for agreement/wantedness domain and 11 outliers were found for readiness domain. These participants were identified as univariate outliers because their scores on agreement/wantedness or readiness was low; however, all values were within the acceptable range. As such, no participants were removed for being a univariate outlier.

The presence of multivariate outliers was assessed with mahalanobis' distances, which was based on the combination of 15 variables. The variables were as follows: (1) early age of first sex (15 and younger), (2) assigned sex, (3) age, (4) sexual identity, (5) nature of first-time sex relationship, (6) university, (7) intrapersonal religious commitment, (8) interpersonal religious commitment, (9) religious fundamentalism, (10) direct nonverbal behavior, (11) passive behaviors, (12) communication/initiator behaviors, (13) safety/comfort, (14) agreement/wantedness, and (15) readiness. Based on these variables, 30 outliers were identified as outside the acceptable range of $|\leq 37.70|$ [X²(15), alpha level .001] and were removed.

Statistical Assumptions

All primary variables were examined for violations of linearity and normality. Multicollinearity was assessed through bivariate correlations; univariate normality was assessed through histograms as well as skewness and kurtosis analyses; multivariate normality was assessed through histograms; linearity is important with canonical correlation and was assessed by examining PP plots; and heteroscedasticity was assessed by visually examining scatter plots of predicted versus residual factors. No violations of linearity or normality were detected.

*Sample Characteristics***Table 1***Sample Demographics (N = 965 – 979)*

Characteristic	M	SD	N (%)
Age	21.28	4.25	
Early Age First-Sex			
Age 15 or younger			219 (22.5%)
Age 16 or older			756 (77.5%)
Assigned Sex			
Male			184 (18.9%)
Female			790 (81.1%)
Other			0 (0%)
Sexual Identity			
Heterosexual/Straight			925 (94.9%)
Homosexual/Gay/ Lesbian			8 (0.8%)
Bisexual			35 (3.6%)
Uncertain			7 (0.7%)
Other			0 (0%)
Relationship Status at First-Sex			
Just met			27 (2.8%)
Acquaintance			31 (3.2%)
Friend but not dating			128 (13.1%)
Dating but not boy/girl friend			93 (9.5%)
Boyfriend/Girlfriend			680 (69.6%)
Fiancée/Spouse			8 (0.8%)
Other			10 (1%)
University			
University of Arkansas			263 (26.9%)
Trent University			368 (37.6%)
UMSL			348 (35.5%)

Participants were enrolled in one of three universities with 26.9% of participants from the University of Arkansas, 37.6% from Trent University, and 35.5% from UMSL.

Participant age ranged from 18 to 49, with a mean age of 21.3 years. The majority of

participants were female (81.1%) and identified as heterosexual (94.9%). A detailed description of sample demographics is presented in Table 1.

Table 2

Descriptive Statistics of Measures (N = 970 – 979)

	N	Minimum	Maximum	Mean (SD)
Interpersonal Religious Commitment	979	2	20	7.26 (4.10)
Intrapersonal Religious Commitment	979	4	30	12.30 (6.80)
Religious Fundamentalism	978	1	5	2.61 (1.29)
Internal Consent				
Safety/Comfort	979	1	4	3.17 (.73)
Agreement/Wantedness	977	1	4	3.53 (.58)
Readiness	979	1	4	3.30 (.67)
External Consent				
Direct Nonverbal Behaviors	970	0	1	.83 (.26)
Passive Behaviors	970	0	1	.77 (.31)
Communication/Initiator Behaviors	970	0	1	.46 (.37)

Table 3

Frequency of Religious Fundamentalism

Rating	Frequency	Percent
1	277	28.3%
2	155	15.8%
3	314	32.1%
4	140	14.3%
5	92	9.4%

Religious fundamentalism ranged from 1 to 5 ($M = 2.61$; $SD = 1.29$), with higher scores indicating more religious fundamentalism, with 71.7% of participants choosing 2 or higher. A detailed description of the main variables is presented in Tables 2 and 3.

Covariates

Relationships between the six dependent variables (i.e., (1) direct nonverbal behavior, (2) passive behaviors, (3) communication/initiator behaviors, (4) safety/comfort, (5) agreement/wantedness, and (6) readiness) and demographic variables of age, early age of first-sex, assigned sex, sexual identity, nature of first-time sex relationship (i.e., acquaintance, boyfriend/girlfriend), and the university were analyzed to determine whether they should be included as covariates in the main statistical analyses (see Table 4 for correlations).

A bivariate Pearson correlation was used to investigate the relationship between age, a continuous variable, and the six dependent variables. Independent sample T-tests were used to investigate the relationships between early age of first-sex (i.e., engagement in sex aged 15 or younger or engagement in sex aged 16 or older), assigned sex (i.e., male or female), and sexual identity (i.e., heterosexual or another identity), dichotomous variables, and the six dependent variables. One-way ANOVAs were used to investigate the relationships between attending university (i.e., University of Arkansas, Trent University, or UMSL) and nature of first-time sex relationship (i.e., just met, acquaintance, friend but not dating, dating but not boyfriend/girlfriend, boyfriend/girlfriend, fiancée/spouse, other), categorical variables, and the six dependent variables.

Table 4

Correlations of Main Variables and Prospective Covariates (N range = 963 – 979, pairwise deletion)

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Safety/Comfort	—												
2. Agree/Want	.74**	—											
3. Readiness	.85**	.79**	—										
4. Direct Nonverbal	.26**	.23**	.22**	—									
5. Passive	.09**	.14**	.10**	.58**	—								
6. Initiator	.34**	.31**	.34**	.45**	.34**	—							
7. Intrapersonal RC	.004	-.05	-.04	-.09**	-.06*	-.06*	—						
8. Interpersonal RC	.01	-.04	-.02	-.07*	-.05	-.05	.88**	—					
9. Fundamental	-.001	-.05	-.03	-.08*	-.06	-.08**	.65**	.60**	—				
Prospective Covariates													
10. Early Age Sex ^a	.16**	.13**	.17**	.06	.02	.06	.06	.05	.06	—			
11. Assigned Sex ^b	.08*	.14**	.14**	.05	.01	.18**	-.08*	-.05	-.09**	.03	—		
12. Age	-.14**	-.09**	-.12**	-.12**	-.004	-.12**	.13**	.12**	.05	-.07*	.08*	—	
13. Sexual Identity ^c	.03	.03	.04	.04	.04	.06	-.07*	-.05	-.07*	-.06*	.03	.06	—

^a0= 15 or younger; 1= 16 or older.

^b0=Female; 1=Male.

^c0=Heterosexual; 1=Another sexual identity.

* $p < .05$ ** $p < .01$.

Covariate Comparisons with Main Variables

Age. Older age was associated with lower levels of both external and internal consent. Specifically, age was significantly negatively correlated with direct nonverbal behavior ($r = -.12, p < .001$), communication/initiator behaviors ($r = -.12, p < .001$), safety/comfort ($r = -.14, p < .001$), agreement/wantedness ($r = -.09, p = .004$), and readiness ($r = -.12, p < .001$). Age was not significantly associated with passive behaviors ($r = -.004, p = .89$). In general, older age was associated with less sexual consent processes. Thus, age was retained as a potential covariate in main analyses as it was significantly related to some of the main variables.

Early Age. Related to early age of first-sex, there were statistical differences between early sex and later sex for internal consent, but not external consent. Individuals who engaged in early sexual intercourse (i.e., engagement in sex 15 or younger) had lower levels of safety/comfort ($M = 2.95$; $SD = 0.81$) than individuals who engaged in sexual intercourse aged 16 or older ($M = 3.23$; $SD = 0.69$), and this difference was statistically significant $t(315.69) = -4.70$, $p < .001$; $d = -.39$. Individuals who engaged in early sexual intercourse also had lower levels of agreement/wantedness ($M = 3.39$; $SD = 0.66$) than individuals who engaged in sexual intercourse aged 16 or older ($M = 3.57$; $SD = 0.56$), and this difference was statistically significant $t(313.87) = -3.74$, $p < .001$; $d = -.31$. Individuals who engaged in early sexual intercourse also had lower levels of readiness ($M = 3.09$; $SD = 0.72$) than individuals who engaged in sexual intercourse aged 16 or older ($M = 3.36$; $SD = 0.65$), and this difference was statistically significant $t(973) = -5.30$, $p < .001$; $d = -.41$. There were no significant differences between age of sexual intercourse (i.e., individuals who engaged in early sex or sex aged 16 or older) and direct nonverbal behaviors, passive behaviors, or communication/initiator behaviors. In sum, engagement in early sexual intercourse was associated with lower levels of internal consent; however, it was not related to external consent processes. Thus, early age was retained as a potential covariate in main analyses as it was significantly related to some of the main variables.

Assigned Sex. Related to assigned sex, there were significant differences between male and female individuals for one external consent measure and for all three internal consent measures. For external consent measures, there was a statistically significant difference between females and males on communication/initiator behavior $t(964) = -$

5.70, $p < .001$; $d = -.47$, with females having lower levels of communication/initiator behavior ($M = 0.43$; $SD = 0.36$) than males ($M = 0.60$; $SD = 0.35$). There were no significant differences between females and males on direct nonverbal behaviors or passive behaviors. For internal consent, females had lower levels of safety/comfort ($M = 3.14$; $SD = 0.76$) than males ($M = 3.29$; $SD = 0.59$), and this difference was statistically significant $t(340.06) = -2.86$, $p = .005$; $d = -.20$. Females also had lower levels of agreement/wantedness ($M = 3.49$; $SD = 0.60$) than males ($M = 3.70$; $SD = 0.46$), and this difference was statistically significant $t(350.37) = -5.16$, $p < .001$; $d = -.36$. Females also had lower levels of readiness ($M = 3.26$; $SD = 0.70$) than males ($M = 3.49$; $SD = 0.52$), and this difference was statistically significant $t(354.25) = -5.10$, $p < .001$; $d = -.35$. Taken together, females in this study had lower levels of internal consent and less communication/initiator behavior compared to males in this study. Thus, assigned sex was retained as a potential covariate in main analyses as it was significantly related to some of the main variables.

Sexual Identity. To increase statistical power, sexual identity was dichotomized into binary heterosexual vs. non-heterosexual categories. No significant differences were found between sexual identity and any of the six internal or external consent variables. Thus, sexual identity was not utilized as a covariate in the main analyses of this study.

University. There were significant differences between the university attended and some of the external and internal consent measures. For external consent, there was a statistical association between university attended and direct nonverbal behaviors, $F(2,967) = 3.81$, $p = .022$, such that individuals attending UMSL ($M = 0.80$; $SD = 0.27$) had lower levels of direct nonverbal behaviors than both individuals attending Trent

University ($M = 0.84$; $SD = 0.25$) and the University of Arkansas ($M = 0.85$; $SD = 0.26$).

There were no between group differences among the University of Arkansas, Trent University, and UMSL in relation to agreement/wantedness, passive behaviors, or communication/initiator behaviors. For internal consent, there was a statistical association between university attended and safety/comfort, $F(2,976) = 4.45$, $p = .012$, such that individuals attending UMSL ($M = 3.08$; $SD = 0.73$) had lower levels of safety/comfort than individuals attending Trent University ($M = 3.24$; $SD = 0.73$). There was a statistical association between university attended and readiness, $F(2,976) = 3.38$, $p = .035$, such that individuals attending UMSL ($M = 3.24$; $SD = 0.68$) had lower levels of readiness than individuals attending Trent University ($M = 3.37$; $SD = 0.66$). Taken together, UMSL was associated with lower levels of direct nonverbal behaviors, safety/comfort, and readiness compared to Trent University and lower levels of direct nonverbal behaviors compared to University of Arkansas as well. Thus, university was retained as a potential covariate in main analyses as it was significantly related to some of the main variables.

Nature of First-Time Sex Relationship. There were significant differences between relationship status at first sex and internal consent, but not for external consent. There were no between group differences between relationship status (i.e., unfamiliar, casual, and committed relationship) in relation to direct nonverbal behaviors, passive behaviors, or communication/initiator behaviors.

For internal consent, there was a statistical association between relationship status and safety/comfort, $F(2,964) = 29.68$, $p < .001$, such that individuals who engaged in first sex with an unfamiliar person ($M = 2.63$; $SD = 0.84$) had lower levels of safety/comfort

than both individuals who engaged in first sex with a casual person ($M = 3.00$; $SD = 0.68$) and engaged in first sex in a committed relationship ($M = 3.27$; $SD = 0.70$). Further, individuals who engaged in first sex with a casual person had significantly lower levels of safety/comfort than those in committed relationships. There was also a statistical association between relationship status and agreement/wantedness, $F(2,962) = 10.63$, $p < .001$, such that individuals who engaged in first sex with an unfamiliar person ($M = 3.24$; $SD = 0.66$) had lower levels of agreement/wantedness than both individuals who engaged in first sex with a casual person ($M = 3.48$; $SD = 0.56$) and engaged in first sex in a committed relationship ($M = 3.58$; $SD = 0.57$). Lastly, there was a statistical association between relationship status and readiness, $F(2,964) = 16.96$, $p < .001$, such that individuals who engaged in first sex with an unfamiliar person ($M = 2.87$; $SD = 0.76$) had lower levels of readiness than both individuals who engaged in first sex with a casual person ($M = 3.23$; $SD = 0.61$) and engaged in first sex in a committed relationship ($M = 3.36$; $SD = 0.67$). Further, individuals who engaged in first sex with a casual person had significantly lower levels of readiness than those in committed relationships. Taken together, relationship status was significant for internal consent processes such that internal consent generally increased with the seriousness/commitment of the relationship status (i.e., unfamiliar, casual, committed). Thus, relationship status was retained as a potential covariate in main analyses as it was significantly related to some of the main variables.

The main analyses included several covariates given the relations to the main variables. Initially, the following covariates were utilized in all main analyses: age, early age of first-sex, assigned sex, nature of first-time sex relationship (i.e., unfamiliar, casual,

committed) and the university (i.e., University of Arkansas, Trent, UMSL) participants were attending. Sexual identity was not utilized as a potential covariate as it did not significantly correlate with any of the main variables in the preliminary analyses. All non-significant covariates were removed in the canonical correlation, regression, and moderation analyses as they were not contributing significantly to the models. Thus, the following analyses only include the significant covariates, which were identified when all five potential covariates were initially added into the models. For the sake of parsimony, initial analyses with all five potential covariates are not displayed in the results section.

Main Analyses

Research Aim 1: Canonical Correlation Analysis

Defining Canonical Correlation Analysis. Canonical correlation analysis examines the multivariate, linear association between a set of predictors and a set of outcomes (i.e., canonical variates) by creating weighted linear composites of each set (Meyers et. al., 2016), which are called canonical functions. Specifically, a canonical function is the squared Pearson r between the two canonical variates (in this study religiosity with significant covariates and sexual consent are the two canonical variates), which specifies the variance explained by the relatedness between the two canonical variates. The individual variables in each set are related in a way that maximizes the correlation between the two canonical variate sets. In canonical correlation analysis there are as many canonical functions as there are variables in the smaller set, with the first function typically yielding a higher correlation than the second function, the second function yielding a higher correlation than the third function, and so on. Canonical functions that explain 10% or more of the shared are considered meaningful (Sherry &

Henson, 2005) and interpreted. Specifically, the variables (e.g., safety/comfort) in each set (i.e., religiosity and sexual consent) are examined to determine significance.

Correlations of .30 and above are considered to indicate significant associations between each variable and its canonical variate (Tabachnick & Fidell, 2013).

Canonical Correlation Analysis. Research Question 1. How were multiple dimensions of religiosity, specifically (1) intrapersonal religious commitment, (2) interpersonal religious commitment, and (3) religious fundamentalism, associated with multiple dimensions of sexual consent, specifically the 6 domains of external and internal consent which includes (1) direct nonverbal behavior, (2) passive behaviors, (3) communication/initiator behaviors, (4) safety/comfort, (5) agreement/wantedness, and (6) readiness during first intercourse.

A canonical correlation analysis was conducted using four demographic variables and three religiosity variables as the predictor variable set, and the six sexual consent variables as the outcome variable set, to evaluate the multivariate shared relationship between the two variable sets (i.e., religiosity and sexual consent). The analysis yielded six canonical functions with squared canonical correlations (Rc^2) of .120, .052, .014, .010, .002, and .001 for each successive function. Collectively, the full model across all functions was statistically significant using the Wilks's $\lambda = .813$ criterion, $F(42, 4351.47) = 34.68, p < .001$. Because Wilks's λ represents the variance unexplained by the model, $1 - \lambda$ yields the full model effect size in an r^2 metric. Thus, for the set of six canonical functions, the r^2 type effect size was .187 ($1 - .813$), which is a medium effect size. The full model explained a substantial portion, about 19%, of the variance shared between the variable sets.

The dimension reduction analysis allows the researcher to test the hierarchical arrangement of functions for statistical significance. As noted, the full model (Functions 1 to 6) was statistically significant. In addition, functions 2 to 6 was also statistically significant, $F(30, 3714.00) = 2.48, p < .001$; however, only explained 5.2% of the shared variance (less than 10%). As such, function 2 to 6 was not interpreted. Functions 3 to 6, 4 to 6, 5 to 6, and function 6 (which is the only function that was tested in isolation) were not statistically significant and did not explain a statistically significant amount of shared variance between the variable sets, $F(20, 3082.09) = 1.22, p = .23$, $F(12, 2460.84) = .926, p = .52$, $F(6, 1862.00) = .359, p = .905$ and $F(2, 932.00) = .251, p = .778$, respectively. Given the effects for each function, only the first function was considered noteworthy in the context of this study (12.0% of shared variance). The other five functions only explained 5.2%, 1.4%, .96%, .18%, and .05%, respectively, of the remaining variance in the variable sets after the extraction of the prior functions. Thus, only the first function was interpreted.

First Canonical Function Interpretation. The standardized canonical coefficients were used to assess the relative importance of individual variables' contributions to a given canonical correlation for function 1 (see Table 5). Using a cutoff correlation (loading) of .30 (Tabachnick & Fidell, 2013), the following predictor variables loaded onto the predictor set (i.e., religiosity and significant covariates): assigned sex, age, early sex, and relationship status – committed. The following outcome variables loaded onto the outcome set (i.e., sexual consent): communication/initiator behavior, safety/comfort, agreement/wantedness, and readiness were correlated with the first canonical variate. Taken together, this pair of sets indicated that being male (.408),

being younger (-.503), age of first-sex 16 or older (.427), and having first-sex in a committed relationship compared to having first sex with an unfamiliar or casual partner (.558) were associated with more communication/initiator behavior (.628), more safety/comfort (.912), more agreement/wantedness (.681), and more readiness (.821). In other words, younger men who had first time sex with a committed partner after the age of 16 were associated with engaging in more communication/initiator behaviors and have higher internal consent in all three domains. Notably, the religiosity domains loaded as follows: interpersonal religious commitment (.013), intrapersonal religious commitment (-.022), and fundamentalism (-.048). Thus, the hypothesis that there would be significant associations between the religiosity and sexual consent processes constructs was not supported.

Research Aim 2: Multiple Regression Analysis

Hypothesis 1. Fundamentalism, as measured by the item “what the texts and stories of my religion tell me is absolutely true and must not be changed” would be associated with sexual consent (both external and internal) over and above intrapersonal religious commitment and interpersonal religious commitment. To address this question, six hierarchical regressions were used to test this hypothesis. Specifically, (1) direct nonverbal behavior, (2) passive behaviors, (3) communication/initiator behaviors, (4) safety/comfort, (5) agreement/wantedness, and (6) readiness were the six dependent variables. Block 1 included intrapersonal and interpersonal religious commitment and significant covariates. Block 2 included religious fundamentalism (as measured by the single item stated above).

Table 5*Standardized Canonical Coefficients Between Religiosity and Sexual Consent Variables**(N = 940)*

Variable	First Variate	
	Correlation	Canonical coefficient (Standardized canonical coefficient)
Characteristic and religiosity (set 1)		
Assigned sex ^a	.408	.497
Age	-.503	-.532
Early sex ^b	.427	.384
Relationship status – committed ^c	.558	.639
Interpersonal Religious Commitment	.013	.209
Intrapersonal Religious Commitment	-.022	-.125
Fundamentalism	-.048	-.089
Sexual consent (set 2)		
Direct nonverbal behavior	.285	.059
Passive behavior	-.017	-.268
Communication/Initiator behavior	.628	.417
Safety/comfort	.912	.698
Agreement/wantedness	.681	-.048
Readiness	.821	.137
R _c ²		.187
Shared variance of first variate		12.0%

^a Female = 0; Male =1.^b0= 15 or younger; 1= 16 or older.^cNot endorsed=0; Endorsed=1.

Regression 1. To test the 1a hypothesis, a two-step hierarchical linear regression was conducted to determine whether fundamentalism was associated with external consent – direct nonverbal behavior over and above endorsement of intrapersonal religious commitment and interpersonal religious commitment. In the first step of the

regression, intrapersonal religious commitment, interpersonal religious commitment, and age (continuous) were regressed on the independent variable of direct nonverbal behavior. The first block explained 2.0% of the variance in direct nonverbal behavior and did contribute significantly to the regression model, $F(3,952) = 6.58, p < .001$; however, neither interpersonal religious commitment ($B = .002, SE B = .004, p = .63$) nor intrapersonal religious commitment ($B = -.004, SE B = .003, p = .11$) contributed significantly to the model. Entry of fundamentalism at step two explained 0.1% of variation in direct nonverbal behavior and this change in R^2 was non-significant, $F(1,951) = 0.72, p = .40$. The overall effect size was small, Cohen's $f^2 = .02$. Partial regression coefficients were reported in Table 6. Hypothesis 1a was not supported; fundamentalism was not significantly associated with external consent – direct nonverbal behavior over and above endorsement of intrapersonal religious commitment and interpersonal religious commitment.

Table 6

Hierarchical Regression Analysis Summary for Variables Predicting Direct Nonverbal Behavior (N = 956)

Step and predictor variable	<i>B</i>	<i>SE B</i>	β	R^2	ΔR^2	f^2
Step 1:				.02***		
Interpersonal RC	.002	.004	.03			
Intrapersonal RC	-.004	.003	-.12			
Age	-.01	.002	-			
			.12***			
Step 2:				.02	.001	.02
Fundamentalism	-.01	.01	-.04			

* $p < .05$. ** $p < .01$. *** $p < .001$.

Regression 2. To test the 1b hypothesis, a two-step hierarchical linear regression was conducted to determine whether fundamentalism was associated with external

consent – passive behavior over and above endorsement of intrapersonal religious commitment and interpersonal religious commitment. There were no significant covariates in this regression. In the first step of the regression, intrapersonal religious commitment and interpersonal religious commitment were regressed on the independent variable of passive behavior. The first block explained 0.4% of the variance in passive behaviors and did not contribute significantly to the regression model, $F(2,966) = 1.89$, $p = .15$. Entry of fundamentalism at step two explained 0.1% of variation in passive behavior and this change in R^2 was non-significant, $F(1,965) = 0.61$, $p = .43$. The overall effect size was small, Cohen's $f^2 = .01$. Partial regression coefficients were reported in Table 7. Hypothesis 1b was not supported; fundamentalism was not significantly associated with external consent – passive behavior over and above endorsement of intrapersonal religious commitment and interpersonal religious commitment.

Table 7

Hierarchical Regression Analysis Summary for Variables Predicting Passive Behavior

($N = 969$)

Step and predictor variable	B	SE B	β	R^2	ΔR^2	f^2
Step 1:				.004		
Interpersonal RC	.002	.01	.02			
Intrapersonal RC	-.004	.003	-.08			
Step 2:				.01	.001	.01
Fundamentalism	-.01	.01	-.03			

* $p < .05$. ** $p < .01$. *** $p < .001$.

Regression 3. To test the 1c hypothesis, a two-step hierarchical linear regression was conducted to determine whether fundamentalism was associated with external consent – communication/initiator behavior over and above endorsement of intrapersonal religious commitment and interpersonal religious commitment and significant covariates.

In the first step of the regression, intrapersonal religious commitment, interpersonal religious commitment, assigned sex (0 = Female and 1 = Male), age, and relationship status – casual (Not endorsed=0; Endorsed=1), and relationship status – committed (Not endorsed=0; Endorsed=1) were regressed on the independent variable of communication/initiator behavior. The first block explained 7.0% of the variance in communication/initiator behavior and did contribute significantly to the regression model, $F(6,937) = 10.99, p < .001$; however, neither interpersonal religious commitment ($B = .01, SE B = .01, p = .24$) nor intrapersonal religious commitment ($B = -.01, SE B = .004, p = .12$) contributed significantly to the model.

Table 8*Hierarchical Regression Analysis Summary for Variables Predicting**Communication/Initiator Behavior (N = 944)*

Step and predictor variable	B	SE B	β	R ²	ΔR^2	f ²
Step 1:				.07***		
Interpersonal RC	.01	.01	.08			
Intrapersonal RC	-.01	.004	-.10			
Assigned Sex ^a	.19	.03	.20***			
Age	-.01	.003	-.13***			
Relationship status – casual ^b	.11	.05	.13*			
Relationship status – committed ^b	.16	.05	.20**			
Step 2:				.07	.003	.08
Fundamentalism	-.02	.01	-.07			

^a Female = 0; Male = 1.

^b Not endorsed=0; Endorsed=1.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Entry of fundamentalism at step two explained 0.3% of variation in communication/initiator behavior and this change in R^2 was non-significant, $F(1,936) = 3.14, p = .08$. The overall effect size was small, Cohen's $f^2 = .08$. Partial regression coefficients were reported in Table 8. Hypothesis 1c was not supported; fundamentalism was not significantly associated with external consent – communication/initiator behavior over and above endorsement of intrapersonal religious commitment and interpersonal religious commitment and significant covariates.

Regression 4. To test the 1d hypothesis, a two-step hierarchical linear regression was conducted to determine whether fundamentalism was associated with internal consent – safety/comfort over and above endorsement of intrapersonal religious commitment and interpersonal religious commitment and significant covariates. In the first step of the regression, intrapersonal religious commitment, interpersonal religious commitment, assigned sex (0 = Female; 1 = Male), age, early age of first-sex (0 = 15 or younger; 1 = 16 or older), relationship status – casual (Not endorsed=0; Endorsed=1), and relationship status – committed (Not endorsed=0; Endorsed=1) were regressed on the independent variable of safety/comfort. The first block explained 12.0% of the variance in safety/comfort and did contribute significantly to the regression model, $F(7,941) = 18.19, p < .001$; however, neither interpersonal religious commitment ($B = .02, SE B = .01, p = .20$) nor intrapersonal religious commitment ($B = -.01, SE B = .01, p = .32$) contributed significantly to the model. Entry of fundamentalism at step two explained 0.00% of variation in safety/comfort, and this change in R^2 was non-significant, $F(1,940) = 0.35, p = .555$. The overall effect size was small, Cohen's $f^2 = .14$. Partial regression coefficients were reported in Table 9. Hypothesis 1d was not supported; fundamentalism

was not significantly associated with internal consent - safety/comfort over and above endorsement of intrapersonal religious commitment and interpersonal religious commitment and significant covariates.

Table 9

Hierarchical Regression Analysis Summary for Variables Predicting Safety/Comfort (N = 949)

Step and predictor variable	B	SE B	β	R ²	ΔR^2	f ²
Step 1:				.12***		
Interpersonal RC	.02	.01	.08			
Intrapersonal RC	-.01	.01	-.06			
Assigned Sex ^a	.22	.06	.12***			
Age	-.03	.01	-.15***			
Early Sex ^b	.26	.05	.15***			
Relationship status – casual ^c	.35	.10	.20***			
Relationship status – committed ^c	.66	.10	.41***			
Step 2:				.12	.000	.14
Fundamentalism	-.01	.02	-.02			

^a Female = 0; Male = 1.

^b0 = 15 or younger; 1 = 16 or older.

^cNot endorsed=0; Endorsed=1.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Regression 5. To test the 1e hypothesis, a two-step hierarchical linear regression was conducted to determine whether fundamentalism was associated with internal consent – agreement/wantedness over and above endorsement of intrapersonal religious commitment and interpersonal religious commitment and significant covariates. In the first step of the regression, intrapersonal religious commitment, interpersonal religious commitment, assigned sex (0 = Female and 2 = Male), age, early age of first-sex (0 = 15 or younger and 1 = 16 or older), relationship status- casual (Not endorsed=0;

Endorsed=1), and relationship status – committed (Not endorsed=0; Endorsed=1) were regressed on the independent variable of agreement/wantedness. The first block explained 7.0% of the variance in agreement/wantedness and did contribute significantly to the regression model, $F(7,939) = 10.19, p < .001$; however, neither interpersonal religious commitment ($B = .01, SE B = .01, p = .31$) nor intrapersonal religious commitment ($B = -.01, SE B = .01, p = .16$) contributed significantly to the model. Entry of fundamentalism at step two explained 0.2% of variation in agreement/wantedness, and this change in R^2 was non-significant, $F(1,938) = 1.79, p = .18$. The overall effect size was small, Cohen's $f^2 = .08$. Partial regression coefficients were reported in Table 10.

Table 10*Hierarchical Regression Analysis Summary for Variables Predicting**Agreement/Wantedness (N = 947)*

Step and predictor variable	B	SE B	β	R^2	ΔR^2	f^2
Step 1:				.07***		
Interpersonal RC	.01	.01	.07			
Intrapersonal RC	-.01	.01	-.09			
Assigned Sex ^a	.23	.05				
			.15***			
Age	-.01	.00	-.09**			
Early Sex ^b	.16	.05				
			.12***			
Relationship status – casual	.25	.08	.18**			
Relationship status – committed	.38	.08				
			.29***			
Step 2:				.07	.002	.08
Fundamentalism	-.03	.02	-.06			

^a Female = 0; Male = 1.

^b 0 = 15 or younger; 1 = 16 or older.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Hypothesis 1e was not supported; fundamentalism was not significantly associated with internal consent - agreement/wantedness over and above endorsement of intrapersonal religious commitment and interpersonal religious commitment and significant covariates.

Regression 6. To test the 1f hypothesis, a two-step hierarchical linear regression was conducted to determine whether fundamentalism was associated with internal consent – readiness over and above endorsement of intrapersonal religious commitment and interpersonal religious commitment and significant covariates. In the first step of the regression, intrapersonal religious commitment, interpersonal religious commitment, assigned sex (0 = Female and 1 = Male), age, early age of first-sex (0 = 15 or younger and 1 = 16 or older), relationship status- casual (Not endorsed=0; Endorsed=1), and relationship status – committed (Not endorsed=0; Endorsed=1) were regressed on the independent variable of readiness. The first block explained 10.0% of the variance in readiness and did contribute significantly to the regression model, $F(7,941) = 15.13, p < .001$; however, neither interpersonal religious commitment ($B = .02, SE B = .01, p = .11$) nor intrapersonal religious commitment ($B = -.01, SE B = .01, p = .08$) contributed significantly to the model. Entry of fundamentalism at step two explained 0.00% of variation in readiness, and this change in R^2 was non-significant, $F(1,940) = 0.48, p = .49$. The overall effect size was small, Cohen's $f^2 = .11$. Partial regression coefficients were reported in Table 11. Hypothesis 1f was not supported; fundamentalism was not significantly associated with internal consent - readiness over and above endorsement of intrapersonal religious commitment and interpersonal religious commitment and significant covariates.

Table 11

Hierarchical Regression Analysis Summary for Variables Predicting Readiness (N = 949)

Step and predictor variable	B	SE B	β	R ²	ΔR^2	f ²
Step 1:				.10***		
Interpersonal RC	.02	.01	.10			
Intrapersonal RC	-.01	.01	-.12			
Assigned Sex ^a	.27	.06	.16***			
Age	-.02	.01	-.12***			
Early Sex ^b	.25	.05	.16***			
Relationship status – casual ^c	.36	.10	.22***			
Relationship status – committed ^c	.54	.09	.36***			
Step 2:				.10	.000	.11
Fundamentalism	-.02	.02	-.03			

^a Female = 0; Male = 1.^b 0 = 15 or younger; 1 = 16 or older.^c Not endorsed = 0; Endorsed = 1.* $p < .05$. ** $p < .01$. *** $p < .001$.**Secondary Exploratory Research Question: Moderation Analysis**

Is assigned sex a moderating factor in the relation between domains of religiosity (i.e., intrapersonal religious commitment, interpersonal religious commitment, and religious fundamentalism) and domains of sexual consent (i.e., external and internal)?

Exploratory analyses were run examining assigned sex as a moderator between religiosity and sexual consent. Bivariate correlations were run of the main variables and potential covariates by assigned sex (see Tables 12 and 13 for correlations).

Table 12

Females Only: Correlations of Main Variables and Prospective Covariates (N range =778 – 790, pairwise deletion)

	1	2	3	4	5	6	7	8	9	10	11	12
1. Safety/Comfort	—											
2. Agree/Want	.76**	—										
3. Readiness	.86**	.80**	—									
4. Direct Nonverbal	.27**	.25**	.24**	—								
5. Passive	.09*	.14**	.10**	.55**	—							
6. Initiator	.36**	.31**	.36**	.44**	.31**	—						
7. Intrapersonal RC	.02	-.03	-.03	-.07	-.05	-.03	—					
8. Interpersonal RC	.03	-.02	-.01	-.04	-.02	.001	.88**	—				
9. Fundamental	.01	-.04	-.02	-.06	-.05	-.05	.66**	.61**	—			
Prospective Covariates												
10. Early Age Sex ^a	.18**	.15**	.20**	.08*	.03	.07	.06	.04	.06	—		
11. Age	-.19**	-.14**	-.17**	-.15**	.004	-.17**	.15**	.14**	.07*	-.11**	—	
12. Sexual Identity ^b	.06	.05	.06	.06	.04	.06	-.06	-.03	-.04	-.05	.04	—

^a0= 15 or younger; 1= 16 or older.

^b0=Heterosexual; 1=Another sexual identity.

* $p < .05$ ** $p < .01$.

Haye's (2017) PROCESS macro for SPSS model 1 with 5000 bootstrap samples was used to explore the above research question. A total of 18 moderations were run with their significant covariates. Specifically, six moderations included interpersonal religious commitment and each of the domains of sexual consent (i.e., direct nonverbal behavior, passive behaviors, communication/initiator behaviors, safety/comfort, agreement/wantedness, and readiness); six moderations included intrapersonal religious commitment and each of the domains of sexual consent; and six moderations of fundamentalism and each of the domains of sexual consent. A total of three moderations were found to be significant. For the sake of parsimony, the 15 non-significant moderations were not reported in the following section.

Table 13

Males Only: Correlations of Main Variables and Prospective Covariates (N range =178 – 184, pairwise deletion)

	1	2	3	4	5	6	7	8	9	10	11	12
1. Safety/Comfort	—											
2. Agree/Want	.59**	—										
3. Readiness	.76**	.67**	—									
4. Direct Nonverbal	.16*	.11	.10	—								
5. Passive	.16*	.18*	.16*	.67**	—							
6. Initiator	.23**	.23**	.17*	.49**	.45**	—						
7. Intrapersonal RC	-.04	-.11	-.03	-.20**	-.14	-.17*	—					
8. Interpersonal RC	-.07	-.13	-.03	-.21**	-.17*	-.19*	.85**	—				
9. Fundamental	-.03	-.08	-.02	-.13	-.07	-.14	.61**	.57**	—			
Prospective Covariates												
10. Early Age Sex ^a	.05	.02	-.06	-.07	-.06	-.004	.07	.08	.04	—		
11. Age	.01	.07	.07	-.02	-.03	-.01	.01	-.03	-.07	.06	—	
12. Sexual Identity ^b	-.08	-.06	-.06	-.02	.06	.03	-.11	-.09	-.15*	-.15*	.12	—

^a0= 15 or younger; 1= 16 or older.

^b0=Heterosexual; 1=Another sexual identity.

* $p < .05$ ** $p < .01$.

Model for the moderating effect of assigned sex within the relation between intrapersonal religious commitment and external consent – communication/initiator behaviors. In this moderation analysis, age (continuous variable) and relationship status – committed (categorical variable, dummy-coded) were included as covariates in this model. The overall model was found to be significant ($R^2 = .06$, $F(5, 939) = 13.00$, $p < .001$). The overall effect size was small, Cohen's $f^2 = .06$. The main effect of intrapersonal religious commitment ($B = -.002$, $p = .17$) on communication/initiator behaviors was not significant. The main effect of participant assigned sex ($B = .18$, $p < .001$) on communication/initiator behaviors was significant. Age ($B = -.01$, $p < .001$) was a significant predictor of communication/initiator behaviors; older age associated

Table 14

Moderation of assigned sex within the relation between intrapersonal religious commitment and external consent – communication/initiator behaviors (N = 945).

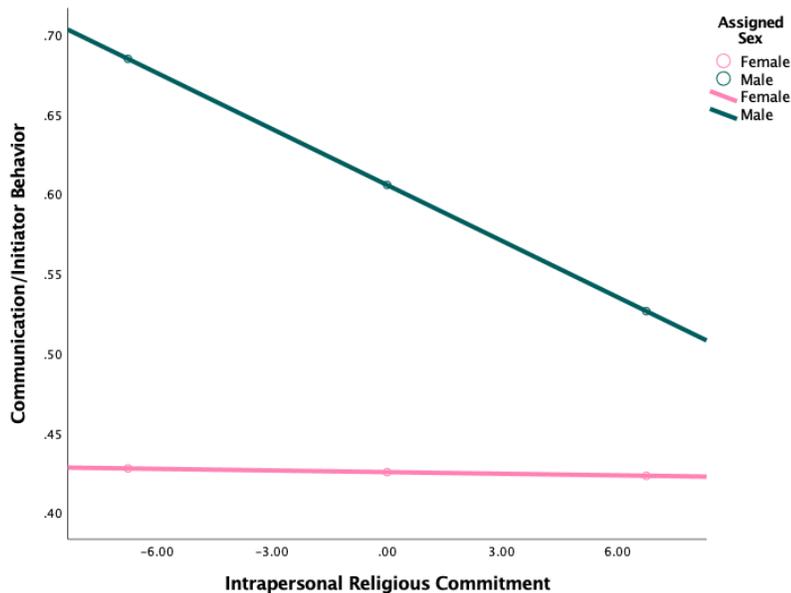
Variables	B	SE	t	p	LLCI	ULCI
Constant	.67	.06	10.46	<.001	.54	.79
Intrapersonal RC	-.002	.002	-1.39	.17	-.006	.001
Assigned sex ^a	.18	.03	5.88	<.001	.12	.24
Interaction	-.01	.005	-2.33	.02	-.02	-.002
Age	-.01	.003	-4.28	<.001	-.02	-.01
Relationship status – committed ^b	.07	.03	2.72	.01	.02	.12
R ²	0.06					
Δ R ²	0.01					
f ²	0.06					

^a Female = 0; Male =1.

^bNot endorsed=0; Endorsed=1.

Figure 1

Interaction of Intrapersonal Religious Commitment and Communication/Initiator Behavior by Assigned Sex



with lower levels of communication/initiator behaviors. Relationship status – committed ($B = .07, p = .007$) was a significant predictor of communication/initiator behaviors; being in a committed relationship (i.e., boyfriend/girlfriend, fiancée/spouse) was associated with higher levels of communication/initiator behaviors compared to individuals who engaged in first-time sex with an unfamiliar partner (i.e., just met, acquaintance). Addition of the interaction (intrapersonal religious commitment x assigned sex) was found to be statistically significant $B = -.01, t(939) = -2.33, p = .02, R^2 \text{ change} = .005, 95\% \text{ C.I. } (-.02, -.002)$. Although intrapersonal religious commitment had no predictive effect on external consent - communication/initiator behaviors in women ($B = -.0003, SE = .002, t(939) = -0.18, p = .86$), intrapersonal religious commitment was found to be significantly negatively related to external consent - communication/initiator behaviors in men ($B = -.01, SE = .005, t(939) = -2.60, p = .009$). Participant assigned sex did moderate the relation between intrapersonal religious commitment and external consent - communication/initiator behaviors. Specifically, as intrapersonal religious commitment increased in men, external consent - communication/initiator behaviors decreased (see Figure 1).

Model for the moderating effect of assigned sex within the relation between interpersonal religious commitment and external consent – communication/initiator behaviors. In this moderation age (continuous variable) and relationship status – committed (categorical variable, dummy-coded) were included as covariates in this model. The overall model was found to be significant ($R^2 = .07, F(5, 939) = 13.37, p < .001$). The overall effect size was small, Cohen's $f^2 = .08$. The main effect of interpersonal religious commitment ($B = -0.002, p = .45$) on communication/initiator

behaviors was not significant. Participant assigned sex ($B = .18, p < .001$) on communication/initiator behaviors was significant. Age ($B = -0.01, p < .001$) was a significant predictor of communication/initiator behaviors; older age associated with lower levels of communication/initiator behaviors. Relationship status – committed ($B = .07, p = .01$) was a significant predictor of communication/initiator behaviors; being in a committed relationship (i.e., boyfriend/girlfriend, fiancée/spouse) was associated with higher levels of communication/initiator behaviors compared to individuals who engaged in first-time sex with an unfamiliar partner (i.e., just met, acquaintance). Addition of the interaction (interpersonal religious commitment x assigned sex) was found to be statistically significant $B = -.02, t(939) = -2.87, p = .004, R^2 \text{ change} = .01, 95\% \text{ C.I. } (-.04, -.007)$. Although interpersonal religious commitment had no predictive effect on external consent - communication/initiator behaviors in women ($B = .002, SE = .003, t(939) = .63, p = .53$), interpersonal religious commitment was found to be significantly negatively related to external consent - communication/initiator behaviors in men ($B = -.02, SE = .007, t(939) = -2.85, p = .004$). Participant assigned sex did moderate the relation between interpersonal religious commitment and external consent - communication/initiator behaviors. Specifically, as interpersonal religious commitment increased in men, external consent - communication/initiator behaviors decreased (see Figure 2).

Table 15

Moderation of assigned sex within the relation between interpersonal religious commitment and external consent – communication/initiator behaviors (N = 945).

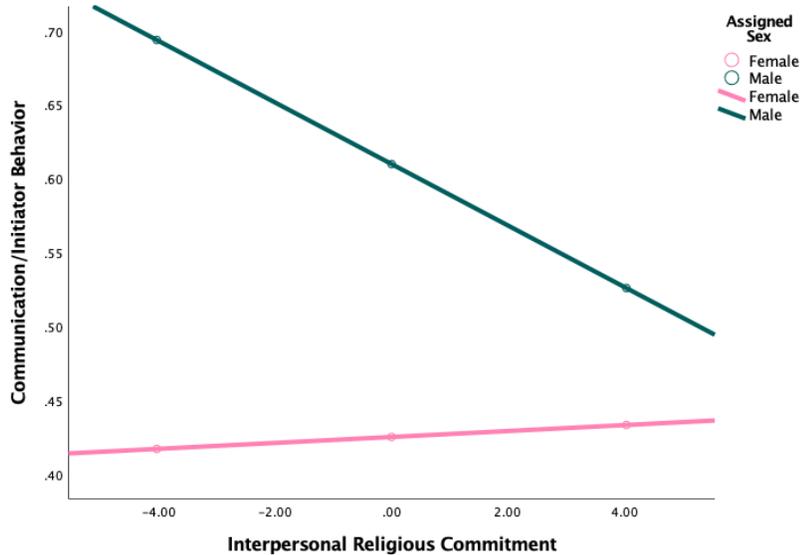
Variables	B	SE	t	p	LLCI	ULCI
Constant	.67	.06	10.69	<.001	.55	.80
Interpersonal RC	-.002	.003	-.75	.45	-.008	.004
Assigned sex ^a	.18	.03	6.07	<.001	.13	.24
Interaction	-.02	.01	2.87	.004	-.04	-.01
Age	-.01	.002	-4.44	<.001	-.02	-.01
Relationship status – committed ^b	.07	.03	2.60	.01	.02	.12
R ²	.07					
Δ R ²	.01					
f ²	.08					

^a Female = 0; Male =1.

^bNot endorsed=0; Endorsed=1.

Figure 2

Interaction of Interpersonal Religious Commitment and Communication/Initiator Behavior by Assigned sex



Model for the moderating effect of assigned sex within the relation between interpersonal religious commitment and external consent – direct nonverbal behaviors.

In this moderation age (continuous variable) was included as a covariate in this model.

The overall model was found to be significant ($R^2 = .03$, $F(4, 951) = 6.28$, $p < .001$).

The overall effect size was small, Cohen's $f^2 = .03$. The main effect of interpersonal religious commitment ($B = -.004$, $p = .042$) on direct nonverbal behaviors was significant.

Participant assigned sex ($B = .03$, $p = .16$) on direct nonverbal behaviors was not

significant. Age ($B = -0.01$, $p < .001$) was a significant predictor of direct nonverbal

behaviors; older age associated with lower levels of direct nonverbal behaviors. Addition

of the interaction (interpersonal religious commitment x assigned sex) was found to be

statistically significant $B = -.01$, $t(951) = -2.23$, $p = .0258$, R^2 change = .01, 95% C.I. (-

.0238, -.0015). Although interpersonal religious commitment had no predictive effect on

external consent – direct nonverbal behaviors in women ($B = -.002$, $SE = .002$, $t(951) = -$

0.83, $p = .41$), interpersonal religious commitment was found to be significantly

negatively related to external consent – direct nonverbal behaviors in men ($B = -.01$, $SE =$

.005, $t(951) = -2.80$, $p = .01$). Participant assigned sex did moderate the relation between

interpersonal religious commitment and external consent – direct nonverbal behaviors.

Specifically, as interpersonal religious commitment increased in men, external consent – direct nonverbal behaviors decreased (see Figure 3).

Table 16

Moderation of assigned sex within the relation between interpersonal religious commitment and external consent – direct nonverbal behaviors (N = 956).

Variables	<i>B</i>	SE	<i>t</i>	<i>p</i>	LLCI	ULCI
Constant	.99	.04	22.75	< .001	.90	1.07
Interpersonal RC	-.004	.002	-2.04	.042	-.008	-.0002
Assigned sex ^a	.03	.02	1.40	.16	-.01	.07
Interaction	-.01	.01	-2.23	.03	-.02	-.002
Age	-.01	.002	-3.73	< .001	-.01	-.004
R ²	.03					
Δ R ²	.01					
f ²	.03					

^a Female = 0; Male = 1.

Figure 3

Interaction of Interpersonal Religious Commitment and Direct Nonverbal Communication by Assigned sex

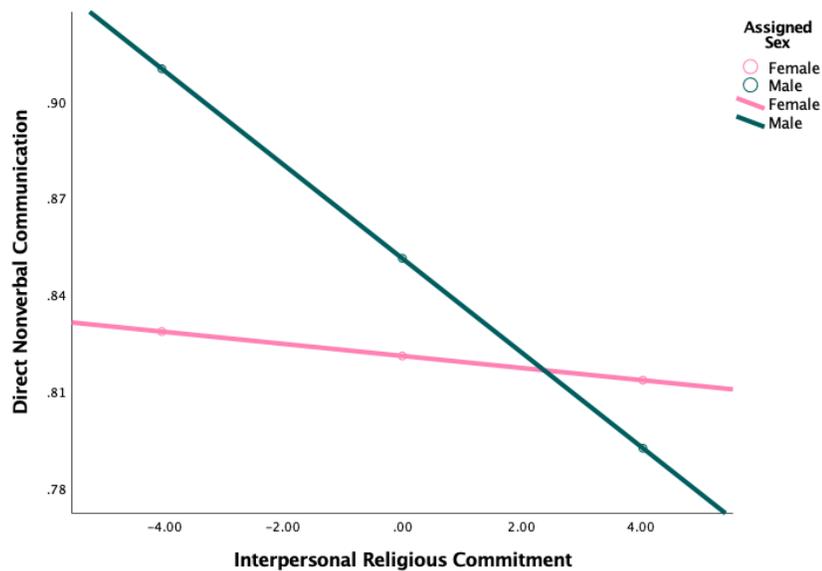


Table 17*Summary of Hypothesized Findings*

	Hypothesis	Analysis	Result/Finding
1.	How are multiple dimensions of religiosity, specifically (1) intrapersonal religious commitment, (2) interpersonal religious commitment, and (3) religious fundamentalism, associated with multiple dimensions of sexual consent, specifically the 6 domains of internal and external consent which includes (1) direct nonverbal behavior, (2) passive behaviors, (3) communication/initiator behaviors, (4) safety/comfort, (5) agreement/wantedness, and (6) readiness during first intercourse.	Canonical Correlation	Not supported
2.	Fundamentalism would be associated with external consent – direct nonverbal behavior over and above intrapersonal religious commitment and interpersonal religious commitment.	Multiple Regression	Not supported
3.	Fundamentalism would be associated with external consent – passive behavior over and above intrapersonal religious commitment and interpersonal religious commitment.	Multiple Regression	Not supported
4.	Fundamentalism would be associated with external consent – communication/initiator behavior over and above intrapersonal religious commitment and interpersonal religious commitment.	Multiple Regression	Not supported
5.	Fundamentalism would be associated with internal consent – safety/comfort over and above intrapersonal religious commitment and interpersonal religious commitment.	Multiple Regression	Not supported
6.	Fundamentalism would be associated with internal consent – agreement/wantedness over and above intrapersonal religious commitment and interpersonal religious commitment.	Multiple Regression	Not supported
7.	Fundamentalism would be associated with internal consent – readiness over and above intrapersonal religious commitment and interpersonal religious commitment.	Multiple Regression	Not supported

Discussion

Given high rates of sexual assault, it is essential to better understand factors that influence sexual consent processes in order to both reduce rates of sexual assault victimization and perpetration as well as inform sexual assault prevention efforts. Religiosity may be an important factor that influences sexual consent processes as religious doctrines and institutions have heavily set norms about what is sexually normative. Further, losing one's virginity (i.e., first-time sexual intercourse) is, often, a momentous/meaningful experience where both religious influences and sexual consent processes may uniquely interact. Thus, the goal of the present study was to examine the role of religiosity on sexual consent processes during the context of an individual's first-time sexual intercourse. Bivariate and multivariate statistical analyses were used to examine the relationship between multidimensional constructs of religiosity and sexual consent and the potential moderating effect of assigned sex on this relationship. This study contributes to the literature as it is the first known quantitative study to examine religiosity and sexual consent. Nonetheless, as the proposed hypotheses of this study were not supported, further research is required to delineate the relationship between these variables.

Interpretation of Results

Bivariate Correlations

At the bivariate level, religiosity was found to be significantly associated with some sexual consent processes. Specifically, intrapersonal religious commitment was found to be significantly negatively associated with direct nonverbal behaviors, passive behaviors, and communication/initiator behaviors. Interpersonal religious commitment

was found to be significantly negatively associated with direct nonverbal behaviors. Lastly, fundamentalism was found to be significantly negatively associated with direct nonverbal behaviors and communication/initiator behaviors. These significant negative associations suggests that individuals higher in religiosity may utilize lower levels of external consent behaviors compared to individuals with lower levels of religiosity. In contrast, one's religiosity was not related to their internal consent processes of safety/comfort, agreement/wantedness, or readiness. Taken together, findings suggest that religiosity may be a risk factor for fewer external consent behaviors, and therefore more negative sexual outcomes. Nonetheless, as detailed below, this relationship is complex and should be considered within the larger relational, social, and cultural context.

Canonical Correlation Between Religiosity and Sexual Consent

The first research aim was to examine the relations between religiosity and internal and external domains of sexual consent through canonical correlation. Canonical correlation analysis examines the multivariate, linear association between a set of predictors and a set of outcomes (i.e., canonical variates) by creating weighted linear composites of each set (Meyers et. al., 2016), which are called canonical functions. Specifically, a canonical function is the squared Pearson r between the two canonical variates (in this study religiosity with significant covariates and sexual consent are the two canonical variates), which specifies the variance explained by the relatedness between the two canonical variates. The hypothesis that there would be significant associations between these two constructs was not supported. Intrapersonal religious commitment, interpersonal religious commitment, and religious fundamentalism were not found to be a significant factor in the canonical correlation. The first function was

significant between covariates and sexual consent processes. The first function demonstrated that men, who were younger, that engaged in first-time sexual intercourse at age 16 or older, and were within a committed relationship were associated with engaging in more communication/initiator behaviors and with higher levels of internal consent. Specifically, these men endorsed higher levels of safety/comfort, more agreement/wantedness, and more readiness. Results suggest that an individual's assigned sex, age, age of first-sex, and relationship status appeared to be more important than religiosity in one's sexual consent processes. Thus, these findings suggest that demographic factors are more important in one's sexual consent during first-time sexual intercourse than religiosity.

These findings are in line with previous research that demonstrates that experiences during first-time sexual intercourse are influenced by gender (Higgins et al., 2010; Reissing et al., 2012), age (Madkour et al. 2014), and relationship status (Higgins et al., 2010; Reissing et al., 2012). For example, first-time sexual intercourse that occurs within the context of a committed relationship has been associated with positive outcomes, specifically, lower feelings of guilt and more physical and psychological satisfaction (Higgins et al., 2010). In addition, men experienced significantly more psychological and physical pleasure than women (Higgins et al., 2010), which highlights gender differences.

The results in the current study also contradict research that demonstrates religiosity is associated with sexual attitudes (Lefkowitz et al., 2004; Sheeran et al., 1993) and behaviors (Kirk & Lewis, 2013; Vasilenko et al., 2013; Vasilenko & Espinosa-Hernández, 2019; Vasilenko & Lefkowitz, 2014). It is important to note that only the

Vasilenko and Lefkowitz (2014) study focused on first time sexual intercourse. There is limited research on religiosity and sexual attitudes and behaviors during first-time sexual intercourse. In addition, there is no quantitative research to date, to the author's knowledge, that specifically examines the relation between religiosity and sexual consent processes. Sexual consent processes are not the same as one's sexual attitudes and sexual behaviors. It is possible that sexual consent processes are more influenced by other factors, such as the environmental setting (Jozkowski et al., 2018), alcohol use (Jozkowski & Wiersma, 2015), and relationship status (Marcantonio et al., 2018). Further, there is evidence to suggest that the relationship between religiosity and sexual outcomes may differ between racial and ethnic groups. For example, it was found that among Latino students, spirituality and sexual attitudes was related to sexual behaviors. Conversely, for non-Latino students, only sexual attitudes were associated with sexual behaviors, not religiosity or spirituality (Luquis et al., 2015). Again, this study did not focus on first-time sexual intercourse. Taken together, this highlights the complex nature of the relationship between religiosity and sexual consent processes that were unable to be captured in this study. Future research may benefit from examining race and ethnicity as it relates to religiosity and sexual consent processes. As patterns of results exhibited differences between internal and external consent processes, future research will benefit from analyzing internal and external consent separately. It is possible that a canonical correlation analysis with only internal consent variables, may have yielded different results.

Regression Analyses with Fundamentalism Predicting Sexual Consent Processes

Given that fundamentalism is associated with strict adherence to one's faith and religious scripture, and over 99% of the participants engaged in first-time sex outside of marriage, we predicted that fundamentalism would be more strongly negatively associated with sexual consent processes than either intrapersonal or interpersonal religious commitment. The hypotheses that fundamentalism would be associated with sexual consent processes, specifically (1) lower levels of direct nonverbal behavior, (2) higher levels of passive behaviors, (3) lower levels of communication/initiator behaviors, (4) lower levels of safety/comfort, (5) lower levels of agreement/wantedness, and (6) lower levels of readiness, over and above intrapersonal religious commitment and interpersonal religious commitment were not supported. These findings contradict previous research that shows that fundamentalism is associated with sexual attitudes and behaviors (Ahrold et al., 2011; Ahrold & Meston, 2010; Farmer et al., 2009; Woo et al., 2012); however, none of these studies examined first time sexual intercourse. As such, it is possible that fundamentalism may interact with sexual attitudes and behaviors differently during first time sex.

In the current study, fundamentalism was measured by only one item, "what the texts and stories of my religion tell me is absolutely true and must not be changed." It is possible that a one item measure does not fully capture the domain of fundamentalism. A more robust measure of fundamentalism, such as the Religious Fundamentalism Scale (Altemeyer & Hunsberger, 1992) or Religious Schema Scale (Streib et al., 2010) could be used in future studies.

Exploratory Moderations: Assigned Sex Differences Between Religiosity and Sexual Consent

Men and women are socialized differently when it comes to both religiosity and sexuality. Specifically, in the context of religiosity, sexual outcomes may be more influential for women than men (Ahrold et al., 2011; Rostosky et al., 2004). Related to sexual consent, there are gender differences regarding men and women's sexual consent processes (Jozkowski, Peterson, et al., 2014; Jozkowski, Sanders, et al., 2014; Willis, Hunt, et al., 2019), with men using more nonverbal cues than women to indicate sexual consent (Jozkowski, Peterson, et al., 2014). Importantly, none of these studies examined gender differences during first times sexual intercourse. To the author's knowledge, there are no studies that examine gender differences between religiosity and sexual consent during the context of first-time sex. Given these robust gender differences, exploratory moderation analyses were run to examine assigned sex as a moderator between religiosity and sexual consent. In this exploratory analysis 18 moderations were explored between the three religiosity domains (i.e., intrapersonal religious commitment, interpersonal religious commitment, and religious fundamentalism) and the six domains of sexual consent (i.e., direct nonverbal behavior, passive behaviors, communication/initiator behaviors, safety/comfort, agreement/wantedness, and readiness).

Of these 18 moderations, three were significant. Specifically, there was a moderating effect of assigned sex within the relation between (1) intrapersonal religious commitment and external consent – communication/initiator behaviors, (2) interpersonal religious commitment and external consent – communication/initiator, and (3) interpersonal religious commitment and external consent – direct nonverbal behaviors.

The other 15 exploratory moderations were not found to be significant. Thus, the following interpretation of the three significant moderations should be considered in light of the 15 non-significant moderations.

Related to the moderating effect of assigned sex within the relation between intrapersonal religious commitment and external consent – communication/initiator behaviors, males with higher levels of intrapersonal religious commitment had significantly lower levels of communication/initiator behavior compared to males with lower levels of intrapersonal religious commitment. For females, intrapersonal religious commitment was not related to their communication/initiator behavior. Similarly, on the moderating effect of assigned sex within the relation between interpersonal religious commitment and external consent – communication/initiator, males with higher levels of interpersonal religious commitment had significantly lower levels of communication/initiator behavior compared to males with lower levels of interpersonal religious commitment. For females, interpersonal religious commitment was not related to their communication/initiator behavior. Lastly, on the moderating effect of assigned sex within the relation between interpersonal religious commitment and external consent – direct nonverbal behaviors, males with higher levels of interpersonal religious commitment had significantly lower levels of direct nonverbal communication behavior compared to males with lower levels of interpersonal religious commitment. For females, interpersonal religious commitment was not related to their nonverbal communication behavior.

Assigned Sex Differences with Religiosity and External Consent. The significant relation of religiosity and external consent processes for males is not surprising. Prior research indicates that men utilize more external consent cues, direct nonverbal behaviors, passive behaviors, and communication/initiator behavior than women during sexual activity (Jozkowski & Wiersma, 2015). As religiosity has been found to account for more variance in women than in men's sexual attitudes and fantasies (Ahrold et al., 2011; not in the context of first-time sex), it is surprising that multiple domains of religiosity and sexual consent processes were not found to be moderated for females in any of the 18 moderations.

Assigned Sex Differences with Religiosity and Internal Consent. None of the moderations regarding internal consent processes were significant. One explanation for the lack of significance with internal consent processes, is that internal consent may be more difficult to accurately measure compared to external consent. External consent is a visible action that can be viewed by both the individual engaging in the the sexual consent process as well as the observer, albiet direct nonverbal and passive consent processes are less interpretable than communication/initiator behavior. In contrast, internal consent processes are invisible to the observer and may even be invisible, or out of awareness, to the individual engaging in the internal consent process. Indeed, Levand and Zapien (2019) provide support for this claim through a phemomenological approach to better understanding sexual consent processes. The authors posit that Husserl's phenomenological idea of active and passive intentionality, specifically passive synthesis, allows for the idea that components of sexual consent (i.e., desire or willingness) may not be in one's awareness during a sexual interaction (Levand & Zapien, 2019). The lack

of significance in the current study highlights the complex nature of sexual consent processes. Future research is needed to elucidate the mechanisms that interact with and influence sexual consent processes.

Limitations

It is important to acknowledge several limitations that may influence these results. This study involved retrospective self-report, which is inherently subject to social desirability and recall biases. Participants were specifically asked to recall the first time they engaged in sexual intercourse when answering questions related to their sexual consent processes (i.e., direct nonverbal behavior, passive behaviors, communication/initiator behaviors, safety/comfort, agreement/wantedness, and readiness); however, related to religiosity (i.e., intrapersonal religious commitment, interpersonal religious commitment, and religious fundamentalism) participants were asked “indicate on the following scale how much each statement is true for you.” This is problematic as participants religiosity may have fluctuated since their first-time sexual intercourse. Indeed, religious identity development is ongoing during college years (Barry & Nelson, 2005; Fidler et. al., 2009).

The use of a cross-sectional study design prohibits causality. Given the sensitive nature of this topic, the current sample may have been influenced by a self-selection bias. It is possible that individuals who opted to participate and fully completed the study versus those that did not participate or complete this study may have differed in variables of interest. Further, limitations of this study include the inability to establish temporal relationships between religiosity and sexual consent processes, which is an area that requires further investigation. As previously mentioned, another limitation is that there

are likely multiple factors that influence the relation between religiosity and sexual consent processes that were not measured in the present study. Another limitation is that a relatively small percentage of variance was predicted within only three of 18 moderations. Thus, a large proportion of influence on sexual consent processes is explained by factors other than intrapersonal religious commitment, interpersonal religious commitment, and religious fundamentalism.

The FTI data were not geared towards testing the specific hypotheses of this study. Thus, a limitation of secondary data was the reduced choice of measures. Due to the nature of secondary data, religious fundamentalism was measured through one item “What the texts and stories of my religion tell me is absolutely true and must not be changed” from the religious schema scale (Streib et al., 2010). Although the item is an essential concept to religious fundamentalism and is generalizable across a variety of religions, it would have been preferable to utilize a validated scale, such as the full religious schema scale (Streib et al., 2010). In addition, the FTI dataset did not contain demographic questions related to race and ethnicity, which precluded the ability to examine racial differences between religiosity, religious fundamentalism, and sexual consent. Another limitation of this dataset is the homogeneous nature of participants’ sexual identity (94.2% identified as heterosexual), which prevents the ability to examine sexual identity differences among religiosity, religious fundamentalism, and sexual consent. Lastly, a sizeable majority of the participants identified as female (81.1%), young ($M = 21.28$), and all participants were attending a university.

Strengths of Study

Despite these limitations, this study contributes to our knowledge on contextual factors that may influence sexual consent processes. The current study examined both religiosity and sexual consent as multidimensional constructs, instead of utilizing unidimensional constructs. Multidimensional conceptualizations of religiosity (Vasilenko & Espinosa-Hernández, 2019) and sexual consent (Jozkowski, Sanders, et al., 2014) is supported within the literature. In addition, the use of secondary data comes with several advantages. The FTI data were collected by experienced and well-known researchers within the field of sexual consent who can establish high quality research projects as recommended by Cheng and Phillips (2014). The FTI sample was large and captured a range of participants from three different geographical locations. The use of a large sample ensures that this study was sufficiently powered. Lastly, the use of existing data for secondary analysis is advantageous as it increases research efficiency by saving both time and financial resources (Cheng & Phillips, 2014).

Implications

The findings of this study have some potentially important implications towards efforts to prevent and reduce sexual assault perpetration and victimization. In general, findings suggest, for men, that religiosity may be a risk factor for less consent communication, and therefore more negative sexual outcomes. This highlights a potential need for targeted interventions for religious men where external consent communication can be encouraged. Importantly, interventions should include consent communication as part of a broader comprehensive sexuality education programming.

More broadly, this study illustrates the need to examine sexual consent as multidimensional construct and to consider contextual factors. Thus, it is essential for educators to incorporate contextual factors into consent discussions, helping individuals understand that communication varies in all contexts, including sexual consent. Educators should encourage individuals to be more attuned to the context and how context can impact sexual interactions. It is also important for educators to teach individuals how sexual consent interactions are imbedded in the broader social, cultural, and historical context.

Future Directions

This study only found a significant relation between religiosity and external consent processes for men. Future research would benefit from examining other variables/mechanisms, such as sexual norms or attitudes, as it relates to religiosity and sexual consent processes. The canonical correlation analysis found that assigned sex, age, age of first sex, and relationship status were significantly related to more communication/initiator behaviors and higher levels of internal consent. As such, future sexual consent research may wish to examine age, age of first sex, and relationship status as moderators in the relation between religiosity and sexual consent processes. The patterns of results throughout this study showed differences between internal and external consent processes. Canonical correlation analysis revealed a significant relation between covariates and all three internal consent processes and only one external consent process. In contrast, moderation analyses demonstrated significance between religiosity and external consent processes only. As such, future research will benefit from analyzing internal consent and external consent separately.

This study was unable to examine ethnicity/race as a potential covariate. As previous research has found significant differences between religiosity and sexual outcomes differing by race/ethnicity (e.g., Ahrold & Meston, 2010; Woo et al., 2012), it would be fruitful to examine this relationship. As noted, there is a strong need to increase the ethnic and racial diversity within sexual consent studies. Currently, our understanding and conceptualization of sexual consent is mostly through the lens of White individuals. Sexual scripts, which are based on the current cultural environment, likely influence how sexual consent occurs (e.g., Bay-Cheng & Eliseo-Arras, 2008; Conroy, Krishnakumar, & Leone, 2015; Humphreys, 2007). Thus, it is possible that sexual consent occurs differently within another ethnic and/or racial group. It is essential that researchers begin to understand sexual consent through a more diverse lens through increased diversity in study samples.

The current sample was homogeneous in regards to sexual identity (94.2% identified as heterosexual), assigned sex (81.1% female), age ($M = 21.28$), and education status (100% attending a university). The current study's homogeneous sample, unfortunately, reflects most literature on sexual consent with participants being university students (e.g., Jozkowski et al., 2018; Jozkowski, Peterson, et al., 2014; Willis & Jozkowski, 2019). This is problematic as our current conceptualization of sexual consent is conflated with education level and age. It is possible that sexual consent may look different outside of a university setting. For example, individuals in a university setting are likely to have more exposure to affirmative consent policies. A possible avenue for future research is to examine differences between community and university students' conceptualizations of sexual consent. In addition, since the majority of sexual consent

research is conducted with college samples, participants are generally young (18-25). Sexual consent may function differently across the lifespan; therefore, work is needed with participants older than 25 as there may be potential generational and cohort differences of sexual consent. Taken together, research on sexual consent is needed in within community settings to more fully understand consent across sub-groups, the lifespan, and settings. Future research may wish to collect a more heterogeneous sample, through oversampling sexual minorities, men, older individuals, and sampling a community sample.

Further, future research may wish to examine the relation between religiosity and sexual consent processes by utilizing a validated measure of fundamentalism. Similarly, future research may examine other domains of religiosity such as spirituality and paranormal belief, which have been significantly related to sexual outcomes (Ahrold et al., 2011; Farmer et al., 2009; Woo et al., 2012). The current study also only examined the relation between religiosity and sexual consent processes in the context of one sexual behavior, penile-vaginal intercourse. It may be fruitful for future studies to examine this relation with other sexual behaviors. Recent research suggests that internal and external consent differs depending on the type of sexual behavior (Willis & Smith, 2021).

Cross-sectional research does not allow for inferring causation. Future studies should examine sexual consent using a longitudinal design, such as a daily diary study. This may help to capture a more accurate portrayal of sexual consent due to decreased recall biases that are inherent within retrospective studies (Bolger et al., 2003). In addition, longitudinal design allows researchers to study sexual consent within the

context of ongoing daily life, which is less feasible in a cross-sectional design (Bolger et al., 2003).

Given the complexity of sexual consent processes, there is a continued need to address the social context of sexual consent processes. Future research may benefit from an ethnographic design to explore the social dimensions of sexual consent. Ethnographic methods are useful in that these techniques help assess complex and socially embedded dimensions of interactions (Ginsburg, Rapp, & Reiter, 1995). Indeed, research utilizing ethnographic methodology has found seven social dimensions of consent for heterosexuals: 1) gendered heterosexual scripts; 2) sexual citizenship; 3) intersectionality; 4) men's fear of "doing" consent wrong; 5) "drunk sex"; 6) peer groups; and 7) spatial/temporal factors impact sexual consent practices (Hirsch et al., 2018). For instance, within the sexual citizenship dimension, Black men described detailed consent practices, noting the racialized risk of sexual assault accusations, especially if with a White woman. These authors also suggest that it is possible for Black men to have more respect for others' bodies due the absence of racial privilege (Hirsch et al., 2018). As such, ethnographic designs allow for the ability to pick up on diversity related issues that may be missed in a quantitative design.

Conclusions

The present study investigated the relation between multidimensional domains of religiosity and sexual consent processes during first-time sexual intercourse. In general, findings suggest that religiosity, specifically intrapersonal religious commitment, interpersonal religious commitment, and fundamentalism, is not a significant predictor of sexual consent processes. Instead, canonical correlation revealed that assigned sex, age,

age of first-sex, and relationship status predicted communication/initiators behaviors and internal consent processes. Moderations analyses revealed that for men, higher levels of religiosity were associated with lower levels of external consent behaviors suggesting that religiosity may be a risk factor for less consent communication in men. Importantly, the current study highlights the complexity of sexual consent processes and the need to examine other contextual factors.

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