Research article

The impact of childhood gender expression on childhood sexual abuse and psychopathology among young men who have sex with men☆

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ABSTRACT

Young men who have sex with men (MSM) are a risk group highly vulnerable to HIV infection and psychiatric symptoms are direct predictors of sexual risk behavior in MSM. Childhood sexual abuse (CSA) is associated with psychiatric symptomology in adolescence, and MSM are disproportionately impacted by CSA compared to heterosexuals. Some evidence suggests that childhood gender nonconformity, a natural variation of human gender expression, is more common in MSM than heterosexual males and places MSM at greater risk for CSA. This study examined whether or not childhood gender expression moderated the association between incidents of unwanted, early sexual experiences occurring before age 13 (ESE) and current psychiatric symptomology in a community-based sample of 449 young MSM aged 16–20. Analyses revealed significant bivariate associations between ESE and psychological symptoms, and significant multivariable associations between ESE, gender nonconformity and psychiatric outcomes. Young MSM with childhood gender nonconformity may be disproportionately victimized by CSA thereby increasing their likelihood of developing psychiatric symptoms in adolescence. Early intervention addressing these factors may help reduce lifetime negative sequelae.

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Introduction

Similar to other sexual minorities, men who have sex with men (MSM) (including those who identify as gay/bisexual) are more likely than heterosexuals to exhibit lifetime psychopathology (Cochran, Sullivan, & Mays, 2003; Mustanski, Garofalo, & Emerson, 2010). Childhood sexual abuse and childhood gender nonconformity, two factors found to be more common among gay/bisexual men than their heterosexual counterparts (Friedman et al., 2011; Zucker & Lawrence, 2009), are worthy of examination as they are both associated with the development of later psychopathology in heterosexual as well as lesbian, gay, bisexual, and transgender populations (Benoit & Downing, 2013; D'Augelli, Grossman, & Starks, 2006; Roberts, Rosario, Corliss, Koenen, & Bryn Austin, 2012b). Moreover, childhood sexual abuse (Lloyd & Operario, 2012), and psychiatric disorders

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such as depression (Alvy et al., 2011) and post-traumatic stress disorder (PTSD) are associated with sexual risk behavior in adult (Reisner, Mimiaga, Safren, & Mayer, 2009) and young MSM (Beidas, Birkett, Newcomb, & Mustanski, 2012) – groups already disproportionately vulnerable to HIV infection due to risk associated with condomless anal intercourse and a high concentration of HIV in MSM communities (CDC, 2012a, 2012b). Thus, for multiple reasons, it is imperative to examine the factors associated with the development of psychopathology including childhood sexual abuse and childhood gender expression.

Childhood Sexual Abuse

Childhood sexual abuse has been defined as any unwanted or inappropriate form of sexual contact between a child and a person at least 5 years older, and it can consist of genital touching or fondling, vaginal, anal, or oral intercourse (or attempted intercourse) (Andrews, Corry, Slade, Issakidis, & Swanston, 2004). Individuals who experience these severe forms of CSA are at increased odds of experiencing psychiatric conditions (Andrews et al., 2004; Maniglio, 2010). For example, according to one recent meta-analysis, CSA was associated with lifetime diagnosis of a psychiatric disorder including depression, anxiety, and posttraumatic stress disorder (PTSD), as well as suicide attempts (Chen et al., 2010). Trait impulsivity, a risk factor for suicidal behavior (Maser et al., 2002), substance use (Li et al., 2012) and sexual risk (Dir, Coskunpinar, & Cyders, 2014), is also associated with CSA (Roy, 2005). The aspects of impulsivity most strongly associated with CSA include negative urgency (i.e., tendency to act hastily in response to negative affect) (Gagnon, Daelman, McDuff, & Kocka, 2013) and a lack of both premeditation (i.e., tendency to act without thinking) and perseverance (i.e., inability to sustain focus on a task) (Sujan, Humphreys, Ray, & Lee, 2014).

In the United States, CSA is experienced by approximately ten percent of youth 18 and under, with the majority of cases (25–75%) experienced by females and 16–25% among males (CDC, 1997; Pérez-Fuentes et al., 2013). While CSA prevalence rates are yet to be examined in young MSM, adult gay/bisexual men report disproportionately high rates of CSA that range between 4 and 59% (Paul, Catania, Pollack, & Stall, 2001; Rothman, Exner, & Baughman, 2011). Since it is likely that gay/bisexual men (including some MSM) exhibit greater gender nonconformity in childhood than do their heterosexual counterparts, the presence of childhood gender nonconformity may be an important attribute that explains the disproportionately high rates of CSA in MSM (Zucker & Lawrence, 2009).

Childhood Gender Expression and Nonconformity

Gender identity refers to an individual's psychologically rooted "personal sense of self as male or female" (Adelson, 2012, p. 5). By the age of 3 years, most children reared in western culture understand their gender identity to be either male or female and, by age 5 or 6 years, most children identify with a life-long male or female gender identity consistent with their natal sex (Martin, Ruble, & Szkrybalo, 2002). *Gender expression* refers to the way in which an individual communicates their gender identity to others most notably through their behavior (e.g., how they dress, behave), self-reference (e.g., use of "she", "he", "they"), and/or (non-)adherence to culturally dictated gender roles (American Psychological Association, 2009). In western culture, sociocultural norms dictate that natal males and natal females conform to masculine and feminine gender roles, respectively. *Gender nonconformity* is the "extent to which a person's gender identity, role, or expression differs from the cultural norms prescribed for people of a particular sex" (Coleman et al., 2012, p. 168). Given that children begin exhibiting gender-related phenomena in early childhood, gender nonconformity may occur as young as age 3 years (Martin et al., 2002). Findings from clinic-referred samples of prepubertal children with gender nonconformity infer that in the majority of cases these children develop to be cisgender (i.e., non-transgender) individuals who identify as gay or lesbian (Zucker & Lawrence, 2009).

Compared to children who conform to gender role expectations, gender-nonconforming children are at greater risk of experiencing ridicule, discrimination or violence from family or peers, and these factors increase their susceptibility to psychopathology in adolescence including depression, anxiety, posttraumatic stress disorder and suicidality (D'Augelli et al., 2006; Haas et al., 2011; Skidmore, Linsenmeier, & Bailey, 2006; Toomey, Ryan, Diaz, Card, & Russell, 2010; Travers et al., 2012). Moreover, recent studies support associations between childhood gender nonconformity and childhood sexual abuse (Bandini et al., 2011). Findings from retrospective case-controlled studies among adults indicate that childhood gender nonconformity moderates the relationship between CSA and adulthood PTSD risk (Roberts, Rosario, Corliss, Koenen, & Bryn Austin, 2012a). This research suggests that, compared with children who have no history of gender nonconformity, greater associations of CSA and psychopathology are found among those with gender nonconformity. No known studies have examined gender nonconformity as a mediator in the association between CSA and psychopathology perhaps because study findings to date are inconclusive regarding any psychological or biological precipitants of gender nonconformity, including that it manifests as a result of adverse childhood experiences including CSA (for a review see Sánchez & Vilain, 2013). However, no known studies have examined a similar moderating relationship in young MSM.

Current Study

This study examined whether or not incidents of CSA were associated with current psychiatric symptomology in a sample of young adult MSM aged 16–20. This study also examined how recalled childhood gender nonconformity influenced the

likelihood of CSA, as well as the likelihood of current psychiatric symptomology. Given extant literature characterizing CSA as often predictive of psychopathology, we hypothesized that those with histories of CSA would demonstrate an increased likelihood of developing symptomology consistent with Major Depressive Disorder, PTSD, and suicide risk factors (e.g., impulsivity, suicidal ideation, suicide attempts) in our sample of young men (hypothesis 1). We also hypothesized that young MSM with childhood gender nonconformity would report greater experiences of CSA consistent with extant literature regarding increased susceptibility of CSA among gender-nonconforming children (hypothesis 2). Last, we hypothesized that, compared to young MSM without childhood gender nonconformity, experiences of CSA in those with childhood gender nonconformity would contribute to an increased likelihood of psychiatric symptomology including suicide risk factors; in other words that gender nonconformity would moderate the CSA-psychopathology relationship (hypothesis 3).

Method

Sample Characteristics

This analysis was conducted from data gathered in Crew450, a longitudinal cohort study examining the prevalence, course, and predictors of syndemic psychosocial health issues associated with HIV infection in a multiethnic sample of 450 young MSM, aged 16–20, and residing in a large Midwestern metropolitan area. The mean age in the sample was 18.9 years (SD = 1.3), with 26% of the sample under age 18. The sample was largely racial/ethnic minority (82%). In terms of sexual orientation, 73% identified as only or mostly gay/homosexual, 21% as bisexual and 6% as only/mostly heterosexual or "other." Additional details regarding Crew450's sample characteristics are extensively noted elsewhere (see Newcomb, Ryan, Garofalo, & Mustanski, 2013).

Data Collection

Recruitment of young MSM began in December 2009 using a modified approach to respondent-driven sampling (RDS) that, in comparison to conventional RDS, yielded a greater proportion of initial recruits, or "seeds". The methods of this approach are described in greater detail elsewhere (see Kuhns et al., 2014). Study promotion, including active and passive recruitment, targeted young MSM-frequented community settings. Eligible participants were between the target age-range at baseline, English-speaking, assigned a male natal sex, had a prior sexual encounter with a male or identified as gay/bisexual, resided in the target metropolitan area, and were available for multiple follow-ups across 24 months. Following assent/consent procedures, baseline, self-report data were collected via computer-assisted self-interviewing (CASI); follow-up data were collected approximately every 6 months thereafter. CASI for baseline and follow-up lasted approximately 2 h and 1 h, respectively. Participants were reimbursed $45 for their time and travel, and the study received approval from institutional review boards (IRBs) of all affiliated institutions. Waiver of parental permission was granted by the IRBs for the involvement of minors ages 16–17.

Measures

In this analysis, variables of primary interest included the presence of childhood sexual abuse, childhood gender expression, and the presence of recent and lifelong psychiatric symptoms (including suicidality and impulsivity).

Childhood Sexual Abuse. Instances of CSA were measured using an adapted, 10-item version of the Early Sexual Experiences (ESE) Checklist (originally 9 items) employed at baseline to respondents who endorsed at least one past, unwanted, sexual experience occurring before the age of 13 (i.e., item one of the measure) (Miller, Johnson, & Johnson, 1991). In this study, ESE is defined within the context of CSA (although early sexual experiences may also be perpetrated by peers); therefore, CSA and ESE are used interchangeably throughout the remainder of the article. The measure consists of a combination of items in checklist (e.g., "Please check [incidents that happened to you before the age of 13]"), open-ended (e.g., How many times did this behavior occur?"), and 7-point scale format (e.g., 1 = Not at all, 7 = Extremely; in response to an item measuring "How much does the experience bother you now?"). Items employed here were nearly identical to the original measure, with the exception that respondents checked whether any incidents occurred before the age of 13 years (as opposed to 16 as in the original measure) to better capture sexual abuse of childhood rather than adolescence.

Childhood Gender Expression. Childhood gender expression was assessed using 18-items that comprise the recalled gender-typed behavior factor of the 23-item *Recalled Childhood Gender Identity/Gender Role Questionnaire* (Zucker et al., 2006). A second factor of the measure assesses relative closeness to mother and father during childhood (not examined in this study). For all 18 items assessed here respondents characterized their gender-type behavior during childhood ("As a child, compared to other boys my age, I felt. . .") using 5-point Likert response scales (1 = very masculine, 5 = very feminine) tailored to each item. It is notable that for this analysis reverse scoring of 13 items translated scale direction such that lower scores indicated greater endorsements childhood gender nonconformity (i.e., femininity).

Psychological Symptomology, Impulsivity, and Suicidality. The *Computerized version of the Diagnostic Interview Schedule* (CDIS-IV) (Robins et al., 2000) was used to estimate psychological symptomology related to depression and posttraumatic stress disorder (PTSD). As a structured interview, the CDIS-IV is designed to diagnose DSM-IV psychiatric disorders based on the presence and severity of symptoms. Reliability of the CDIS-IV has been studied by Robins and others with evidence of reliability and validity (i.e., kappas >5) for psychiatric populations and slightly lower for nonclinical samples (Robins, Helzer, Croughan, & Ratcliff, 1981; Robins, Helzer, Ratcliff, & Seyfried, 1982; Robins et al., 2000; Vandiver & Sher, 1991). The supervisors at each data collection site attended a CDIS-IV administration training and trained and supervised all interviewers. Quality checks were conducted at regular intervals by a psychologist to ensure fidelity to the interview protocol. The data collection staff and investigators were blinded to diagnoses as diagnostic scoring was completed at the point of analysis. Symptoms of PTSD were also coded to correspond with DSM-IV symptom clusters representing intrusive thoughts (Cluster B), persistent avoidance/numbing (Cluster C) and hyperarousal (Cluster D).

In addition, this study relied on the 59-item *UPPS Impulsive Behavior Scale-Revised* (UPPS+P) (Cyders et al., 2007), administered at baseline, to assess five facets of impulsivity including negative urgency, lack of premeditation, lack of perseverance (defined previously), sensation-seeking (i.e., tendency to seek out thrilling experiences), and positive urgency (i.e., tendency to act hastily in response to positive affect). The scale uses a 1 (agree strongly) to 4 (disagree strongly) response format on items such as "I have trouble controlling my impulses" and "I am a cautious person." Reverse scoring of certain items ensured uniformity in scale direction such that higher scores indicated greater impulsivity.

Last, two items assessed *suicidality*, operationalized as consisting of either suicide ideation (e.g., "During the past 6 months, did you ever seriously consider attempting suicide?") and/or suicide attempts ("During the past 6 months, how many times did you actually attempt suicide?"). These two items originally derived from the Youth Risk Behavior Survey Questionnaire (i.e., items 31 and 33) (MDESE, 2005), and were modified to reflect the past 6 months period. The scale that assessed past ideation used a "yes/no" response format while the scale that assessed past suicide attempts used a 1 (0 times) to 5 (6 or more times) response format.

Statistical Analysis

Each of the 10 ESE Checklist items was scored as 0 (no) or 1 (yes). An ESE scale was created by summing the score of the 10 ESE Checklist items. The ESE responses to number of past ESE incidents were categorized into three levels: 0, 1–4, and ≥ 5 for bivariate analyses. The cutoff point of 4 was used based on the medians for those who ever had ESE. However in the final multivariate regression modeling, a dichotomized ESE variable (ESE vs. no ESE) was used because the coefficient of 1–4 ESE did not differ from the coefficient of ≥ 5 ESE in prior multivariate regression analysis. For 18 gender expression items selected in accordance to the factor analysis results by Zucker et al. (2006), responses for the majority of items (13) concerning male gender expression were reverse-scored such that responses concerning gender conformity were rated higher (i.e., closer to 5) and responses concerning male gender nonconformity were rated lower (i.e., closer to 1). A gender expression scale was calculated by averaging the scores of the 18 gender expression items. The gender expression scale was calculated only when participants had at least 7 valid answers (missing = 0%). The gender expression scale was dichotomized: "conforming" if the score was higher than 3 and "nonconforming" if the score was 3 or lower.

Outcome variables of interest included the five UPPS+P impulsive behavior scales (e.g., negative urgency, premeditation, perseverance, sensation-seeking, positive urgency), lifetime PTSD diagnosis, PTSD diagnosis in the past year, PTSD Cluster B (PTSD 3BSX), Cluster C (PTSD 3CSX), Cluster D (PTSD 3DSX), lifetime major depressive episode, major depressive episode in the last year, lifetime suicidal ideation, and lifetime suicide attempt. Each of the UPPS+P items was scored 1 (strongly agree) to 4 (strongly disagree), and some scores were reversed as necessary to make a higher score indicate more impulsive behavior. Five UPPS+P impulsive behavior scales were calculated in accordance to suggestions by Cyders et al. (2007): negative urgency, premeditation, perseverance, sensation seeking, and positive urgency. UPPS+P scales were calculated only when participants had at least 70% valid answers (missing = 0%).

Descriptive analyses, including frequency analyses, distribution tests, and internal consistency reliability tests (Cronbach's alpha) were conducted. Bivariate analyses between (a) ESE scaled scores and the outcome variables and between (b) gender expression and the outcome variables were performed using chi-square and ANOVA. Any outcome variables that showed $P < 0.10$ in the bivariate analyses between ESE and the outcome variables were selected for further analyses in multivariable regression models. Any UPPS+P impulsive behavior scales that were not normally distributed were log-transformed for use in multivariable linear regression models.

To examine whether the probabilities or levels of the selected outcomes differ by ESE and gender expression in multivariable regression models, participants were categorized into the following four groups: no ESE and conforming (reference), no ESE and nonconforming, ESE and conforming, and ESE and nonconforming. This categorical approach to moderation analysis was used in order to set cut-points for these subgroups based on preliminary analyses of effects and to elucidate trends associated with each risk category. All regression models were adjusted for age group (16–18 years and 19–20 years) and race/ethnicity (Black, Latino, White, and other). Multivariable logistic regression models were fit to examine the probability of the PTSD, depression, and suicidal outcomes for the four ESE and gender expression groups. Similarly, multivariable linear regression models were fit to examine the level of the UPPS+P impulsive behavior scales for the four ESE and gender expression groups. We also conducted multivariable regression analyses using six ESE and gender expression groups (created from three ESE categories and two gender expression categories) to examine whether there is an increasing or decreasing trend

Table 1

Demographics, gender expression, PTSD, major depressive episode (MDE), and suicidality by incidents of unwanted early childhood sexual experiences (ESE).

| | ESE | | | | | | | | P |
| | All | | Zero | | 1–4 | | ≥5 | | |
	n	%	n	%	n	%	n	%	
All	449	100	244	54.3	120	26.7	85	18.9	
Age									
16–18 years	208	46.3	114	54.8	51	24.5	43	20.7	0.51
19–20 years	241	53.7	130	53.9	69	28.6	42	17.4	
Race/ethnicity									
African Amer.	239	53.2	113	47.3	68	28.5	58	24.3	0.03
Latino	90	20	53	58.9	24	26.7	13	14.4	
White	81	18	53	65.4	20	24.7	8	9.9	
Other	39	8.7	25	64.1	8	20.5	6	15.4	
Gender expression score									
>3 (conforming)	337	75.1	193	57.3	86	25.5	58	17.2	0.08
≤3 (nonconforming)	112	24.9	51	45.5	34	30.4	27	14.1	
PTSD 3BSX									
0	267	59.6	155	58.1	67	25.1	45	16.9	0.16
≥1	181	40.4	89	49.2	52	28.7	40	22.1	
PTSD 3CSX									
0 to 2	322	71.9	188	58.4	85	26.4	49	15.2	<0.01
≥3	126	28.1	56	44.4	34	27.0	36	28.6	
PTSD 3DSX									
0 to 1	294	65.6	177	60.2	72	24.5	45	15.3	<0.01
≥2	154	34.4	67	43.5	47	30.5	40	26.0	
PTSD ever									
Yes	72	16.1	31	43.1	101	26.9	62	16.5	<0.01
No	376	83.9	213	56.6	18	25.0	23	31.9	
PTSD in the past year									
Yes	29	6.5	10	34.5	9	31.0	10	34.5	0.04
No	419	93.5	234	55.8	110	26.3	75	17.9	
MDE ever									
Yes	149	33.3	70	58.2	74	24.7	51	17.1	0.08
No	299	66.7	174	47.0	45	30.2	34	22.8	
MDE in the past year									
Yes	80	17.9	34	42.5	24	30.0	22	27.5	0.03
No	368	82.1	210	57.1	95	25.8	63	17.1	
Suicidal ideation ever									
Yes	83	18.5	87	50.0	45	25.9	42	24.1	0.08
No	365	81.5	157	57.3	74	27.0	43	15.7	
Suicide attempt ever									
Yes	174	38.8	27	42.9	19	30.2	17	27.0	0.10
No	274	61.2	217	56.4	100	26.0	68	17.7	

in the levels or probabilities of the outcomes with increasing ESE levels. Because the analysis using the six ESE and gender expression groups did not produce any significant trend partly due to a reduced power, we present the multivariable regression analysis results using the four ESE and gender expression groups in this report. A significance level was set as 0.05 (two-tailed).

Results

The analysis included 449 participants, excluding one participant who did not respond to the ESE Checklist. All participants completed at least 7 valid answers for the gender expression scale. The Cronbach alpha for negative urgency, lack of premeditation, lack of perseverance, positive urgency, sensation-seeking, and gender nonconformity scales, was 0.80, 0.85, 0.64, 0.92, 0.82, and 0.88, respectively.

Sociodemographic characteristics and psychopathology are summarized overall and by number of unwanted early childhood sexual experiences in Table 1. The mean of gender expression was 3.5 and the median was 3.6 (on a scale of 1 = nonconforming and 5 = conforming). UPPS+P impulsive behavior scales and gender expression scales were not normally distributed (normality test $P < 0.05$), except for negative urgency. As shown in Table 1, 45.7% of participants reported at least one ESE, the majority of whom were African American (52.7%). Almost a quarter of the sample (24.9%) was categorized as gender nonconforming. Those with childhood gender nonconformity tended to report greater instances of ESE than those who were gender conforming as children ($P = 0.08$). A higher proportion of participants who reported ESE had PTSD symptoms ($P < 0.05$), symptoms consistent with a major depressive episode ($P < 0.05$), and suicidal ideation and past attempts ($P < 0.10$). Participants who reported ESE also had higher scores of negative urgency and premeditation ($P < 0.05$; Table 2).

Table 2

Means (95% confidence intervals) of UPPS+P impulsive behavior and childhood gender expression by incidents of unwanted early childhood sexual experiences (ESE).

Variable	ESE			
	Zero	1–4	≥5	ANOVA P
Negative urgency	2.39 (2.32, 2.46)	2.49 (2.41, 2.57)	2.57 (2.45, 2.69)	0.03
Premeditation	1.90 (1.83, 1.97)	1.85 (1.44, 1.77)	1.75 (1.65, 1.85)	0.05
Perseverance	1.88 (1.81, 1.94)	1.69 (1.81, 1.96)	1.61 (1.72, 1.91)	0.50
Positive urgency	2.12 (2.04, 2.21)	2.20 (2.08, 2.31)	2.25 (2.10, 2.40)	0.27
Sensation-seeking	2.89 (2.81, 2.96)	2.93 (2.83, 3.03)	3.01 (2.89, 3.13)	0.23

Bivariate analyses between gender expression and the outcomes of interest did not show significant relationships ($P > 0.05$), except for the positive association between childhood gender nonconformity and suicidal attempt ever ($P < 0.05$; data not shown).

The relationship between ESE and psychopathology was then tested among those characterized as conforming and nonconforming in terms of gender expression. Table 3 presents odds ratios (ORs) and 95% confidence intervals (CIs) from multivariate logistic regression analyses. In comparison to the reference category (i.e., no history of ESE and gender conforming), participants who reported ESE and were characterized as gender conforming showed a trend toward higher probability of PTSD, depression, or suicidal outcomes, but this trend was not significant, except for PTSD3D (OR = 1.87; 95% CI = 1.17, 3.00). However, participants with a history of ESE and who were also characterized as gender nonconforming showed a significantly higher probability of all PTSD, depression, and suicidality outcomes (except lifetime history of suicidal ideation) in comparison to the reference category (OR of PTSD ever = 2.83, 95% CI = 1.39, 5.79; OR of major depression episode ever = 2.82, 95% CI = 1.52, 5.23; OR of suicidal attempt ever = 3.12, 95% CI = 1.46, 6.69; see the "ESE and nonconforming" row in Table 3). Although ESE showed a significant association with PTSD in the past year ($P < 0.05$; Table 1), the variable was not examined in multivariate logistic regression analysis, due to a small number of cases with PTSD in the past year ($n = 29$).

Table 4 presents multivariable linear regression model for negative urgency and log-transformed premeditation. ESE was associated with a 0.16 point higher negative urgency score, regardless of childhood gender expression ($P < 0.05$). However, the four groups by ESE and childhood gender expression did not have a significantly different score of log-transformed premeditation.

Discussion

This study examined the relationship of early childhood sexual abuse to current psychiatric problems (including suicidality and impulsivity) among young MSM and the degree to which childhood gender nonconformity moderated this relationship. Overall, a high proportion of young men in this sample reported ESE (45.6%). These rates are similar to, yet slightly higher than, rates recorded previously among adult MSM (20–39.7%) (Paul et al., 2001) and nearly double the CSA rates reported among heterosexual adult males overall (16–25%) (CDC, 1997; Pérez-Fuentes et al., 2013). Although studies of racial/ethnic group differences in CSA prevalence have been inconclusive (Elliott & Urquiza, 2006; U.S. Department of Health and Human Services, 2005) the rates observed in this study may be due in part to the racial/ethnic composition of our sample, given that African American participants are overrepresented and had higher rates of ESE. We note, however, that even rates of ESE among other race/ethnicities in this sample are higher than those found among adult MSM by Paul and colleagues (2001). In addition, higher prevalence may be due to better recall of ESE in our sample given the greater proximity to the event(s) in this young age group. The high rates of ESE reported by young MSM in our sample may also be attributed to the broad way in which childhood sexual abuse was operationalized as ESE in this study. Specifically, ESE accounted for unwanted childhood sexual experiences that involved contact (i.e., touching, fondling, intercourse) as well as non-contact (e.g., sexual solicitation, indecent exposure) abuse – the former considered a more severe form of CSA (Andrews et al., 2004). An analysis of between-group differences by severity of abuse was not examined as research in this area suggests that differences between contact vs. non-contact abuse are not moderators of psychiatric outcomes such as PTSD, depression, or suicide attempts (Paolucci, Genuis, & Violato, 2001; Yancey & Hansen, 2010). In addition, sample size limited statistical power to meaningfully examine between-group comparisons by type of abuse in either a uni- or multivariate fashion.

In terms of study hypotheses, the first hypothesis was supported as, compared to young MSM who did not report ESE, those who reported ESE were more likely to endorse psychiatric symptoms consistent with posttraumatic stress and depressive disorders, as well as suicide risk factors (e.g., negative urgency, and lack of premeditation). That lack of perseverance was not associated with ESE, as other research has found (Sujan et al., 2014), may result from the non-normal distribution of impulsivity scores overall. The statistical trend approaching significance for a positive association between gender nonconformity and ESE, while resulting in a formal rejection of the second hypothesis, suggests further study is needed given the relatively small sample size.

With regard to the study's final hypotheses, compared to all groups of young MSM, those with ESE and childhood gender nonconformity were at the greatest odds of experiencing a variety of psychiatric problems extending into young adulthood, which provides support for moderation of effects by gender expression (i.e., increasing the size of the effect). Most notable

Table 3
Adjusted odds ratios (95% confidence interval) of PTSD, major depressive episode (MDE), and suicidality.

	Outcomes						
	PTSD3C	PTSD3D	PTSD ever	MDE ever	MDE past year	Suicidal ideation ever	Suicidal attempt ever
Age							
16–18 years	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
19–20 years	1.70 (1.10, 2.63)	1.72 (1.14, 2.59)	1.44 (0.85, 2.43)	1.48 (0.98, 2.24)	1.42 (0.86, 2.36)	0.95 (0.65, 1.40)	1.45 (0.83, 2.54)
Race/ethnicity							
Afr. Am.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Hispanic	0.54 (0.29, 0.99)	0.79 (0.46, 1.35)	0.80 (0.39, 1.66)	2.20 (1.30, 3.74)	2.44 (1.31, 4.51)	1.47 (0.88, 2.44)	1.23 (0.60, 2.51)
White	0.80 (0.44, 1.43)	0.76 (0.43, 1.33)	1.33 (0.68, 2.62)	2.93 (1.70, 5.05)	2.18 (1.14, 4.19)	2.49 (1.47, 4.20)	0.92 (0.41, 2.05)
Other	1.08 (0.51, 2.28)	1.10 (0.53, 2.28)	1.58 (0.66, 3.77)	1.92 (0.92, 4.01)	1.08 (0.39, 2.99)	2.31 (1.14, 4.66)	2.76 (1.20, 6.36)
ESE and gender expression							
No ESE and conforming	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
No ESE and nonconform.	0.98 (0.46, 2.09)	1.54 (0.78, 3.02)	0.95 (0.36, 2.47)	1.04 (0.52, 2.09)	0.94 (0.38, 2.33)	1.09 (0.57, 2.01)	1.47 (0.58, 3.75)
ESE and conforming	1.39 (0.84, 2.29)	1.87 (1.17, 3.00)	1.41 (0.76, 2.62)	1.55 (0.96, 2.51)	1.63 (0.90, 2.95)	1.51 (0.96, 2.39)	1.59 (0.82, 3.10)
ESE and nonconform.	2.71 (1.46, 5.05)	2.85 (1.55, 5.23)	2.83 (1.39, 5.79)	2.82 (1.52, 5.23)	2.95 (1.46, 5.98)	1.69 (0.93, 3.08)	3.12 (1.46, 6.69)

ESE, unwanted early childhood sexual experience.

Table 4
Multivariate linear regression models for negative urgency and premeditation impulsive behaviors.

	Outcomes			
	Negative urgency		Log transformed Premeditation	
	$\beta \pm$ SE	P	$\beta \pm$ SE	P
Intercept	2.34 ± 0.05	<0.01	0.57 ± 0.03	<0.01
Age				
16–18 years	Ref.	–	Ref.	–
19–20 years	0.03 ± 0.05	0.55	-0.01 ± 0.03	0.61
Race/ethnicity				
Black	Ref.	–	Ref.	–
Hispanic	-0.01 ± 0.07	0.76	0.02 ± 0.03	0.50
White	0.01 ± 0.07	0.96	0.06 ± 0.04	0.09
Other	0.11 ± 0.09	0.29	0.07 ± 0.05	0.11
ESE and gender expression				
No ESE and conforming	Ref.	–	Ref.	–
No ESE and nonconform.	0.14 ± 0.08	0.10	0.04 ± 0.04	0.34
ESE and conforming	0.16 ± 0.06	<0.01	-0.03 ± 0.03	0.27
ESE and nonconform.	0.16 ± 0.08	0.04	-0.01 ± 0.04	0.64

ESE, unwanted early childhood sexual experience.

are within-group differences observed in those with ESE, where odds ratios were significant only among young men who were nonconforming as children, although a non-significant trend was seen for gender conforming youth. This suggests that gender expression may uniquely contribute to subsequent psychosocial adversity among young MSM who experience childhood sexual abuse. Perhaps most alarming: these young men were over three times more likely than the reference group (i.e., young MSM without both ESE and nonconformity) to have a history of attempted suicide.

These findings are consistent with literature documenting that gender-nonconforming children who experience discouragement and rejection from others (e.g., family, peers, school) on account of their gender expression are at greater odds of developing a host of psychosocial adversities in adolescence (e.g., depressive symptoms, low life satisfaction, self-harm, isolation, homelessness, incarceration, post-traumatic stress, and suicide ideation and attempts) (D'Augelli et al., 2006; Garofalo, Deleon, Osmer, Doll, & Harper, 2006; Roberts et al., 2012b; Skidmore et al., 2006). Conversely, burgeoning research conducted among families illustrates that support and acceptance of gender-nonconforming children contributes to positive self-esteem, increased social support, life satisfaction, and overall health in early adulthood and it serves as a protective factor against depression and suicidality (Toomey et al., 2010; Travers et al., 2012). These positive outcomes can be ensured, in part, through the use of supportive approaches that are affirmative in nature, in which children are provided the "opportunity to live in the gender that feels most real or comfortable to that child and to express that gender with freedom from restriction, aspersion, or rejection" (Hidalgo et al., 2013, p. 286).

Childhood gender nonconformity is a natural variation of human diversity and development that requires further study, particularly among populations of youth (Hidalgo et al., 2013). When pertaining to the relationship between CSA and this study's outcomes of choice, gender nonconformity was tested as a moderator rather than a mediator because study findings to date are inconclusive regarding any psychological or biological precipitants of gender nonconformity, including that gender-variant identity develops as a method of coping with adverse childhood experiences involving interpersonal trauma (Sánchez & Vilain, 2013).

Limitations and Strengths

This study has several limitations, strengths, and it directs the field to further scientific inquiry in this area. In terms of limitations, the findings presented here may have limited generalizability to all young MSM given that these data were collected via a non-random community-based sampling design. In addition, as with any measure that retrospectively inquires about events during childhood, there is a possible limitation that individuals reporting childhood sexual abuse or recalling childhood gender expression may have inaccurately recalled these aspects of their childhood. Last, the cross-sectional design employed in this study limited the findings due to a lack of temporal ordering. We attempted to address this issue by restricting the report of CSA experiences to those that occurred before the age of 13, while including the report of recent psychological symptoms (i.e., in the last 12 months) among our outcomes of interest. Nevertheless, recall problems, as noted above, limit these conclusions. Furthermore, our study design limited our capacity to control for the influence of potentially confounding factors such as history, maturation, or the epidemiological trend regarding the greater onset of psychiatric symptoms during adolescence than childhood (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003).

A major strength of this study is its examination of childhood gender expression as it relates to CSA and the development of psychiatric symptoms (including suicidality and impulsivity) in young MSM, associations that no other known studies have examined. Another notable strength of this study is that the independent (e.g., ESE and recalled childhood gender expression) and dependent variables (e.g., currently psychiatric outcomes) were temporally specific which suggested some predictive direction in the tested model. Future research on this topic should test the hypotheses examined here while also

examining additional CSA-specific factors (e.g., frequency of abuse, duration of abuse) also highlighted as moderators of mental health problems (Andrews et al., 2004). It is also important to examine the degree to which CSA increases likelihood of re-victimization from various forms of interpersonal violence (e.g., sexual abuse/assault, intimate partner violence) – a phenomenon empirically observed among heterosexual women (Fleming, Mullen, Sibthorpe, & Bammer, 1999).

Conclusion

Study findings suggest that young MSM with childhood gender nonconformity were at increased risk for experiencing CSA. Among this subgroup of young men, a variety of psychiatric problems emerged by young adulthood. It may be advisable that minors with histories of childhood gender nonconformity be screened for the presence of CSA, affective and stress-related disorders, as well as suicidal risk factors.

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