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THE ROLE OF SEXUAL BELIEFS AND SEXUAL SELF- ESTEEM IN THE ADOPTION OF SEXUALLY AGGRESSIVE BEHAVIORS AMONG COLLEGE STUDENTS.

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AVISOS LEGAIS

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Abstract

Introduction: Considering previous literature on sexual violence in university populations, sexual beliefs are of interest to this context. Dysfunctional sexual beliefs lead men to establish high expectations about sexual performances, enhancing their own vulnerability. Such vulnerability may increase the need to reinforce the individual's manhood, resulting in sexual aggression as a means to establish it. Additionally, there were reasons to believe that sexual self-esteem may be the bridge through which that association occurs.

Objectives: This study aimed to understand how the endorsement of sexual dysfunctional beliefs may be associated with both sexual self-esteem and sexually aggressive behavior; and, simultaneously, if there is an association between sexual self-esteem and sexually aggressive behaviors in college youth. Finally, this study aimed to test the potential mediating role of sexual self-esteem in the relationship between sexual beliefs and sexual aggression in university populations.

Method and Sample: Three hundred sixty-four male participants submitted their answers to an online questionnaire assessing sexual beliefs, sexual self-esteem, and aggressive sexual behavior. The inclusion criteria required all participants to be 18 years of age or older, attending college and to report themselves as heterosexual. The statistical approach accounted for a mediation analysis.

Results: Findings revealed a significant relationship between sexual dysfunctional beliefs and sexual aggression, with models explaining between 14% and 27% of the variance of results. Despite that, the results didn't support the hypothesis of the mediating role of sexual self-esteem in that relationship.

Conclusion: The focus stands in the cognitive domain. Results suggest that young men's beliefs have about sexuality may have a role in sexual aggression. The present results should have great implications within prevention programs. Further research is needed to deepen the knowledge and understanding of such phenomenon.

Keywords: Sexual aggression; sexually aggressive strategies; sexual beliefs; sexual self-esteem; college students

1. Introduction

Sexual violence has been a topic of priority research, and it is generally defined as consisting of non-consensual sexual acts, emerging within a plurality of contexts (O'Neil & Morgan, 2010). Among these contexts, there is evidence that sexually aggressive behaviors have been somewhat present in university populations over time (e.g, Berkowitz, 1992; Carvalho & Sá, 2017; Carvalho et al., 2018; Koss & Oros, 1982 cited in Briere & Malamuth, 1983).

Within this regard, there is considerable literature on the psychological features characterizing college students with a history of sexual perpetration (e.g. Carvalho & Nobre, 2013; Carvalho & Sá, 2017; Malamuth & Check, 1983). These features include impulsivity, neuroticism, psychoticism, less confidence in others, hostility, and aggressiveness. Overall, psychopathology and maladaptive personality traits are often found in the literature regarding sexual offenders, including non-forensic samples of college students (Carvalho & Nobre, 2013). Nonetheless, other characteristics have also been associated with this type of aggressive behavior.

Some data support a relationship between sexual dysfunction and sexual assault. Research has revealed that a significant number of sex offenders report sexual difficulties, sexual incompetence, and sexual dysfunction (Bownes, 1993; Dwyer & Amberson, 1989; Lee et. Al, 2001; Jones et. Al, 2010). However, although sex offenders are often diagnosed with sexual dysfunction, it has not been considered a risk factor for sexual violence. Metz and Sawyer (2004) suggest that sexual dysfunctions interact with other factors related to the sexual offense, predisposing individuals to sexual violence. The authors state that sexual dysfunction can be a precursor to a sexual offense, functioning as an aggravating factor in an offensive cycle by increasing stress, anger, and shame, and decreasing sexual satisfaction and self-esteem.

In this perspective, sexual beliefs may be of interest to the context of sexual violence. Sexual beliefs were defined by Nobre (2009) as ideas that individuals have about sexuality and that are based on previous life experience as well as learning processes. Men with sexual dysfunction are prone to present conservative, unrealistic, and even demanding beliefs about sexuality, which makes them more vulnerable to developing self-interpretations (Barlow, 1986). Demanding and unrealistic beliefs about men's sexual performance ('Macho' beliefs) would set a highly demanding standard that would make men more vulnerable to developing catastrophic interpretations of a sexual event whenever these standards are not met (Nobre,

2014). As so, dysfunctional sexual beliefs might have a role in sexual offending behavior as well. In particular, the 'Macho' beliefs could underpin such behavior. The 'Macho' beliefs denominate the concept of the man's ability to always be ready for sex, to satisfy all women, and to keep the penis erect until the very end of any sexual activity (Nobre et al., 2003). Some examples of these beliefs are "a real man is always ready for sex" and "a real man has sex very often". Nobre, Gouveia, and Gomes (2003) state that the more sexual dysfunctional beliefs a man has (specifically conservative and 'macho'), the less likely he is to present himself as a sexually liberal subject. In addition, Barnett, Hale, and Sligar (2017) found that male sexual dysfunctional beliefs significantly explained the variance in accepting rape myths. It is important to clarify the concept of rape myth. According to Burt (1980), rape myths are prejudiced, stereotyped, or false beliefs about rape, rape victims, and rapists. Some examples of these myths are "any healthy woman can resist a rapist if she really wants to" or "women ask for it". Thus, we can more easily conceptualize rape myths as generally false attitudes and beliefs about rape that are widely and persistently defended and that serve to deny and justify male sexual assault against women (Lonsway & Fitzgerald, 1994).

There is also evidence in the literature that the traditional profile of masculinity is associated with sexual assault (Muehlenhard & Linton, 1987 cit in. Abbey et al., 1998; Mosher & Anderson, 1986). It is important to notice that men who were exposed to contexts that promote the traditional condition of the male role, reported significantly more dysfunctional sexual beliefs than those who were exposed to the modern condition of the male role (Clarke et al., 2015). Additionally, one of the dimensions that Mosher and Sirkin (1984) included in the "macho personality" constellation is insensitive sexual beliefs. These beliefs include some men's attitude that a sexual relationship with a woman establishes male power and female submission, and so it should be achieved without any empathic concern for a woman's subjective experience. Such perspective over sexuality and the lack of concern about the woman's experience might be related to a higher probability of engaging in sexually aggressive behaviors. In fact, empirical data support the hypothesis of a relation between the "macho personality" constellation and a history of sexually aggressive behavior.

Malamuth and colleagues (1996) developed the Confluence Model of sexual aggression, suggesting that such behavior is the result of the confluence or interactive combination of motivation, disinhibition, and opportunity predictor variables (Malamuth et al., 1996). The

authors also suggest that the motivation and disinhibition factors form constellations that may be meaningfully organized into two major paths, one of them being the *Hostile Masculinity Path*. Through life, an individual may develop such attitudes and personality characteristics that are conducive to violence against women (Burt, 1980). When the social and cultural influences regard to power, risk-taking, toughness, dominance, aggressiveness, “honor defending” and competitiveness as “masculine” qualities, it enhances the hostility towards female characteristics. Men who have internalized these characteristics are more likely to be aggressive towards women in sexual and non-sexual contexts (Malamuth et al., 1996). Consequently “aggressive courtship” and sexual conquest may be a critical component of manhood for these individuals (Gilmore, 1990 cit in Malamuth et al., 1996). Accordingly, when presenting dysfunctional sexual beliefs, the men establish high expectations about their own performances, enhancing their own vulnerability. This vulnerability may increase the need to reinforce the individual’s manhood, resulting in sexual aggression as a means to establish dominance and power.

There are reasons to believe that self-esteem may be the bridge through which dysfunctional sexual beliefs, namely ‘macho’ beliefs, lead to the adoption of sexually aggressive behaviors. “Sexual self-esteem” has been used to describe an individual's self-perspective as a sexual being, ranging from sexually appealing to unattractive and from sexually competent to incompetent. Thus, sexual self-esteem can be viewed as the value one places on oneself as a sexual being, including sexual identity and perceptions of sexual acceptability (Mayers, Heller & Heller 2003). There is some evidence that sex offenders are indeed characterized by low self-esteem. Sex offenders have been described several times as having negative self-perceptions and low self-esteem (e.g., Bridges et al., 1998; Fisher, et al., 1999; Mann & Hollin, 2001; Alba Scortegagga & Amparo, 2013). Another study showed that students who reported sexual assaults considered themselves sexually incompetent, undesirable, and rejected, as well as highly critical of their sexual performance (Carvalho et al., 2013).

Low self-esteem can also play an important role in the way that sexual beliefs influence sexually aggressive behavior. Sexual aggressors not only present low self-esteem and high self-criticism, but also, indicate weak sexual functioning (Dwyer & Amberson, 1989). Peixoto and Nobre (2017) studied the moderating role of dysfunctional sexual beliefs in the association between the frequency of unsuccessful sexual episodes and the activation of

incompetence schemas, and the results showed that macho beliefs act as moderators (in both heterosexual and homosexual samples). This information supports the cognitive-emotional model of sexual dysfunction, in which men with high ‘macho’ beliefs develop negative ideas about themselves (Nobre, 2006). As so, beliefs associated with the ‘macho’ myth are, in fact, a vulnerability factor for developing incompetence schemas in the face of unsuccessful situations. In this sense, it is possible to believe that dysfunctional sexual beliefs will consequently have some impact on sexual self-esteem.

This study aims to understand how the presence of dysfunctional sexual beliefs, namely beliefs associated with the ‘macho’ myth, may be associated with both sexual self-esteem and the perpetration of sexually aggressive behavior in college youth.

Another objective is to analyze whether there is an association between sexual self-esteem and the perpetration of sexually aggressive behaviors in college youth. Finally, this study aims to test the potential mediating role of sexual self-esteem in the relationship between sexual beliefs and sexual aggression.

In the light of the aforementioned information, the hypothesis of the present study is that the presence of sexually dysfunctional beliefs is positively associated with the adoption of sexually aggressive behaviors. Another hypothesis is that low self-esteem is the process by which that association occurs. The presence of sexual dysfunctional beliefs will result in lower self-esteem (due to the fact that individuals may not correspond to their own “macho” expectations) and, because of it, they will resort to sexual aggression (as a means to cope with that vulnerability).

1. Methods

2.1 Participants and Procedures

Three hundred sixty-four male participants ($M_{\text{age}} = 21.91$, $SD = 2.95$) submitted their answers to an online questionnaire. The inclusion criteria required all participants to be attending college, to report themselves as heterosexual, and be older than 18 years. The survey was advertised on social media as a study on sexual interactions. Due to this topic’s vulnerability to social desirability, the aim of the study wasn’t mentioned. That could have inhibited the participants and had a significant impact on the size of the sample as well as on

the answers given. All participants declared their written informed consent before proceeding to participate. The participation was voluntary, and the confidentiality of the data was guaranteed, as no personal information that could identify respondents was collected. This study was approved by the committee of Ethics Committee of the Faculty of Psychology and Educational Sciences of Porto University in 2021.

2. Measures

3.1 Sexually Aggressive Behavior Scale (SABS; Anderson, 1996).

The SABS is a self-report measure, consisting of 26 items that assess the lifelong frequency of sexual interaction attempted by aggressive means (Anderson, 1996). Each item is scored dichotomously as (1) when a behavior occurred and (0) when the behavior did not occur. Scores for sexual aggression are calculated by adding up the scores obtained on the items for each behavior. The critical items address three different dimensions of sexually aggressive behaviors by questioning how many times they had ever initiated sexual contact for each motive or by engaging in each behavior: sexual coercion (five items, e.g., “you pressured with verbal arguments”), sexual abuse (four items, e.g., “by getting your partner intoxicated”) and use of physical force (three items, e.g., “by using physical force”). Items 1-6 and 11-18 relate to sexual contact with mutual consent, simple seduction or attempts at arousal, or reasons for behaviors that were not part of the analysis and are non-theoretically relevant items used to conceal the critical items. The face validity of the SABS was established with a KR-20 of 0.75. In the present study, the KR-20 for the subscales varied from KR-20 = .56 (sexual abuse) to KR-20 = .92 (physical force), and the total items scored a KR-20 = 0.85. In order to get a more reliable data interpretation, the analysis was performed considering the scale of the total items and not by each sub-dimension.

3.2 The Sexual-Esteem Subscale (Snell, 1989).

The sexual self-esteem subscale is one of the three scales that make up the Sexuality Scale (Snell, 1989). This scale is a ten-item self-assessment instrument that aims to measure sexual esteem (e.g., “I would rate my sexual skill quite highly” and “I sometimes doubt my sexual competence”). The possibility of answering each item varies between "agree" and "disagree" on a Likert scale of five points. The score attributed to each item varies ranges from -2 to 2 and to obtain the total score it is necessary to sum the quotation of all items. In

the validation of the original scale, the alphas for the sexual self-esteem subscale were .93 for men and .92 for women. In the current study, the $\alpha = 0.92$, indicating high levels of internal consistency.

3.3 Sexual Dysfunctional Beliefs Questionnaire (SDBQ; Nobre, Pinto-Gouveia, & Gomes, 2003).

This questionnaire consists of 40 statements representing sexual stereotypes and beliefs found in the literature to be predisposing factors to the development of sexual dysfunctions in men and women (Nobre, 2006). This questionnaire has a female and a male version, in order to better assess gender-specific beliefs. For the aim of the present study, only the male version was used. The response options range from 1 to 5, ("strongly disagree" to "strongly agree"), for each of the statements about the various sexual beliefs (e.g., "Orgasm is possible only by intercourse" and "a real man doesn't need much stimulation to reach orgasm"). Six factors were identified in each version which accounts for 43% of the total variance. In the male version, those factors cover macho beliefs; restrictive attitudes towards sex, sex as men's abuse of power; women's sexual satisfaction, sexual conservatism, and female sexual power. The validity and reliability were confirmed with psychometric studies (Nobre et al., 2003). Test-retest reliability in both versions of the questionnaire showed significant ($p < .05$) correlations; ($r = .73$ for the male version, and $r = .80$ for the female version) between two consecutive administrations four weeks apart. Internal consistency is $\alpha = .93$ for the male questionnaire and $\alpha = .81$ for the female questionnaire. In this study, the alphas from the sub-scales ranged from $\alpha = .53$ (restrictive attitude toward sex) to $\alpha = .82$ (sexual conservatism). To improve internal consistency for the *Sex as an abuse of men's power* sub-scale, one item was removed from that dimension, reaching an alpha value of .61. The total items scored $\alpha = 0.91$, revealing high internal consistency.

3.4 Socially Desirable Response Set Measure (SDRS-5).

This measure assesses the respondent's tendency to give socially desirable answers (Hays, Hayashi & Stewart, 1989). It consists of only five items, some examples being "I am always courteous even to people who are disagreeable" and "I sometimes try to get even rather than forgive and forget". The Cronbach's alpha was $= .75$. In the present study, the $\alpha = 0.61$.

3. Statistical Approach

In order to test the mediating role of sexual self-esteem in the relationship between sexual beliefs and sexual aggression, a mediation analysis according to Hayes's procedures was performed, accounting for social desirability effects. Model 4 from PROCESS Macro v3.5 was used for that purpose (Hayes, 2018). One model was tested for each subscale of the SDBQ, regarding the frequency of all sexually aggressive strategies of the SABS (and not considering each dimension). Social desirability was included as a covariate. Statistical significance was considered according to the confidence intervals. The effect can be assumed as statistically significant if the confidence intervals (CI) don't include zero (du Prel et. al, 2009). Preacher and Kelley's criteria were accounted to report all effect sizes (Preacher & Kelley, 2011).

4. Results

5.1 Descriptive Data

Findings revealed that 36,2% (n = 132) of participants reported having used aggressive strategies to attempt sexual interactions. Among these, 68,7% (n = 90) reported strategies that classify as sexual coercion; 27,3% reported strategies that classify as sexual abuse; and 4,5% (n = 6) reported strategies that classify as use of physical force. Consult Table 1 for the percentages of participants endorsing each item.

5.2 Sexual Beliefs and Sexual Aggressive Behavior: The Mediating Role of Sexual Self-Esteem

A significant relationship between all groups of sexually dysfunctional beliefs and the adoption of sexually aggressive strategies was found (see Table 2 for non-standardized regression coefficients; lower and upper limits of the 95% CI). After controlling for sexual self-esteem, the direct effect of all sexual dysfunctional beliefs including macho ($c' = .38$; 95% CI [.2, .55]), restricted attitude ($c' = .23$; 95% CI [.07, .4]), abuse of power ($c' = .66$; 95% CI [.45, .87]), women's sexual satisfaction ($c' = .3$, 95% CI [.16, .44]), sexual conservatism ($c' = 1.23$; 95% CI [.94, 1.52]), and female sexual power ($c' = .28$; 95% CI [.11, .45]), was significant. As so, the presence of sexual dysfunctional beliefs predicted

Table 1

Description of the items per category; percentage of participants endorsing each item.

Items	(n)	(%)
Sexual Coercion		
How many times have you attempted to have sexual contact with a woman by threatening to end your relationship?	13	3,6
How many times have you attempted to have sexual contact with a woman by saying things that you didn't mean?	55	15,2
How many times have you attempted to have sexual contact with a woman by pressuring her with verbal arguments?	45	12,4
How many times have you attempted to have sexual contact with a woman by questioning her sexuality (suggesting that she may be frigid)?	17	4,7
How many times have you attempted to have sexual contact with a woman by threatening to harm yourself?	6	1,7
Sexual Abuse		
How many times have you attempted to have sexual contact with a woman by using your position of power or authority (boss, teacher, babysitter, counselor, or supervisor)?	7	1,9
How many times have you attempted to have sexual contact with a woman between 12 and 18 years of age who was 5 or more years younger than yourself?	23	6,3
How many times have you attempted to have sexual contact with a woman by getting her drunk or high?	9	2,5
How many times have you attempted to have sexual contact with a woman by taking advantage of a compromising position she was in (being where she did not belong or breaking some rule)?	12	3,3
Physical Force		
How many times have you attempted to have sexual contact with a woman by threatening to use some degree of physical force (holding her down, hitting her, etc.)?	4	1,1
How many times have you attempted to have sexual contact with a woman by using some degree of physical force?	6	1,7
How many times have you attempted to have sexual contact with a woman by threatening her with a weapon?	3	0,8

(Anderson, 1996)

sexually aggressive behavior despite the role of sexual self-esteem. The percentage of explained variance of the models were as follows: macho beliefs 16%, restricted attitude 13%, abuse of power 21%, women's sexual satisfaction 16%, sexual conservatism 27%, and female sexual power 14%.

Despite that, the results didn't support the hypothesis of the mediating role of sexual self-esteem in the relationship between sexual beliefs and the adoption of sexually aggressive behaviors in male college students. No significant indirect effects (ab) were found: macho beliefs (ab = -.01; 95% CI [-.05, .04]); restricted attitude (ab = .0; 95% CI [-.02, .02]); abuse of power (ab = .0; 95% CI [-.02, .02]); women's sexual satisfaction (ab = .0; 95% CI [-.02, .02]), sexual conservatism (ab = -.01 [-.04, .03]) and female sexual power (ab = -.0; 95% CI [-.02, .02])). This means that all different beliefs were predictors of sexual aggression, independently of sexual self-esteem. Therefore, there is no mediation. Additionally, only macho beliefs were positive predictors of sexual self-esteem (a=.2; 95% CI [.06; .34]), but self-esteem has never predicted aggression.

Table 2

Non-standardized regression coefficients; lower and upper limits of the 95% CI.

	Macho Beliefs	Restricted Attitude	Sex as an abuse of men's power	Women's Sexual Satisfaction	Sexual Conservatism	Female Sexual Power
a	.2 [.06; .34]	-.07 [-.2, .06]	-.1 [-.27, .07]	.1 [-.01, .21]	-.11 [-.36, .14]	-.06 [-.19, .07]
b	-.03 [-.17; .11]	.03 [-.11, .16]	.04 [-.09, .17]	-.01 [-.15, .13]	.04 [-.09, .17]	.02 [-.12, .16]
c	.37 [.19, .54]	.23 [.07, .4]	.66 [.45, .86]	.3 [.16, .43]	1.23 [.93, 1.52]	.28 [.11, .45]
c'	.38 [.2, .55]	.23 [.07, .4]	.66 [.45, .87]	.3 [.16, .44]	1.23 [.94, 1.52]	.28 [.11, .45]
ab	-.01 [-.05, .04]	-.0 [-.02, .02]	-.0 [-.03, .02]	-.0 [-.02, .02]	-.01 [-.04, .03]	-.0 [-.02, .02]

Note. (a = direct effect of sexual beliefs on sexual self-esteem; b = direct effect of sexual self-esteem on sexually aggressive behaviors; c = total effect of sexual beliefs on sexually aggressive behaviors; c' = direct effect of sexual beliefs on sexually aggressive behaviors; ab = indirect effect / mediation model).

5. Discussion

In the light of previous research about psychological features characterizing college students reporting sexual offending behavior, the present study was aimed to understand how dysfunctional sexual beliefs could be associated with both sexual self-esteem and the perpetration of sexually aggressive behavior in college youth.

It is important to reflect upon the prevalence of sexual aggression among college students. To do so, it should be acknowledged that the results do not reflect the perpetration of rape. Instead, results relate to the frequency of sexual interaction attempted by aggressive means (Anderson, 1996), addressing different forms of sexually aggressive behavior. Descriptive findings revealed a percentage of 32,6% of participants reporting sexually aggressive strategies as means to engage in sexual interactions. Relatively recent investigations had revealed higher percentages (52,6%) of male college students endorsing these strategies (Carvalho & Sá, 2017), suggesting that the perpetration of those behaviors may not be stable over time. The percentage of participants endorsing SABS-specific critical items was also lower when compared to previous findings. Male college students appear to be engaging in significantly less sexual coercive behaviors, sexual abuse, and use of physical force, with lower percentages of students scoring in every critical item within these categories. For example, previous research results reported 61,1% of the participants reporting to have attempted sexual contact with a woman by saying things they didn't mean at least one time (Carvalho & Sá, 2017). In the present study, only 12,4% of the students reported having resorted to that strategy at least one time. The only exception to this decreasing phenomenon is the last critical item that falls into the physical force category. The present results show a higher percentage of students reporting to have attempted to have sexual contact with a woman by threatening her with a weapon, when compared to previous findings. Past research (Carvalho & Sá, 2017) had revealed 0% of participants ($n = 0$) endorsing such strategy, whereas the present results present evidence of slightly higher percentages, with 0,8% of participants endorsing that behavior ($n = 3$). Even though this is a very low percentage, it is a curious finding that every critical item presents lower rates of endorsement, except for this one that reflects an extreme form of violence with men recurring to weapons to initiate sexual contact. Future studies are expected to pay close attention to this scenario.

Findings regarding the mediation analyses revealed that the hypotheses were partially corroborated. The first hypothesis of this study was that the presence of sexual

dysfunctional beliefs was positively associated with the adoption of sexually aggressive behaviors. Results have supported that hypothesis, with all models explaining significant percentages of the variance of engagement in sexually aggressive strategies. Namely, sexual conservatism beliefs appear to explain the greater variance of the results (27%). This construct is characterized by conservative ideas about sexual behavior (e.g., sex before marriage is unacceptable, it should be directed to coitus and without foreplay, with men on top and serving procreative goals, etc.) (Nobre et al., 2003). Such results support the previously mentioned findings that suggest conservatism could be a risk factor for perpetrating aggressive behaviors. The literature presents evidence that the traditional profile of masculinity is associated with sexual assault (Muehlenhard & Linton, 1987 cit in. Abbey, McAuslan & Ross, 1998; Mosher & Anderson, 1986) and, additionally, that men who were exposed to contexts that promote the traditional condition of the male role, reported significantly more dysfunctional sexual beliefs than those who were exposed to the modern condition of the male role (Clarke, Marks & Lykins, 2015). Within the present findings, the explained variance of sexually aggression strategies according to the endorsement of beliefs about sex as an abuse of men's power (21%), macho beliefs (16%), and beliefs about women's sexual satisfaction (16%) should also be acknowledged. These categories include sexual beliefs such as "a real man has sexual intercourse very often" and even the conceptualization that "sex is an abuse of male's power".

Overall, considering the content of these beliefs, the present findings align with the idea that the traditional masculinity profile associates with sexual aggression. As addressed in the introduction, Mosher and Sirkin (1984) had mentioned insensitive sexual beliefs as part of the "macho personality" constellation. These beliefs include some men's attitudes that a sexual relationship with a woman establishes male power and female submission, and so it should be achieved without any empathic concern for a woman's subjective experience. Also, Burt (1980) found that rape attitudes were strongly connected to other deeply held and pervasive attitudes such as sex role stereotyping, distrust of the opposite sex (adversarial sexual beliefs), and acceptance of interpersonal violence (Burt, 1980).

One possible explanation could be that some men may recognize such little primacy to women that lack any concern about their subjective experience and, eventually, end up having no inhibitions to their aggressive behavior. This perspective is addressed in the aforementioned Confluence Model of Sexual Aggression, that recognizes three interrelated categories of proximate causes of aggression against women: the motivation; reductions in inhibitions and opportunity for aggression to occur (Malamuth et al., 1996). Within those

categories, six different predictor variables for aggressive acts were named. Examples of those predictors are the *Dominance motive*; *Hostility toward women* and *Attitudes facilitating aggression against women*. These variables relate, respectively, to the idea that men expressed the desire to sexually dominate women motivating sexual aggression; the idea that the hostility towards women may also motivate the aggressive behavior and remove any inhibitions when facing women's suffering; and the idea that certain attitudes (that directly or indirectly support aggression against women) play an important role in contributing to sexual aggression (Malamuth et al., 1996). In the light of such information, the present findings gain more relevance. The content of some of the sexual beliefs matches with this model of sexual aggression. For example, beliefs such as "women have no other choice but to be sexually subjugated by man's power", that fall into the category of sexual conservatism (which explains the highest variance of the adoption of sexually aggressive strategies), add up to the conceptualized *Dominance motive* as a predictor of sexual aggression. When considering the bigger picture, it seems that the most rigid beliefs and attitudes toward sexuality help to better explain the frequency of sexual aggression.

Continuing with the analysis performed in the present investigation, another aim was to verify whether there was an association between sexual self-esteem and the perpetration of sexually aggressive strategies in college youth. Results failed to support any correlation between these variables. It was also hypothesized that low self-esteem was the process by which sexual beliefs related to sexual aggression and that hypothesis was not supported by the present results either. The mediation role of sexual self-esteem was expected within the hypothesis that the presence of sexual dysfunctional beliefs would result in lower self-esteem which, eventually, would resort to sexual aggression (as a means to cope with that vulnerability). Findings did not reveal significant relationships between any sexual beliefs and sexual self-esteem, except for macho beliefs that seem to correlate with higher rates of sexual self-esteem. These results were unexpected given the empirical evidence that supported that hypothesis (Barlow, 1986; Nobre 2006; Nobre, 2014). Special attention should be brought to Nobre's (2006) conclusion that the endorsement of "macho" beliefs was, in fact, a factor of vulnerability to develop schemes of incompetence. The expected consequence was that, eventually, such interpretations would result in lower levels of sexual self-esteem. Also, previous findings had revealed the moderating role of dysfunctional sexual beliefs in the association between the frequency of unsuccessful sexual episodes and the activation of incompetence schemas in samples of both heterosexual and homosexual men (Peixoto & Nobre 2017). Nevertheless, the absence of significant relationships between

dysfunctional sexual beliefs and sexual self-esteem in this investigation should help to explain why no mediation was accounted for. Indeed, further research is necessary to achieve a more comprehensive understanding of the interaction between these variables.

To sum up, results suggest that the beliefs that young men have about sexuality may have a role in the perpetration of sexual aggression, making the focus really stand in the cognitive domain. Much of the sexual aggression phenomenon can be explained by the endorsement of these beliefs. It is important to reinforce that the present findings are consistent with previous ones, namely, the investigation conducted by Barnett and colleagues that lead to conclusions that are very relevant to this discussion. The authors sought to investigate the relationships between masculinity, femininity, dysfunctional sexual beliefs, and rape myth acceptance among heterosexual college men and women in the USA. Their results revealed that among both men and women, dysfunctional beliefs about gender and sexuality are stronger predictors of rape myth acceptance than an individual's masculinity or femininity. All of this means that rape myth acceptance is less related to how masculine or feminine men and women identify themselves, and more closely related to their general beliefs about gender and sexuality (Barnett, Hale & Sligar, 2017). These results are extremely important for the present study in a way that they demonstrate that not only rape-specific sexual beliefs, but overall cognition and general attitudes about sexuality may have a great impact on sexual aggression. The general view of masculinity, which is cultivated throughout life as heroic, adds up to the conception of women as a sexual object that exists as a reward for the conquering hero (Mosher & Sirkin, 1984). It is crucial to acknowledge that the antecedents of rape also consist of socially transmitted cultural attitudes about women that are stereotypically harmful and serve as psychological liberators of sexual aggression (Briere & Malamuth, 1983). Consequently, sex role socialization appears to give men permission to commit sexual abuse and create a cognitive structure that allows them to justify similar behavior among male peers (Berkowitz, 1992). All this information stands for the importance of the socialization process of young people and its impact on the perpetration of sexually aggressive behaviors. Consequently, it leads to the role of sexual education in prevention.

Preventive interventions against sexually aggressive behavior involve minimizing risk factors and maximizing protective factors (Hall & Barongan, 1997). Several risk factors for sexual aggression have been identified within the cognitive domain (e.g., rape myths) (Hall, 1996; Hall & Barongan, 1997). Given this context, the present findings appear to be relevant, suggesting that sexual beliefs are framed within attitudes toward sexuality that enhance the

probability for sexual aggression to occur. After a systematic review of rape prevention education (Lonsway, 1996), addressing rape mythology content was considered a critical component for such programs. Likewise, the design and implementation of any educational evaluation is concluded to require a theoretical perspective on the formation and change of beliefs, attitudes, and behaviors (Lonsway, 1996). Thus, given the present findings concerning the impact of dysfunctional sexual beliefs on sexual aggressive behaviors, these thematics should be included in sexual education programs regarding sexual aggression prevention.

Despite its relevance, some limitations to the present investigation should be recognized. First, when addressing such sensitive topics as sexual aggression, respondents are prone to be influenced by social desirability. In order to minimize such influence, a measurement of social desirability was included in the online survey and that effect was accounted for in the statistical approach. Nevertheless, it is important to consider that all measures were self-report, leaving data exposed to bias in reporting. The SDBQ items may also be prone to issues of accuracy, since participants may be responding positively to its items in a way that they perceive that its content is somehow present in real contexts and not as an attitude they endorse or a belief of their own. The reliability analysis presented unsatisfactory values for some measures. The *Restrictive attitude toward sex* dimension from the SDBQ presented $\alpha = .53$, which implies low internal consistency. Also, a decision was made to exclude one item from the SDBQ's *Sex as an abuse of men's power* to improve its internal consistency. The decision to maintain such domains in the analysis requires additional caution when interpreting the present findings. Also, to preserve result interpretation, the mediation analysis was performed considering the SABS total items score that presented very good internal consistency, in detriment of the SABS sub-dimensions. Despite such procedure, results should be considered carefully and not generalized to other populations outside the student community. This study only included individuals who identified as male and as heterosexual; therefore, the results cannot be generalized to LGBTQIA+ populations. Finally, it is crucial to acknowledge that no cause-effect interpretation can be implied. Mediation analysis can be used to establish or test how *X* exerts its effect on *Y* in a model in which one or more intervening variables (*M*) is located causally between that relationship (Hayes, 2018). Mediation analysis then allows to quantify and test hypotheses about direct and indirect effects of *X* on *Y* (Hayes, 2018). Findings must be interpreted within a correlational frame (Iacobucci, 2012). The cross-sectional nature of

the present investigation does not allow drawing any conclusions about the causal ordering of the relationships observed.

In conclusion, the present findings are expected to inform the literature on the cognitive processes and sexual offending behavior, and further impact prevention programs. Specific intervention with the college male population regarding sexual beliefs and more general attitudes toward sexuality with a specific focus on gender role expectations could be potentially effective in reducing the rates of sexual aggression within college populations. Yet, further research is needed to deepen the knowledge and understanding of such phenomenon, including the existence of potential mediating paths.

6. References

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