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## Latent Classes of Childhood Maltreatment, Adult Sexual Assault, and Revictimization in Men: Differences in Masculinity, Anger, and Substance Use

AQ: 1

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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. 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 latent class analysis 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 with 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.

#### Public Significance Statement

Based on exposure to childhood abuse and neglect, and adult sexual assault, latent class analysis yielded five classes, namely, revictimization, adult substance-representation, childhood maltreatment, and low victimization, in a community sample of mention during childhood and adulthood, and were higher anger and substance use. Compared to the low victimized class, all four classes with more severe victimization experiences were higher on domains of masculinity.

AQ:3-4

Keywords: Revictimization, Masculinity, Substance-use, anger, LCA

Sexual victimization is a global and pervasive problem affecting both men and women, although the majority of studies examine victimization among women. The National Intimate Partner and Sexual Violence Survey of 2011 (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 aged 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.

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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). Due 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, which 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, DiLillo, Messman-Moore, & Gratz, 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).

Although the bulk of sexual revictimization literature focuses on women, some studies have identified this phenomenon in men as well (Aosved, Long, & Voller, 2011; Elliott, Mok, & Briere, 2004). The National Intimate Partner and Sexual Violence Survey of 2011 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 with 4% of men who were forced to penetrate only during adulthood (Breiding et al., 2014). In a national sample of men, ASA victims were five times more likely to have a history of CSA than nonvictims, with revictimized men reporting greater levels of psychological distress than those with a history of CSA- or ASA-only, and nonvictims (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 pow-

erlessness 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: (a) vulnerability due to a propensity to engage in higher rates of risky behavior (e.g., heavy alcohol use or risky sexual activity) and (b) psychological vulnerability emanating from traumatic stress symptoms, including facets of posttraumatic stress disorder (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 well-being (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 because 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 indicates that different types of childhood maltreatment (e.g., sexual abuse, physical abuse, or neglect) often co-occur and accumulate to have a negative effect on the survivor's mental health and well-being (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 maltreatmentusually CSA-in later risk for revictimization. Hetzel and Mc-Canne (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 ASA compared with 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, & Millar, 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 or 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 et al., 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 nonclinical, 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 50s, 60s, and 70s 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 contribute to the lower rates of victimization reported 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 by 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 or 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, 2003). 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, and 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 because 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, Heidt, & Gold, 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: (a) by blaming their vulnerability for victimization on the consumption of alcohol and (b) by emphasizing how they successfully thwarted an unwanted sexual attack by physical violence (e.g., punching or 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: (a) being in power and control in the relationship by acknowledging suffering an "assault" but denying being a "victim", (b) active resistance to the abuse without the use of violent force, and (c) 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 and 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 used latent class analysis (LCA) to identify patterns of victimization based on endorsement of childhood maltreatment types and ASA experiences as previously examined in samples of women (Charak et al., 2017; Macy, 2008; Masters et al., 2015). The present study hypothesizes as follows:

Hypothesis 1: 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 (Aosved et al., 2011).

In line with the traumagenic dynamics model, it was hypothesized as follows:

Hypothesis 2: Men who were revictimized would report greater conformity to masculine norms (Durfee, 2011; Javaid, 2015), anger, and substance misuse (Turchik, 2012; Weiss, 2010), compared with the least victimized group of men.

#### Method

#### **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, and 0.6% identified as Other; total percentage exceeds 100% because 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 General Equivalency Diploma, 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 to \$39,000, 32.6% reported \$40,000 to \$74,000, 14.6% reported \$75,000 to \$99,000, 17.4% reported \$100,000 to \$199,000, 1.4% reported more than \$200,000, and 1% reported "I don't know."

#### **Procedure**

Data were collected through Amazon Mechanical Turk, an online data collection website where individuals complete online research studies for compensation. Amazon Mechanical Turk 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 with undergraduate samples (Paolacci & Chandler, 2014). The study was visible to users with IP addresses originating in the United States and who had a Human Intelligence Tasks approval rate greater or equal to 95%. AQ:8 Potential participants were prescreened based on demographic characteristics, inclusion criteria as follows: being male, aged 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 socioemotional constructs. Data were collected in summer and fall of 2015, and participants were compensated \$3.00. The institutional review board at [Miami University] approved the study protocol.

AO: 9

#### Measures

Childhood maltreatment. The Childhood Trauma Questionnaire (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, emotional, and sexual abuse, and emotional and physical neglect. Example items AQ: 10 include the following: "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., 2003). AQ: 11 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). Partici-

sexual victimization: fondling/kissing, attempted oral sex, completed oral sex, attempted penetration, and completed penetration. Five methods of coercion were examined for each type of act, resulting in total 25 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 AQ: 12 as dichotomous variables (1, 2, or 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 sequalae among women (Brown et al., 2009; Monks, Tomaka, Palacios, & Thompson, 2010). Attempted and completed rape was also examined separately due to unique patterns in alcohol-related AQ: 13 outcomes (Monks et al., 2010) and psychological distress.

pants responded to five sets of questions examining experiences of

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 as follows: "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 (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 indicating 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 (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 (Berman, Bergman, Palmstierna, & Schlyter, 2005) 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; 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. Because age was related to all outcome variables (except alcohol use variables), it was a covariate in the multivariate analysis of covariance (MANCOVA)/ analysis of covariance (ANCOVA). Bivariate correlations of masculinity, anger, and substance use variables are included in Table 1.

LCA (Hagenaars & McCutcheon, 2002) is a person-centered approach that uses maximum likelihood estimation with robust standard errors 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 Childhood Trauma Questionnaire (i.e., emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect) and five dichotomous adult sexual victimization responses from the Sexual Experiences Survey-Short Form Victimization (SES-SFV; i.e., forcible completed rape, forcible attempted rape, substance-related completed rape, substance-related attempted rape, and other experiences of sexual coercion). In the present study, a series of two- to five-class AQ: 16 models were tested via Mplus (Version 7; Muthén & Muthén, 1998-2013, Los Angeles, CA, USA). The estimation of each AQ: 17-18 model was run with the default 10 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

Table 1
Bivariate Correlations of the Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Winning	_	.02	.19**	.13*	.36**	.21**	.04	.19**	.23	.07	.12**	03
2. Emotional control		_	.01	.17**	.12*	.21**	.53**	03	.13*	.23**	.13*	.01
<ol><li>Risk-taking</li></ol>			_	.12*	.32**	.34**	.09	.17**	01	.14	.10	.14*
4. Violence				_	.18**	.15*	.19**	09	.03	.23**	.04	.06
5. Power over women					_	.30**	.06	.31**	.46**	.27**	.12*	04
6. Playboy						_	.19**	.14*	07	.24**	.26**	.09
7. Self-Reliance							_	.02	.04	.32**	.15*	.18**
8. Primacy of work								_	.18**	.08	.06	.03
9. Het. presentation									_	.13*	00	10
10. Anger										_	.22**	.25**
11. Alcohol use/problems											_	.24**
12. Drug use/problems												_

Note. N = 294. Variables 1 to 9 represent Conformity to Masculine Norms (CMNI) subscales. Het. presentation = CMNI Heterosexual Self-Presentation. \* p < .05. \*\* p < .01.

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, whereas 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 fit the data better than the solution with k-l classes (e.g., whether four-class solution fits the data better than three-class solution). These statistical indices were used to select the optimal number of latent victimization AQ: 19 classes within the two- to five-class solution. The final latent class solution was exported into SPSS (Armonk, NY) for further analyses on domains of masculinity, anger, and substance use variables AQ: 20 (i.e., alcohol use and drug use).

The 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 exam
AQ: 21 ined. Specifically, a 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 AQ: 22 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 ANCOVAs 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

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Table 2
Fit Indices for Latent Class Models With Two- to Five-Classes Based on Victimization History

	Two classes	Three classes	Four classes	Five classes
AIC	2,248.13	2,087.04	2,040.06	2,031.58
BIC	2,325.49	2,204.91	2,198.45	2,230.50
Sample size adjusted BIC	2,258.89	2,103.43	2,062.09	2,059.25
Entropy	.89	.91	.93	.93
LMR	2 vs. 1	3 vs. 2	4 vs. 3	5 vs. 4
	Value = 522.86	Value = 180.22	Value = 67.89	Value = 30.00
	p = .012	p = .003	p = .004	p = .120
BLRT	-1,368.68	-1,103.07	-1,011.52	-977.03
	p = .001	p = .001	p = .001	p = .001
Sample size for each class	Class $1 = 68$	Class $1 = 36$	Class $1 = 32$	Class $1 = 32$
•	Class $2 = 226$	Class $2 = 77$	Class $2 = 14$	Class $2 = 14$
		Class $3 = 181$	Class $3 = 70$	Class $3 = 171$
			Class $4 = 178$	Class $4 = 30$
				Class $5 = 47$

*Note.* AIC = Akaike's information criterion; BIC = Bayesian information criterion; LMR = Lo-Mendell-Rubin test; BLRT = bootstrapped likelihood ratio test.

T5

the five-class solution. Notably, a simulation study by Nylund et al. (2007) indicated that BIC is the stronger indicator that decides

number of classes among the various information criteria (e.g., AQ: 24 AIC). In addition, the 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 to

AQ: 25 0.93. Finally, the average posterior probabilities for the four-class solution were high, ranging from .090 to 0.99, which suggests excellent class determination. The average posterior probabilities for the three-class solution ranged from 0.94 to 0.97, and the five-class solution ranged from 0.90 to 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. What is noteworthy is that the labels used 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 adults 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 those of 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  $\lambda = .82$ ,  $F(27, 821) = 2.19, p < .001, \eta_p^2 = .05$  (Table 4). A discriminant T4 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 the 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 indicted the first function differentiated most strongly between RV, SUB, and CM groups compared with the LV group (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 ANCOVAs 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 with 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 with the LV group. The univariate effect of the

Table 3 Percentage of Men Reporting Experiences of Childhood Maltreatment and Adult Sexual Assault Within Each Latent Class

Victimization exposure	Percent within sample	RV	SUB	CM	LV
Childhood maltreatment					
Emotional abuse	18.7	59.1	0	47.6	0
Physical abuse	18.0	65.2	8.5	36.6	1.7
Sexual abuse	28.9	83.6	15.8	44.4	12.9
Emotional neglect	33.3	75.2	12.6	88.1	3.2
Physical neglect	31.3	90.5	21.7	65.3	6.0
Adult sexual victimization					
Forcible completed rape	6.1	52.3	0	0	0.6
Forcible attempted rape	7.8	70.8	0	0	0
Substance-related completed rape	10.2	67.8	52.6	0	0
Substance-related attempted rape	13.6	83.5	85.0	0	0
Other sexual coercion	29.9	100.0	92.9	25.3	13.1

Note. RV = revictimization (Class 1; n = 32); SUB = adult substance-related victimization (Class 2; n = 14); CM = childhood maltreatment (Class 3; n = 70); LV = low victimization (Class 4; n = 178).

Table 4
Multivariate Analysis of Covariance Examining Class Differences on Nine Domains of Masculinity

Variables	Total	RV	SUB	CM	LV
Masculinity					
Winning	8.86 (3.55)	8.19 (3.40)	10.71 (3.24)	9.17 (3.58)	8.71 (3.55)
Emotional control	9.35 (3.58)	9.97 (3.36)	9.64 (3.39)	10.21 (3.86)	8.87 (3.46)
Risk-taking	5.90 (2.83)	6.91 (3.04)	6.57 (3.06)	5.89 (3.33)	5.67 (2.53)
Violence	9.04 (3.83)	9.00 (3.93)	9.29 (2.81)	8.95 (3.95)	9.07 (3.87)
Power over women	3.67 (2.65)	5.10 (3.12)	3.86 (2.74)	4.37 (2.82)	3.12 (2.32)
Playboy	4.96 (3.08)	5.69 (2.73)	7.07 (3.32)	5.79 (3.20)	4.34 (2.91)
Self-reliance	7.46 (3.05)	7.84 (2.91)	7.64 (2.37)	8.27 (3.11)	7.06 (3.04)
Primacy of work	5.22 (2.59)	5.63 (2.41)	5.50 (2.21)	5.40 (2.57)	5.05 (2.66)
Het. Presentation	7.84 (4.49)	7.91 (3.48)	7.21 (3.79)	8.61 (4.92)	7.57 (4.52)

*Note.* Table entries comprise marginal means and standard errors in parentheses. RV = revictimization; SUB = adult substance-related victimization; CM = childhood maltreatment; LV = low victimization; Het. Presentation = heterosexual self-presentation. Age was entered as a covariate. p < .05. \*\* p < .001.

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 with the LV group.

#### Discussion

The aim of the present study was twofold. 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

Table 5
Results of Discriminant Function Analysis Examining Domains of Masculinity Across Classes

	Function 1	Function 2	Function 3
		Group centroids	
Class			
RV	.520	.211	138
SUB	.415	.004	.095
CM	.413	576	113
LV	289	.006	004
		Correlation	
Predictor variable			
Power over women	.75	.50	43
Playboy	.71	69	16
Self-reliance	.45	.05	.85
Emotional control	.46	.07	.57

*Note.* N = 294. RV = revictimization (n = 32); SUB = adult substance-related victimization (n = 14); CM = childhood maltreatment (n = 70); LV = low victimization (n = 178). Loadings  $\geq |.40|$  are in bold.

supported). In addition, 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 ASA (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 and risk factors for first-time adult victimization (among previously nonvictimized 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 (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 ASA) and substance-related sexual assault also reported higher levels of multiple facets of masculinity (i.e., emotional control, power over women, being

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Table 6
Univariate Analysis of Covariance and Planned Comparisons Examining Class Differences on Anger, Alcohol Use, and Drug Use

Variables	Total	RV	SUB	CM	LV	F
Anger	70.95 (23.84)	89.32 (3.82) <sup>a</sup>	72.14 (5.76) <sup>b</sup>	( )	63.63 (1.62) <sup>b</sup>	19.62***
Alcohol use/problems Drug use/problems	5.34 (5.22) 2.51 (5.22)	7.06 (.91) <sup>a</sup> 4.74 (.89) <sup>a</sup>	8.95 (1.37) 4.89 (1.34)	5.36 (.61) 3.65 (.60)	4.73 (.30) <sup>b</sup> 1.48 (.38) <sup>b</sup>	4.33** 6.84***

Note. Table entries comprise marginal means and standard errors in parentheses. Planned comparisons were conducted with RV as the reference group. Within each row, means with different subscripts are significantly different than the RV group at p < .05. RV = revictimization; SUB = adult substance-related victimization; CM = childhood maltreatment; LV = low victimization; Masculinity = Conformity to Masculine Norms Inventory; Anger = Aggression Questionnaire. Age was entered as a covariate. Within each row, means with different letter subscripts are significantly different at p < .05.

\*\*\* p < .01.

\*\*\* p < .001.

a playboy, and self-reliance) compared with 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. In addition, the present study found greater anger scores among revictimized men compared with 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 with the CM group. 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, Koot, Dvorak, Elklit, & Elhai, 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 dymanics 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 nonvictimized 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 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 the perpetrator (specifically male perpetrator; Peterson et al., 2011) and the characteristics of childhood abuse and neglect (e.g., age of onset and 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 ASA. Although 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

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histories of child maltreatment and ASA are less likely to report their victimization experiences and/or seek help due to fear of stigma, shame, masculine ideals, and fear of not being believed (Kia-Keating et al., 2005; King & Woollett, 1997). Interventions directed toward 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 toward management of anger and substance misuse, would likely benefit male survivors.

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