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**Latent Classes of childhood maltreatment, adult sexual assault, and revictimization in men:
Differences in masculinity, anger, and substance use**

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Abstract

Male sexual abuse has been associated with a number of maladaptive outcomes, however there is a dearth of research on male revictimization, that is, experiences of victimization in both childhood and adulthood. The current study examined different patterns of victimization based on five types of childhood maltreatment and characteristics of adult sexual assault via latent class analysis (LCA). Further, the present study assessed differences across these latent classes in the domains of masculinity, anger, and substance use. A community sample of 294 men ranging in age from 18 to 66 years ($M = 32.71$; $SD = 9.73$) was recruited via Amazon Mechanical Turk, an online research forum. The LCA identified four classes, namely, *revictimization* (10.9%), *adult substance-related victimization* (4.8%), *childhood maltreatment* (23.8%), and *low victimization* (60.5%). Differential patterns emerged for masculinity, anger, and substance use, with the *revictimization* and *childhood maltreatment* classes differing significantly from the *adult substance-related victimization* and *low victimization* classes. Compared to the *low victimization* class, the three victimization classes were elevated on multiple facets of masculinity; the *revictimization* class was higher on anger, and alcohol- and drug use. Results provide evidence that research examining childhood or adulthood victimization experiences in isolation may fail to capture the full range of victimization experiences in men. Findings provide important implications for understanding patterns of victimization among men and how interventions may be targeted to address psychological and behavioral outcomes.

Keywords: childhood abuse/neglect; revictimization; masculinity; substance use; anger;

Latent class analysis; men

**Latent classes of childhood maltreatment, adult sexual assault, and revictimization in men:
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Sexual victimization is a global and pervasive problem affecting men and women, although the majority of studies examine victimization among women. The National Intimate Partner and Sexual Violence Survey of 2011 (NISVS; Black et al., 2011) indicated that 1.7% of men report lifetime rape, and an additional 23.4% report experiences of other forms of sexual victimization, such as, being made to penetrate, unwanted sexual touch, and sexual coercion during their lifetime (Breiding et al., 2014). The few studies that examined sexual victimization among males demonstrated that male age 12 years or older accounted for 9% of all rape and sexual victimization victims (Planty, Langton, Krebs, Berzofsky, & Smiley-McDonald, 2013), and 17.1% of college men reported experiences of completed rape (Turchik, 2012). Sexual victimization among men is thus a prevalent, although overlooked, area of study.

Accurate rates of childhood sexual abuse (CSA) and adult sexual assault (ASA) among men remain somewhat elusive due to low rates of abuse disclosure (Schraufnagel, Davis, George, & Norris, 2010). Owing to the stigma, shame, and self-blame among male survivors of CSA, many men experience the phenomenon of ‘self-silencing’ (O’Leary & Barber, 2008), choosing not to disclose and remaining silent about their victimization experiences (Easton, Saltzman, & Willis, 2014). One study reported that men take an average of 21 years since the onset of CSA to disclose victimization, primarily due to perceived barriers, such as, older age, being abused by a family member (i.e., incest), conventional masculinity, sexual orientation, past negative responses to disclosure, and limited availability of resources for male victim-survivors (Easton, 2013; Easton et al., 2014; Stemple & Meyer, 2014).

Failure to disclose sexual victimization experiences may interfere with treatment seeking that can prove problematic for one's psychological functioning. Studies indicate that both childhood victimization (Easton, 2014; Ullman & Filipas, 2005) and ASA (Black et al., 2011) are associated with an array of psychological and functional difficulties among men including, increased substance use, depression, posttraumatic stress symptoms, self-harm, and poor self-esteem (for a review, see Peterson, Voller, Polusny, & Murdoch, 2011). Furthermore, exposure to CSA is a prominent risk factor for adult sexual victimization, a phenomenon referred to as *sexual revictimization* (Charak et al., 2017; Classen, Palesh, & Aggarwal, 2005; Messman-Moore & Long, 2003). Specifically, sexual revictimization is defined as the experience of sexual abuse or assault across two or more developmental periods (e. g., childhood, adolescence, and/or adulthood; Messman-Moore & Long, 2003).

While the bulk of sexual revictimization literature focuses on women, some studies have identified this phenomenon in men as well (Aosved, Long, & Voller, 2014; Elliott et al., 2004). The NISVS survey examined sexual revictimization among men and found that 45% of men who were forced to penetrate as minors were also forced to penetrate as adults, compared to 4% of men who were forced to penetrate only during adulthood (Breiding et al., 2014). In a national sample of men, ASA victims were 5-times more likely to have a history of CSA than non-victims with revictimized men reporting greater levels of psychological distress than those with a history of CSA-or ASA-only, and non-victims (Elliott et al., 2004). It is thus important to examine patterns of childhood maltreatment, adult sexual victimization, and revictimization in men, and how these patterns differentially associate with long-term mental health problems, and other risk factors, such as anger and masculinity.

Traumagenic Dynamics Model of Sexual Revictimization

A prominent theory examining CSA proposes four factors or “traumagenic dynamics” to describe negative outcomes associated with CSA, namely, traumatic sexualization, betrayal, powerlessness, and stigmatization (Finkelhor & Browne, 1985). This model suggests that the sequelae of CSA, such as, traumatic sexualization (e.g., rewarding a child for sexual activity) may lead to inappropriate sexual behavior, sexual aggression, or sexual revictimization. Further, experiencing powerlessness as a result of CSA may lead to the use of impaired coping strategies that in turn can lead to revictimization. Messman-Moore and Long (2003) incorporated key aspects of the Traumagenic Dynamics model into their framework suggesting that risk for revictimization is elevated among CSA survivors due to two mechanisms that increase the likelihood of being targeted by an opportunistic perpetrator: 1) vulnerability due to a propensity to engage in higher rates of risky behavior (e.g., heavy alcohol use, risky sexual activity), and 2) psychological vulnerability emanating from traumatic stress symptoms including facets of PTSD, dissociation, and other impairments. The present study aims to investigate the role of risky behavior—measured via alcohol and drug use—and speculates that psychological vulnerability in the form of anger and higher scores on various domains of masculinity will be greater among revictimized men.

Sexual Revictimization in Men

Prior studies also suggest that sexual revictimization has a cumulative and detrimental impact on psychological wellbeing (Aosved et al., 2011; Charak et al., 2017; Humphrey & White, 2000). Akin to the extant literature on sexual revictimization in women, studies on male college students (Aosved et al., 2011) and gay men (Balsam, Lehavot, & Beadnell, 2011) show that those with sexual revictimization histories report significantly higher general distress, alcohol use, increased suicide ideation and suicide attempts, and greater self-harm behavior than

men without sexual victimization histories or who were victimized during a single developmental period. Notably, the few studies on sexually revictimized men focus on specific populations (e. g., college men and sexual-minority men) and less is known about the psychological impact of sexual revictimization in community samples of men. The latter are important studies as they would facilitate identification of (sexually revictimized) men at-risk for mental health problems, which in turn would help clinicians develop effective procedures for responding to reports of sexual (re)victimization among men.

Exposure to Multiple Types of Childhood Maltreatment

A plethora of studies indicate that different types of childhood maltreatment (e.g., sexual abuse, physical abuse, neglect) often co-occur, and accumulate to have a negative effect on the survivor's mental health and wellbeing (Charak et al., 2016; Charak & Koot, 2015; Easton & Kong, 2017; Finkelhor, Ormrod, & Turner, 2007). Most sexual revictimization research however, limits the investigation to the role of one type of child maltreatment—usually CSA—in later risk for revictimization. Hetzel and McCanne (2005) examined the contribution of other forms of child maltreatment and found that women with a history of childhood physical abuse (CPA) or a history of CPA and CSA were more likely to also report adult sexual assault (ASA) compared to women with no prior history of abuse or a history of CSA only. Other studies suggest childhood emotional abuse as a prominent risk factor of revictimization (Miron & Orcutt, 2014; Stermac, Reist, Addison, & Miller, 2002).

Among men, studies indicate that a history of combined CPA and CSA increases the risk of sexual revictimization by six times (Desai, Arias, Thompson, & Basile, 2002), and exposure to different types of childhood adversities (e.g., emotional and physical abuse) leads to increase in symptoms of depression in men with CSA histories (Easton & Kong, 2017). Such findings

support the sexual revictimization phenomenon in that exposure to multiple types of childhood maltreatment increases the likelihood of being revictimized as an adult and that men with sexual revictimization histories experience high levels of mental health problems. Given these findings, the current study examined the presence of five different types of childhood maltreatment, namely, emotional, physical, and sexual abuse, and emotional and physical neglect while also examining the presence of sexual victimization during adulthood among community men.

Characteristics of Adulthood Sexual Victimization

Sexual victimization involves several tactics used by perpetrators including different forms of coercion (e.g., verbal, incapacitation with alcohol or drugs) or outright use of physical force associated with a variety of outcomes, ranging from unwanted touching to penetrative sex/completed rape (Basile & Saltzman, 2002). The heterogeneity in experiences of sexual victimization comprises different characteristics of victimization, including the nature of the act (unwanted sexual touch vs. penetrative sex), frequency, duration, and relationship with the perpetrator (Charak, DiLillo, Messman-Moore, & Gratz, 2017; Masters et al., 2015). These characteristics often co-occur, leading to various patterns of victimization experiences that in turn affect the severity of assault experiences and outcomes of emotional dysregulation and psychopathology (Charak et al., 2017; Masters et al., 2015; Ullman, Townsend, Filipas, & Starzynski, 2007).

In a study on women, self-reported PTSD symptoms differed by characteristics of the sexual violence, with forcible rape survivors reporting the highest levels of posttraumatic stress symptoms, followed by incapacitated rape survivors, and the lowest level among verbally coerced assault survivors (Brown, Testa, & Messman-Moore, 2009). Findings such as these suggest the importance of examining characteristics of sexual victimization, particularly the type

of victimization (e.g., rape vs. fondling) and tactics used (force vs. incapacitation), for a comprehensive understanding of how unique sexual victimization experiences are differentially associated with emotional and behavioral problems. Notably, these studies focused exclusively on samples of women and did not include men. Taken together, there is a need to examine characteristics of sexual victimization and their differential effect on psychological problems in men. The present study includes a more comprehensive examination of sexual victimization experiences including specific types and tactics used in ASA and exposure to different types of childhood maltreatment to examine heterogeneity in patterns of victimization experiences in men.

Victimization, Masculinity, Anger, and, Substance Use in Men

There are a growing number of non-clinical, population-based studies on men with CSA histories suggestive of the detrimental and long-term effect of CSA on mental health (Easton, 2014; Easton & Kong, 2017; Easton, Kong, Gregas, Shen, & Shafer, 2018). For example, in a sample of men in middle and late adulthood, it was found that those with histories of CSA experienced higher levels of depressive symptoms in their fifties, sixties, and seventies in contrast to men with no history of CSA (Easton et al., 2018). However, sexual (re)victimization in adulthood is far less researched among general population samples of men. Perhaps the minimization of male sexual victimization and the stigma associated with being a victim of ASA contributes to the lower rates of reported victimization by men in contrast to women. Nonetheless, studies consistently document the detrimental effect of adult sexual victimization on the mental health of men (see review Peterson et al., 2011).

A unique struggle men report is the contrast between their experiences of sexual victimization and societal expectations of conventional masculinity that identifies men as the

dominant gender and (often) the perpetrator rather than the victim of sexual assault (Kia-Keating, Grossman, Sorsoli, & Epstein, 2005). The construct of masculinity is often incompatible with victim-identity and leaves victimized men with a limited range of possibilities to understand their experiences (Javaid, 2015). Such conflict may lead victimized men to engage in acts indicative of exaggerated masculinity through anger/aggression and unhealthy risk taking behavior (e.g., substance use) as attempts to reestablish or repair their “broken” masculinity (Banyard et al., 2007; Javaid, 2015; Weiss, 2010). This parallels the Traumagenic Dynamics model that suggests among sexual victimization survivors, proclivity to engage in risky sexual and health behaviors (e.g., multiple sexual partners, substance use) and psychological vulnerabilities in the form of anger and a hypermasculine persona may emanate from exposure to CSA (Iverson, McLaughlin, Adair, & Monson, 2014; Messman-Moore & Long, 2000). In line with this model, prior studies show that men who experience repeated victimization across development periods (i.e., revictimization) have increased anger-related dysregulation (Iverson et al., 2014), likely struggle with the perceived tenets of masculinity (e.g., men are strong, invulnerable, self-reliant), and may therefore exhibit even greater general distress (Aosved et al., 2011) and engagement in the use and abuse of substances (Turchik, 2012; Weiss, 2010).

Alternatively, psychological vulnerability may be expressed as increased anger as it may be perceived as a “safe” emotion that aligns with traditional masculine ideals (Miller et al., 2014). Studies indicate increased anger, irritability, and hostility to be common among men following CSA (Easton & Kong, 2017), who may suppress other emotions suggestive of weakness and vulnerability (e.g., sadness and fear, Easton et al., 2014; Romano & De Luca, 2001). As an example, among 205 male survivors of clergy-perpetrated sexual abuse, survivors reported their sense of masculinity was compromised and endorsed overwhelming anger related

to the incident of CSA (Easton, Leone-Sheehan, & O’Leary, 2016). In another study, anger-related dysregulation mediated the association between childhood maltreatment and victimization by an intimate partner during adulthood in men and women (Iverson et al., 2014). Thus, anger may increase the risk of victimization through interfering with information processing and risk detection in the environment (Marx et al., 2005).

Relatedly, another psychological vulnerability of conformity to masculine norms in men can be exaggerated in the aftermath of child maltreatment and sexual assault. In a qualitative analysis of interviews from the National Crime Victimization Survey, Weiss (2010) found that men with experiences of rape and sexual assault attempted to frame their victimization in ways that allowed them to repair and reassert their masculinity in two ways: (i) by blaming their vulnerability for victimization on the consumption of alcohol; (ii) and by emphasizing how they successfully thwarted an unwanted sexual attack by physical violence (e.g., punching, grabbing by the neck of the perpetrator). In another study of men who filed for a domestic violence protection order against a woman partner, three masculinity related themes emerged in the victimized men’s narratives: (i) being in power and control in the relationship by acknowledging suffering an “assault” but denying being a “victim”; (ii) active resistance to the abuse without the use of violent force; (iii) lack of fear of the woman partner even when perpetration involved acts of violence (Durfee, 2011). These studies indicate that victimized men tend to show reactions post abuse/assault that are consistent with various masculine norms (e.g., power over women, self-reliance; Mahalik et al., 2003). In the present study, we thus decided to explore differences across multiple domains of masculinity based on exposure to childhood and adulthood victimization experiences.

The Current Study

Most studies on sexual revictimization (i.e., experiences of victimization during childhood and adulthood) investigate the phenomenon among women, and less is known about its presence among men. Although earlier studies on revictimization address the robust association between CSA and ASA, most fail to study other types of childhood maltreatment or characteristics of ASA. The present study employed latent class analysis (LCA) to identify patterns of victimization based on endorsement of childhood maltreatment types and adult sexual assault experiences as previously examined in samples of women (e.g., Charak et al., 2017; Macy, 2008; Masters et al., 2015). The present study hypothesized that there would be heterogeneous groups of individuals varying in exposure to different types of childhood maltreatment and ASA characteristics, in that there would be at least one group with exposure to childhood abuse/neglect and ASA, namely, a revictimization class (Hypothesis 1; Aosved et al., 2011). In line with the Traumagenic Dynamics model, it was hypothesized that men who were revictimized would report greater conformity to masculine norms (Durfee, 2011; Javaid, 2015), anger, and substance misuse (Turchik, 2012; Weiss, 2010), compared to the least victimized group of men (Hypothesis 2).

Methods

Participants

The final sample comprised 294 men ranging in age from 18 to 66 years old ($M = 32.71$; $SD = 9.73$) and was relatively ethnically diverse (78.8% Caucasian; 8.2% African American; 8.5% Hispanic/Latino; 4.8% Asian; 0.3% Pacific Islander; 0.3% American Indian; 0.6% identified as Other; total percentage exceeds 100% as some participants choose to identify more than one race). With regard to educational attainment, 0.3% did not graduate high school, 15.6% reported completing high school or their GED, 19.7% reported some college experience, 43.2%

obtained a college degree, 8.5% reported some graduate school experience, and 12.6% completed graduate or professional training. With regard to annual family income, 8.5% reported less than \$20,000, 24.5% reported \$20,000-39,000, 32.6% reported \$40,000-74,000, 14.6% reported \$75,000-99,000, 17.4% reported \$100,000-199,000, 1.4% reported more than \$200,000, and 1% reported “I don’t know.”

Procedure

Data were collected through Amazon Mechanical Turk (MTurk), an online data collection website where individuals complete online research studies for compensation. MTurk samples tend to be more demographically diverse (with respect to race and age in particular; Buhrmester, Kwang, & Gosling, 2011) and provide similar quality of data compared to undergraduate samples (Paolacci & Chandler, 2014). The study was visible to users with IP addresses originating in the United States and who had a HIT approval rate greater or equal to 95%. Potential participants were prescreened based on demographic characteristics; inclusion criteria being: male, at least 18 years old, and currently living in the United States. Eligible participants were then provided with a consent form and questionnaires examining adult sexual victimization, childhood maltreatment, and other socio-emotional constructs. Data were collected in summer and fall of 2015 and participants were compensated \$3.00. The IRB at [MASKED FOR REVIEW] approved the study protocol.

Measures

Childhood maltreatment. The Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998) is a 28-item instrument assessing experiences of several types of child maltreatment prior to age 18. This measure assesses experiences of physical abuse, emotional abuse, sexual abuse, emotional neglect, and physical neglect. Example items include, “I didn’t have enough to

eat,” “Someone tried to make me do sexual things or watch sexual things,” and “People hit me so hard that it left me with bruises or marks.” Experiences of abuse were examined on a scale ranging from 1 (*never true*) to 5 (*very often true*). Participant’s scores were classified into categories of abuse severity based on published recommendations (Bernstein & Fink, 1998; Bernstein et al., 2010). Abuse severity categories include, “none to minimal,” “low to moderate,” “moderate to severe,” and “severe to extreme.” Five dichotomous variables were created for each type of child abuse and neglect where 1 equals moderate, severe, or extreme abuse/neglect and 0 equals none, minimal, or low abuse/neglect. The internal reliability values for the current study are as follows: physical abuse ($\alpha = .87$), emotional abuse ($\alpha = .91$), sexual abuse ($\alpha = .94$), emotional neglect ($\alpha = .93$), and physical neglect ($\alpha = .74$).

Adult sexual victimization. The Sexual Experiences Survey – Short Form Version (Koss et al., 2006) was used to assess for sexual victimization in adulthood (i.e., age 18 or older). Participants responded to five sets of questions examining experiences of sexual victimization: fondling/kissing; attempted oral sex; completed oral sex; attempted penetration; completed penetration. Five methods of coercion were examined for each type of act resulting in 25 total questions. The methods of coercion include: verbal coercion; using anger or criticisms; inability to consent due to alcohol or drugs (i.e., substance-related); threat of physical harm; and using physical force (i.e., forcible). Participants were instructed to indicate how many times these acts have occurred with responses of 0, 1, 2, or 3+ times. All experiences were coded as dichotomous variables (1, 2, 3+ times = 1; 0 times = 0). Five categories of adult sexual victimization were created: completed forcible rape (completed oral sex or penetration by physical force), attempted forcible rape (attempted oral sex or penetration by physical force), completed substance-related rape (completed oral sex or penetration related to inability to consent due to alcohol or drugs),

attempted substance-related rape (attempted oral sex or penetration related to inability to consent due to alcohol or drugs), and other sexual coercion (all other acts and methods of coercion not previously included, such as fondling without penetration or penetrative sex due to verbally coercive tactics such as showing displeasure, threatening to end the relationship, or telling lies). Forcible and substance-related rape was examined separately due to the previously demonstrated differential impact on psychological sequelae among women (Brown, Testa, & Messman-Moore, 2009; Monks, Tomaka, Palacios, & Thompson, 2010). Attempted and completed rape was also examined separately due to unique patterns in alcohol-related outcomes (Monks et al., 2010) and psychological distress (Davis et al., 2014).

Masculinity. Masculinity was evaluated with the Conformity to Masculine Norms Inventory (CMNI; Mahalik et al., 2003). The CMNI is a 46-item measure that captures the extent to which men conform to traditional masculine roles. The scale consists of nine subscales, namely, winning, emotional control, risk-taking, violence, playboy, self-reliance, primacy of work, power over women, and heterosexual self-presentation. Example items included: “Women should be subservient to men,” “If I could, I would frequently change sexual partners,” and “I never share my feelings.” Each item is rated on a 4-point Likert scale (0 = *Strongly disagree*, 3 = *Strongly agree*). The total scale demonstrated good internal consistency reliability in the current sample ($\alpha = .88$). The subscale internal consistency reliabilities were as follows: winning ($\alpha = .85$), emotional control ($\alpha = .86$), risk-taking ($\alpha = .82$), violence ($\alpha = .86$), playboy ($\alpha = .84$), self-reliance ($\alpha = .81$), primacy of work ($\alpha = .80$), power over women ($\alpha = .86$), and heterosexual self-presentation ($\alpha = .90$). For the present study, the nine domains of masculinity were examined.

Anger. The 34-item Aggression Questionnaire (AQ; Buss & Warren, 2000) was used to examine aggressive tendencies and behaviors. Items asked participants to rate their agreement to a series of statements (e.g., “I have trouble controlling my temper” and “At times I get very angry for no good reason”) on a 5-point Likert scale (1 = *Not at all like me*, 5 = *Completely like me*). A total score was used for this study with higher scores indicated more anger and aggressive behaviors. This scale demonstrated excellent internal consistency reliability in the current sample ($\alpha = .95$).

Alcohol use and related problems. The 10-item Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993) was used to examine hazardous patterns of alcohol consumption and alcohol-related problems. Example items included: “How often do you have 6+ drinks on one occasion?” and “Have you or someone else been injured as a result of your drinking?” A total score was used for the current study, with higher scores indicating more hazardous alcohol consumption and related problems. This scale demonstrated good internal consistency reliability in the current sample ($\alpha = .86$).

Drug use and related problems. The 11-item Drug Use Disorders Identification Test (DUDIT; Berman, Bergman, Palmstierna, & Schlyter, 2004) was used to examine drug consumption and related-problems. Example items included: “How often do you use drugs other than alcohol?” “Over the past year, have you felt that your longing for drugs was so strong that you could not resist it?” and “How often over the past year have you taken drugs and then neglected to do something you should have done?” This scale demonstrated excellent internal consistency reliability in the current sample ($\alpha = .90$).

Analytic Approach

Normality checks and handling of missing data. Data were examined for skewness and kurtosis and all variables were within acceptable ranges of normality (i.e., skewness < 3 and kurtosis < 10; see Kline, 1998). Examination of missing data revealed two participants who did not complete the sexual victimization measures needed for classification analyses. There is no gold standard for handling missing victimization data, and some trauma researchers choose to completely exclude such participants from further analyses (Ullman & Najdowski, 2010). Given this, these participants were removed from analyses resulting in a final sample of 294. The remaining measures were completed in full, rendering missing data procedures unnecessary. Descriptive statistics and bivariate correlations of demographics were computed to identify potential covariates. Since age was related to all outcome variables (except alcohol use variables), it was a covariate in the MANCOVA/ANCOVA. Bivariate correlations of masculinity, anger, and substance use variables are included in Table 1.

Latent class analysis (LCA; Hagenaars & McCutcheon, 2002) is a person-centered approach that employs maximum likelihood estimation with robust standard errors (MLR) to classify participants into discrete latent classes. Assignment of a participant to a latent class is probabilistic in nature and is based on similar response patterns to a series of items. In the present study, the items measured five dichotomous childhood maltreatment variables from the CTQ (i.e., emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect) and five dichotomous adult sexual victimization responses from the SES-SFV (i.e., forcible completed rape, forcible attempted rape, substance-related completed rape, substance-related attempted rape, other experiences of sexual coercion). In the present study, a series of two to five class models were tested via *Mplus* (version 7; Muthén & Muthén, 1998-2013). The estimation of each model was run with the default ten different sets of starting values.

Selection of the number of classes was based on interpretative meaningfulness and statistical relevance. With regard to the model fit, a series of indices were examined for each model including, the Akaike information criterion (AIC; Akaike, 1987), the Bayesian information criterion (BIC; Schwarz, 1978), sample size adjusted Bayesian information criterion (SSABIC; Sclove, 1987), the entropy value (Ramaswamy, DeSarbo, Reibstein, & Robinson, 1993), the Lo-Mendell-Rubin adjusted likelihood ratio test (LMR; Lo, Mendell, & Rubin, 2001), and the bootstrapped likelihood ratio test (BLRT; McLachlan & Peel, 2000). Lower AIC, BIC and SSABIC values indicate better model fit while entropy values closer to 1 suggest better group classification (Nylund, Asparouhov, & Muthén, 2007). The LMR and BLRT values were used to examine whether the specified k classes fits the data better than the solution with $k-1$ classes (e.g., whether 4-class solution fits the data better than 3-class solution). These statistical indices were used to select the optimal number of latent victimization classes within the 2 to 5 class solution. The final latent class solution was exported into SPSS for further analyses on domains of masculinity, anger, and substance use variables (i.e., alcohol use and drug use).

Obtained latent classes were compared to examine potential differences in the nine domains of masculinity, as well as on anger, alcohol use and related problems, and drug use and related problems were examined. Specifically, a multivariate analysis of covariance (MANCOVA) was conducted to examine the differences in the obtained latent classes across the nine domains of masculinity, after controlling for the effect of age. Given recommendations that univariate ANOVAs are not an appropriate post-hoc test for a significant MANCOVA (Betz, 1987), a discriminant function analysis was conducted to examine patterns of masculinity that differentiate the latent classes. Next, to examine differences in the latent classes across anger, alcohol use and drug use, three separate analyses of covariance (ANCOVA) were conducted

after controlling for the effect of age. Planned comparisons were conducted to examine differences between the classes, comparing each class to the revictimized class (i.e., the reference group).

Results

Latent Classes of Childhood Abuse and Neglect, and Adulthood Sexual Assault

The LCA revealed a four latent-class solution demonstrated the best goodness-of-fit indices when compared to the two-, three-, and five-class solutions (Table 2). The BIC indicated the four-class solution best fit the data although the AIC and SSABIC indicated the five-class solution. Notably, a simulation study by Nylund et al. (2007) indicated that BIC is the stronger indicator to decide number of classes among the various information criteria (e.g., AIC). In addition, the adjusted likelihood ratio test (LMR) favored the four-class solution over the five-class solution, whereas BLRT findings were inconclusive. The entropy was high for all four solutions ranging from 0.89- 0.93. Finally, the average posterior probabilities for the four-class solution were high, ranging from .090- 0.99, which suggests excellent class determination. The average posterior probabilities for the three-class solution ranged from 0.94- 0.97 and the five-class solution ranged from 0.90- 0.98. Thus, based on statistical and conceptual relevance, the four-class solution was selected.

Percentage distribution for the four-class solution was examined to determine the characteristics of adult sexual victimization and child maltreatment for each of the four classes (Table 3). The classes were labeled based on childhood maltreatment and sexual victimization experiences during adulthood. Noteworthy is that the labels employed to describe the latent classes are subjective in nature. Class 1 ($n = 32$) was labeled *revictimization* (RV), as participants endorsed high rates of childhood maltreatment types (i.e., abuse and neglect) and adult sexual

victimization across types of coercion. Class 2 ($n = 14$) was labeled *adult substance-related victimization* (SUB), as participants endorsed high rates of substance-related sexual victimization as adult and low rates of childhood maltreatment. Class 3 ($n = 70$) was labeled *childhood maltreatment* (CM) as participants endorsed high levels of child maltreatment albeit lower than the revictimization class except emotional neglect. This class appears to be best characterized by high rates of child maltreatment though approximately one quarter (25.3%) reported experiences of unwanted touching or kissing in adulthood on the SES-SFV. Class 4 ($n = 178$) was labeled *low victimization* (LV), as participants endorsed low rates of child maltreatment types and did not endorse any characteristics related to adult sexual victimization.

Differences between Latent Classes in Masculinity, Anger, and Substance Use

For the final set of analyses the four latent classes were entered into a series of tests to examine class differences in desired outcomes. First, a MANCOVA was conducted to examine class differences in the nine domains of masculinity (with age entered as a covariate). The MANCOVA was significant, Wilk's Lambda = .82, $F(27, 821) = 2.19$, $p < .001$, $\eta^2_p = .05$ (Table 4). A discriminant function analysis was conducted to examine post-hoc patterns of masculinity that differentiate the classes. The significant masculinity subscales (i.e., emotional control, power over women, playboy, and self-reliance) were entered as predictor variables to assess how well the four classes could be predicted from CMNI scores (Table 5).

Discriminant function analyses revealed three discriminant functions. The first function explained 83.5% of the variance, canonical $R^2 = .34$, whereas the second explained 13.4%, canonical $R^2 = .14$, and the third explained only 3.1% of the variance, canonical $R^2 = .07$. The first function significantly differentiated the four classes, $\Lambda = .862$, $\chi^2(12) = 43.02$, $p < .001$. Removing the first function did not significantly differentiate the classes, $\Lambda = .975$, $\chi^2(6) = 7.43$,

$p = .28$. Similarly, removing the second function indicated that the third function did not significantly differentiate the classes, $\Lambda = .995$, $\chi^2(2) = 1.42$, $p = .49$. Overall, 60.9% of the cases were correctly classified into the appropriate class. The group centroid results indicated the first function differentiated most strongly between RV, SUB, and CM groups compared to the LV (Table 5). Therefore, the structure matrix results indicated that the RV, SUB, and CM differ from the LV based on higher scores on the masculinity subscales of power over women, playboy, self-reliance, and emotional control. The correlations between outcomes and the three functions are presented in Table 5.

Three separate analyses of covariance (ANCOVA) were conducted to examine class differences in anger, alcohol use and related problems, and drug use and related problems (with age entered as a covariate; Table 6). The univariate effect of the classes on anger was significant, $F(3, 288) = 19.62$, $p < .001$. Planned comparisons with RV as the reference group revealed the RV group reported more difficulties with anger compared to the SUB and LV groups. The univariate effect of the classes on alcohol use and related problems was significant, $F(3, 285) = 4.33$, $p < .01$. Planned comparisons revealed the RV group reported more alcohol use and related problems compared to the LV group. The univariate effect of the classes on drug use and related problems was significant, $F(3, 289) = 6.84$, $p < .001$. Planned comparisons with RV as the reference group revealed a similar pattern, with the RV group reporting more drug use and related problems compared to the LV group.

Discussion

The aim of the present study was two-fold. First, we sought to identify naturally occurring patterns of victimization in men based on five types of childhood maltreatment (abuse and neglect) and different forms of adult sexual victimization (based on type of act and coercion

tactic). Further, we examined whether men with different patterns of victimization history (resultant latent classes) differ in nine domains of masculinity, anger, alcohol use, and drug use. Findings supported the presence of four latent classes characterized by experiences of revictimization, substance-related sexual assault, child maltreatment, and low victimization patterns in a community sample of men in the United States (Hypothesis 1 supported). Additionally, support for the Traumagenic Dynamics model was found, in that, domains of conformity to masculine norms, anger, and substance (alcohol and drug) use were greater among men exposed to revictimization relative to the low victimization class, and to the substance-related sexual assault class with respect to anger (Hypothesis 2 supported).

Consistent with the first hypothesis, results indicated the presence of four latent classes corresponding to experiences of revictimization, incapacitated sexual assault in adulthood, childhood maltreatment (abuse and neglect), and low victimization during any developmental period of childhood or adulthood. The presence of a latent class characterized by experiences of revictimization in men adds to the extant literature highlighting an association between childhood abuse and neglect, and sexual revictimization primarily studied in women (Charak et al., 2017; Filipas & Ullman, 2006; Messman-Moore & Long, 2003). Consistent with the studies of women, men with histories of CSA are also at greater risk for adult sexual assault (i.e., sexual revictimization), although not all men with victimization in childhood are later assaulted (Elliott et al., 2004).

These findings suggest the need for further research in identifying both resilience factors that promote decreased risk for revictimization among male childhood maltreatment survivors, as well as risk factors for first-time adult victimization (among previously non-victimized individuals), such as risky sexual behavior, heavy episodic drinking, and PTSD (Messman-

Moore & Long, 2003; Messman-Moore, Ward, & Brown, 2009). Notably, the present study did not find a latent class characterized exclusively by sexual victimization during childhood or adulthood, but rather the revictimization class reported exposure to multiple types of childhood maltreatment. This is consistent with prior studies suggesting the common co-occurrence of different types of childhood abuse and neglect (e.g., Charak & Koot, 2015; Messman-Moore & Bhuptani, 2017), and their accumulating and detrimental effect on mental health.

Like men in the revictimized class, those who experienced childhood maltreatment (in the absence of adult sexual assault) and substance-related sexual assault also reported higher levels of multiple facets of masculinity (i.e., emotional control, power over women, being a playboy, and self-reliance) compared to men with little to no victimization experience. Prior studies suggest that specific domains of masculinity, namely, emotional control, power over women, being a playboy, and self-reliance are associated with revictimization (Durfee, 2011) and global psychological distress, social dominance, and lower likelihood of help-seeking behavior or processing of CSA in men (Easton et al., 2014; Mahalik et al., 2003). Thus, specific domains of masculinity may act as mechanisms between CSA and ASA, and revictimization and adulthood mental health problems. Additionally, the present study found greater anger scores among revictimized men compared to those in SUB and LV classes. However, the present study did not find that those with (re)victimization experiences scored higher on anger, alcohol use, and drug use compared to the child maltreatment group (CM). A lack of such differences may reflect the powerful long-term effects of child maltreatment on anger and substance use as found in prior studies (Charak et al., 2015; Easton & Kong, 2017). In particular, men with experiences of child sexual abuse are at higher risk for a number of deleterious outcomes including suicidal ideation and attempts (Easton, Renner, & O'Leary, 2013; O'Leary & Gould, 2009). The present

findings of higher scores in anger and in various domains of conformity to masculine norms support an association between the presence of psychological vulnerabilities (as per the Traumagenic Dynamics model) and revictimization of men across various developmental stages of life.

Findings also demonstrated greater alcohol use among men exposed to sexual victimization and child maltreatment (i.e., the RV class); this is not surprising given the robust association between alcohol use and sexual victimization in men and women (Monks et al., 2010). Notably, there is a reciprocal relationship between alcohol use and sexual victimization that can be explained in two ways. First, in line with the *Traumagenic Dynamics theory* of sexual revictimization men who engage in heavy or problematic alcohol use are perhaps more at risk of victimization due to impaired judgment, and may be viewed as easier targets by perpetrators (Messman-Moore & Long, 2003). Second, victimized men may be more likely to engage in heavy alcohol consumption to *self-medicate* or distract oneself from intrusive thoughts of the prior abuse, similar to patterns found among women (Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997; Messman-Moore & Long, 2003). Likewise, present findings indicated drug-use to be higher in those in the RV class than the LV class. These findings corroborate existing studies suggestive of greater alcohol and drug use in sexually victimized men than non-victimized men (Monks et al., 2010; Palmer, McMahon, Rounsaville, & Ball, 2010; Turchik, 2012). Future studies should examine the reciprocal relation between victimization and alcohol- and drug use among men using a longitudinal design in order to better ascribe causality among factors.

The findings of the current study should be considered within the context of the following limitations. First, the present study relied on participants' memory and willingness to report experiences of sexual victimization and related outcomes in an online study that may limit the

generalization to other samples. On the other hand, the use of online data collection forums may paradoxically increase the likelihood of reporting sensitive information in the absence of an interviewer (Tourangeau & Smith, 1996). Second, the cross-sectional design limits conclusions regarding the temporal relation among variables and the assumption that childhood/adulthood victimization leads to differences in domains of masculinity, anger, and substance use. Third, our conclusions should be considered tentative in the absence of replication of these patterns. The relatively small class size of two latent classes—revictimization ($n = 32$) and adult substance-related victimization ($n = 14$)—may affect statistical power to detect potential group differences for masculinity, anger, and substance use. Fourth, the present study did not take into consideration other characteristics of adulthood sexual assault, such as gender of perpetrator (specifically male perpetrator; Peterson et al., 2011) and characteristics of childhood abuse and neglect (e.g., age of onset, nature of the acts; Allen, 2008; Kaplow & Widom, 2007) that have important implications in terms of the psychological consequences associated with sexual victimization of males.

Nonetheless, the present findings are consistent with earlier empirical research and theory, and thus have important implications for intervention and future research with men. It is essential that clinicians be cognizant that men *can* be victims of childhood maltreatment and adult sexual assault. While all forms of abuse, neglect, and sexual assault can be potentially harmful, recognizing the heterogeneity in men's victimization experiences (in childhood and adulthood) may inform clinical interventions, as different types of victimization may be differentially associated with negative outcomes. For example, in the present study those with exposure to childhood abuse/neglect (including those with revictimization experiences) and ASA reported more conformity with masculine norms than those with least victimization experiences.

Men with histories of child maltreatment and ASA are less likely to report their victimization experiences and/or seek help owing to fear of stigma, shame, masculine ideals, and fear of not being believed (Kia-Keating et al., 2005; King & Woollett, 1997). Interventions directed towards generating awareness and reducing stigma among male survivors of childhood maltreatment and adulthood assault may influence survivors in their efforts to seek help. Moreover, early interventions to help prevent (re)victimization in adulthood, and tailored clinical interventions directed towards management of anger and substance misuse, would likely benefit male survivors.

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