

## Emotion Regulation and Mental Health among Men with Childhood Sexual Abuse Histories

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### ABSTRACT

Childhood sexual abuse (CSA) is a form of child maltreatment which has been increasingly recognized as a common experience among men. Research on male CSA remains underdeveloped but suggests many negative mental health impacts. The current study examined the link between mental health outcomes and different emotion regulation strategies among 69 adult men. Men completed measures on their current mental well-being, and participated in a clinical interview about emotion regulation strategies used to manage memories about their sexual victimization. Results indicated that the most frequently used emotion regulation strategies were expressive suppression, rumination, and cognitive avoidance. For perceived effectiveness, men identified cognitive avoidance, self-medication, and behavioral avoidance as being most helpful in managing their CSA-related distress. Finally, greater use of deliberate self-harm, rumination, and behavioral avoidance was associated with more internalizing difficulties, while greater use of deliberate self-harm and self-medication was linked with more externalizing difficulties. Greater perceived efficacy of positive reappraisal was associated with fewer externalizing behaviors. Although these findings require replication through larger mixed-methods studies, they suggest the importance of incorporating emotion regulation strategies into interventions aimed at improving mental well-being among men with CSA histories.

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To add to the limited research on male-specific childhood sexual abuse (CSA), the current study aims to better understand how mental health outcomes among men with CSA histories are related to the ways in which they regulate their CSA-related emotions. We used a mixed-methods approach to examine the link between CSA men's emotion regulation strategies and their psychological functioning. The current study provided a more detailed understanding of the larger concept of emotion regulation and its importance within trauma treatment approaches.

Child maltreatment disrupts physical, social, and emotional development (National Child Traumatic Stress Network (NCTSN), 2003), thereby often maintaining adverse outcomes into adulthood (Herrenkohl et al., 2013). We

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focused on childhood sexual abuse (CSA) among men as their childhood sexual victimization is increasingly being recognized (Barth et al., 2013). One meta-analysis found that men's global CSA prevalence rates vary from 3–17% (Barth et al., 2013). A commonly accepted statistic is that 1 in 6 men experiences some form of sexual abuse before age 18 (Romano & De Luca, 2014). However, rates are likely to be under-estimates as disclosure is often delayed (Romano et al., 2019), and non-disclosure is a concern due to pervasive feelings of guilt, shame, homosexuality stigma (in cases of a same-sex perpetrator), and masculinity stereotypes (Easton et al., 2014). Men remain an under-represented population in CSA studies relative to women (Alaggia et al., 2019), emphasizing the need for male-specific CSA research to better understand its impact on mental health and associated processes, such as emotion regulation.

Diversity factors (e.g., gender identity, sexual orientation, racial and cultural identity) can introduce additional barriers to disclosure. Research has shown that men who identify as gay or bi-sexual may face additional stigma or blame if they disclose their CSA (Easton et al., 2014). Both men's questioning of their sexual orientation and others' homophobic attitudes also represent barriers to disclosure (Easton et al., 2014). There is no (or very limited) research on the impact of racial and cultural identity on disclosure rates, but it is imperative that this topic be explored in future studies. The inclusion of diversity variables would undoubtedly improve the generalizability of male CSA research findings, particularly given that the majority of research has focused on men's later-life outcomes and often uses samples with limited diversity in terms of racial and cultural identity, sexual orientation, and socio-economic status (Alaggia & Millington, 2008; Easton et al., 2014; Easton et al., 2017; Kia-Keating et al., 2010).

### **Male CSA mental health outcomes**

CSA outcomes are dependent on a variety of contextual factors, including characteristics of the child and perpetrator, CSA experience, and child-perpetrator relationship (Lyons & Romano, 2019). These factors combine to contribute to the development of a broad range of CSA-related difficulties, including interpersonal problems (Kia-Keating et al., 2010), substance use (Alaggia & Millington, 2008), and trauma symptoms (Sigurdardottir et al., 2012). In the current study, we examined mental health through the broad lens of internalizing (e.g., anxiety, depression, somatic complaints) and externalizing (e.g., anger, aggression) difficulties. For *internalizing* difficulties, men with CSA histories have been found to report greater depressive symptoms than those without abuse histories (Easton & Kong, 2017; Easton et al., 2017; Sigurdardottir et al., 2012). In a U.S. longitudinal study of 2,451 primarily White men, those with CSA histories had higher rates of depression in middle

and late adulthood than non-CSA men (Easton et al., 2017). CSA among men has been found to be related to increased rates of self-destructive impulses as well as greater suicidal thoughts, ideation, and attempts (Easton et al., 2013; Sigurdardottir et al., 2012). In terms of anxiety, Amado et al.'s (2015) meta-analysis similarly found that, in comparison with non-abused males, CSA men were more likely to develop anxiety symptoms. For *externalizing* difficulties, CSA men often display their distress through irritability, hostility, anger, and aggression (Alaggia & Millington, 2008; Easton & Kong, 2017; Sigurdardottir et al., 2012). There also is evidence that CSA men display higher rates of rule-breaking or criminal behavior (Papalia et al., 2018). These behaviors may be related to the pressure that men feel to conform to rigid masculinity norms, which has been associated with an increased reliance on angry, aggressive, and violent criminal behaviors among men in the general population (Dahl et al., 2015; Reidy et al., 2014).

### ***Emotion regulation and mental health outcomes***

CSA-related outcomes can be conceptualized within a complex trauma model when children's early traumatic experiences are chronic in nature, interpersonal (e.g., within the caregiving system), and occur within the context of other adverse circumstances (National Child Traumatic Stress Network (NCTSN), 2003). Complex trauma can also refer to the multitude of impacts that can arise across various domains of well-being and functioning by virtue of a child's exposure to developmentally adverse traumatic events (National Child Traumatic Stress Network (NCTSN), 2003; Van der Kolk et al., 2005). Although it is possible that CSA can represent a single incident that does not occur within the context of other adverse circumstances, the research literature generally suggests that men who have experienced CSA have also been exposed to other forms of maltreatment (e.g., physical abuse) as well as other forms of non-maltreatment adversity (Easton & Kong, 2017; Lyons & Romano, 2019; Romano et al., 2019). As such, we believed that the adoption of a complex trauma lens would best capture the experiences of most men in the current study.

One key developmental process often undermined by complex trauma is emotion regulation, which consists of both cognitive and behavioral processes to manage emotional responses (Gross & Thompson, 2007). Children's emotion regulation competencies may be acquired in part through child-caregiver interactions (Calkins & Hill, 2007), which are often compromised in a family environment marked by significant adversity. By providing fewer opportunities to develop healthy emotion processing abilities, children with complex trauma often struggle with effectively identifying, regulating, and expressing internal emotional states (National Child Traumatic Stress Network (NCTSN), 2003), which is associated with

a range of difficulties across the lifespan, such as anxiety and depression (Aldao et al., 2010; Nolen-Hoeksema, 2012). Therefore, it is likely that the link between early trauma and adult mental health is partly influenced by emotion regulation.

Men, including those with CSA histories, are often influenced by socialization messages that emphasize traditional masculine norms, such as self-reliance, toughness, and restriction of emotion (Easton et al., 2014; Levant et al., 2016). Adherence to such norms limits the range of available emotion regulation strategies and may be indicative of why men tend to use more maladaptive strategies, such as substance use, avoidance, and anger rumination (Nolen-Hoeksema, 2012). One study with a sample of primarily White men found that CSA is often such a severe violation of masculine norms that that it tends to evoke fears of stigmatization (Easton et al., 2014). Men may attempt to cope with their sexual victimization by denying or minimizing its impact, which can lead to greater mental health difficulties than if more adaptive strategies were used (Kia-Keating et al., 2010; O'Leary & Gould, 2010).

The use of adaptive regulatory strategies has been associated with various beneficial outcomes, including fewer mental health difficulties (Aldao et al., 2010; Hefner & Eisenberg, 2009; Zainal & Newman, 2019). For specific strategies, *social support seeking* can buffer distress and improve psychological functioning across White and/or heterosexual adolescent and adult samples (Cheng et al., 2014; Hefner & Eisenberg, 2009). *Acceptance* strategies, which involve active engagement with and non-judgmental acceptance of experienced emotions, have also been linked with decreased internalizing difficulties (Aldao et al., 2010; Ford et al., 2018). *Positive reappraisal* is a reality-based reevaluation of circumstances (John & Gross, 2004) that tends to be associated with fewer internalizing (Zainal & Newman, 2019) and externalizing (e.g., reduced anger and higher frustration tolerance) problems (Szasz et al., 2011).

In contrast, research suggests that reliance on maladaptive emotion regulation strategies is associated with unfavorable outcomes, including greater mental health difficulties (Meszaros et al., 2017; Nolen-Hoeksema et al., 2008; du Pont et al., 2019; Zahniser & Conley, 2018). Maladaptive strategies, such as *self-medication* (e.g., use of alcohol or drugs) and *deliberate self-harm*, are often linked with internalizing and externalizing symptoms (Boles & Miotto, 2003; Chapman et al., 2006; Fliege et al., 2009; Meszaros et al., 2017; Turner et al., 2018). *Expressive suppression*, which is the conscious inhibition of emotional arousal and expression, often maintains unwanted thoughts or feelings and has been associated with greater internalizing difficulties (Haga et al., 2009; Zahniser & Conley, 2018). *Rumination*, as well as *cognitive and behavioral avoidance*, prevents active engagement with distress-producing stimuli, and research shows that the use of these strategies is often associated

with internalizing and externalizing symptoms (Aldao et al., 2010; Grant et al., 2013; Hofmann & Hay, 2018; Kashdan et al., 2010; Lovibond et al., 2009; Nolen-Hoeksema et al., 2008; du Pont et al., 2019).

### **Study objectives and hypotheses**

Through this study, we built on the research with men who have experienced CSA by examining their mental health outcomes through the lens of emotion regulation. Based on previous, albeit limited, research, we expected men in our study to use more maladaptive (e.g., self-medication, deliberate self-harm, expressive suppression, rumination, and behavioral/cognitive avoidance) than adaptive (e.g., social support seeking, acceptance, positive reappraisal) strategies to manage their CSA-related emotions. In instances where men made use of adaptive strategies, we expected them to rate these strategies as being more effective than maladaptive strategies in decreasing emotional distress (e.g., anger, sadness). Second, we examined the link between different emotion regulation strategies and mental health, namely internalizing and externalizing difficulties. Greater use of adaptive strategies was expected to be associated with fewer mental health difficulties, while greater use of maladaptive strategies was expected to be associated with greater mental health difficulties.

## **Methods**

### **Participants**

To be included in the study, men were required to be between 25–60 years, fluent in English, reside in proximity of where the study was being conducted (i.e., within city limits so participants were largely from an urban city or small proximal townships), and have had a CSA experience before age 16.<sup>1</sup> We used the Canadian Criminal Code, R.S.C (1985) to make determinations about unclear situations (e.g., age difference between two adolescents). Men's average age was 39.8 years ( $SD = 10.9$ ). Table 1 shows that most men (43.5%) were in an intimate relationship, while 36.2% had never married, and 20.3% were separated/divorced. Men were primarily White (75.5%), had no children (72.5%), and had obtained minimally a high school education (97%). Most (63.8%) had a total income of less than \$59,000. Based on census data comparisons, the sample of 69 men was mostly representative of men within the city and province in which our study was conducted (Statistics Canada,

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<sup>1</sup>Participants in the current study identified themselves as men both in terms of their gender and sexual identity.

**Table 1.** Socio-Demographic characteristics (N = 69).

Variable	%
Ethnicity	
White	75.5
First Nations, Metis, and Inuit	7.2
East Asian	5.8
South Asian	5.8
Black	1.5
Middle Eastern	1.4
Latino	1.4
More than one ethnicity	1.4
Highest completed education	
Elementary school	3.0
High school or some college/university	34.8
Vocational/trade school	17.3
Undergraduate studies	33.3
Graduate studies	11.6
Household income (Canadian funds)	
Less than \$29,000	31.9
\$30,000-59,000	31.9
\$60,000-89,000	26.1
More than \$90,000	10.1
Marital status	
Married/common-law/partnered	43.5
Single (never married)	36.2
Separated/divorced	20.3
Children	
Yes	27.5
No	72.5

2019). One difference was that the average yearly income of men (\$39,750) was lower than that of men both in the city (\$52,684) and province (\$48,443; Statistics Canada, 2019).

## Measures

**Socio-demographics.** Participants answered questions about their age, ethnicity, marital status, education, and income level.

**Childhood sexual abuse.** Participants completed the *Sexual Victimization Survey* (SVS; Finkelhor, 1979) to gather detailed information about any CSA experiences. We used an adapted SVS version (Lyons & Romano, 2019) to address limitations from past studies, which generally have examined only the most severe experience. To gather information on CSA experiences, the adapted SVS provides an opportunity for participants to describe up to three sexually abusive experiences before age 16 with different perpetrators. For each experience, there are questions about the type of sexual act(s), perpetrator(s), age of onset, frequency, duration, and disclosure. Recent research found that the SVS possessed high inter-rater reliability (92.7%) on sexual abuse status and abuse characteristics (e.g., duration, age of onset; 94.3–99.3%) among 227 adult CSA men from Canada and the United States (Lyons & Romano, 2019). Findings also indicated that the SVS had fair concurrent

validity with the sexual abuse subscale of the Childhood Experiences of Violence Questionnaire (Walsh et al., 2010) in terms of abuse status, with a kappa of .39 (Lyons & Romano, 2019). For test-retest reliability, 100% of males who initially reported CSA continued to endorse having experienced CSA one week later, along with similar abuse characteristics (kappa values of .78–1.00 for abuse characteristics; Lyons & Romano, 2019).

**Internalizing and externalizing difficulties.** The *Achenbach System of Empirically Based Assessment – Adult Self-Report for Ages 18–59* (ASR; Achenbach & Rescorla, 2003) has 39 items for internalizing difficulties (i.e., anxiety/depression, withdrawn behavior, somatic complaints) and 35 items for externalizing difficulties (i.e., aggression, rule-breaking behavior, intrusive behavior) over the past 6 months. Items are rated along a 3-point scale from 0 (*not true/never*) to 2 (*very true/often*). The internalizing mean score of this sample was 26.01 ( $SD = 17.49$ , potential range 0–78) and 21.35 ( $SD = 14.66$ , potential range 0–70) for externalizing difficulties. The internal consistency was excellent for both the internalizing ( $\alpha = .96$ ) and externalizing ( $\alpha = .96$ ) scales.

**Emotion regulation.** The *Semi-Structured Emotion Regulation Interview* (SERI; Lee et al., 2017) is a researcher-administered measure that assesses three main components: 1) affective state; 2) emotion identification and strategy use; and 3) strategy use efficacy. The second author was individually trained by the scale developers and conducted all interviews. We asked men to recall their most difficult CSA experience (if there was more than one) in as much detail as was comfortable and then identify related emotions. Men were then asked to identify, from a list of nine emotion regulation strategies, those used to manage their CSA-related distress in the past month, as well as the frequency of use and perceived efficacy. Frequency was recorded as a percentage and efficacy on a 5-point scale from 1 (*much more affective state*) to 5 (*much less affective state*). We categorized the emotion regulation strategies as adaptive (social support seeking, acceptance, and positive reappraisal) or maladaptive (self-medication, deliberate self-harm, expressive suppression, rumination, behavioral avoidance, and cognitive avoidance), based on previous research (Cheng et al., 2014; Fliege et al., 2009; Ford et al., 2018; Grant et al., 2013; du Pont et al., 2019; Turner et al., 2018; Zahniser & Conley, 2018; Zainal & Newman, 2019). Strategy use frequency ratings demonstrated excellent discriminant validity across all three examined target emotion blocks during initial psychometric evaluation (Lee et al., 2017).

## **Procedure**

This study was part of a larger project on psychological and affective functioning among men with histories of CSA, and it was approved by our University's office of research ethics and integrity. Men who met inclusion criteria

completed an in-person assessment during which time they completed questionnaires and interviews. For this study, we focused on data from the ASR questionnaire and the researcher-administered SERI. Following the assessment, participants were provided with monetary compensation and mental health resources in case of distress.

### **Data analysis**

Missing data across all study variables was low (1.2%) and none of the data points were outliers. Data were not imputed because of the nature of the information that was collected (e.g., CSA history, affective states). We conducted descriptive statistics to understand the frequency and efficacy of men's CSA-related emotion regulation strategies. Pearson's correlations provided an initial examination of any associations between emotion regulation strategies and mental health outcomes. We then ran simple linear regressions to determine the extent to which strategy use and efficacy predicted mental health outcomes. Because of statistical power limitations, we only entered into the regression analyses those strategies that were statistically significant in the correlational analysis. Predictor variables were self-medication frequency and efficacy; deliberate self-harm frequency and efficacy; positive reappraisal efficacy; rumination frequency; and behavioral avoidance frequency and efficacy. A post hoc power analysis was conducted using a medium effect size ( $f = .15$ ), which determined power to be .70. In addition to probabilities, we also examined effect sizes (Cohen's  $f^2$ ) where 0.02 was small, 0.15 was medium, and 0.35 was a large effect. Analyses were conducted using SPSS version 25.0.

## **Results**

### **CSA characteristics**

On average, men reported 1.7 different CSA experiences ( $SD = 0.8$ ) out of a possible 3. They were, on average, 8.5 years old ( $SD = 2.7$ , range = 5–15) at abuse onset. The majority of men experienced CSA by male perpetrators (78.3%). Most men (39.1%) reported that their perpetrator, regardless of their gender, was an older adult (31–59 years), followed by a young adult 19–30 years old (26.1%) and then an adolescent (26.1%). The most common relationship with the perpetrator was reported to be a caregiver's friend/acquaintance (17.4%), followed by cousin (14.5%), stranger (11.6%), and uncle (10.1%). The majority (62.3%) had disclosed at least one of their CSA experiences. Of those who disclosed, the average age of

first disclosure was 21.9 years ( $SD = 9.5$ , range 6–53), with the length of time between abuse onset and first disclosure averaging 13.6 years ( $SD = 9.4$ , range = 0–46).

### CSA-related emotions and emotion regulation

An open-ended question about emotions related to their most difficult CSA experience (if there was more than one) showed that men identified an average of 1.5 emotions ( $SD = 1.0$ ; range 0–5). Approximately 4 in 10 (42.0%) identified *anger/frustration* as their most frequent CSA-related emotion, followed by *shame/guilt* (14.5%), *disgust* (10.1%), *anxiety* (6.7%), and *fear* (4.2%). Men then had the opportunity to discuss the frequency of use and efficacy of nine different emotion regulation strategies to manage their CSA-related distress. In response to whether they use any of the nine emotion regulation strategies, Table 2 shows that men reported more frequent use of maladaptive than adaptive strategies. Expressive suppression (76.8%) was the most frequent CSA-related emotion regulation strategy, followed by rumination (72.5%) and cognitive avoidance (65.2%). Comparatively, men reported their least frequently-used strategies to be social support seeking (26.4%), acceptance (20.6%), and positive reappraisal (18.3%). Men also reported on the perceived efficacy of emotion regulation strategies used to manage their CSA-related distress. Table 2 shows that all maladaptive strategies were rated as having high efficacy in managing distress, compared with adaptive strategies. The range spanned from 68.5% of men reporting that deliberate self-harm resulted in experiencing “much less of the emotion” or “little less of the emotion” to 82% for cognitive avoidance. For the adaptive strategies,

**Table 2.** CSA-Related emotion regulation strategies (N = 69).

Strategies	Percentage who reported using the strategy	Perceived Efficacy of Use (%) <sup>a</sup>				
		Much less of the emotion	Little less of the emotion	No difference in the emotion	Little more of the emotion	Much more of the emotion
<b>Adaptive Strategies</b>						
Social Support Seeking	26.4	12.9	14.4	11.4	23.2	38.1
Acceptance	20.6	7.4	9.4	20.1	28.8	34.3
Positive Reappraisal	18.3	12.4	11.4	21.6	31.7	22.9
<b>Maladaptive Strategies</b>						
Self-Medication	49.3	48.8	21.7	15.8	13.7	0
Deliberate Self-Harm	34.5	36.4	32.1	11.9	11.6	8.0
Expressive Suppression	76.8	39.8	36.2	13.0	5.8	5.2
Rumination	72.5	46.2	29.0	16.3	4.4	4.1
Behavioural Avoidance	50.7	51.2	28.7	11.4	5.8	2.9
Cognitive Avoidance	65.2	47.5	34.5	8.7	4.3	5.0

<sup>a</sup>Percentages are based on those men indicated using the emotion regulation strategy.

perceived efficacy ratings (when collapsing the categories of “much less” and “little less” of the emotion) ranged from 16.8% of men for acceptance to 27.3% for social support seeking.

### ***Relationship between emotion regulation and mental health outcomes***

Prior to regression analyses, we conducted simple bivariate correlations to examine the associations among all study variables. Table 3 shows that greater internalizing difficulties were associated with greater externalizing difficulties ( $r = .59, p < .001$ ). There also were significant associations in the expected direction between adaptive and maladaptive strategies. For example, greater use of self-medication was associated with less use of positive reappraisal ( $r = -.37, p = .005$ ), and greater use of rumination was associated with less use of acceptance strategies ( $r = -.28, p = .036$ ). Most of the strongest correlations were between a given strategy's frequency of use and perceived efficacy, such that greater use was associated with greater efficacy.

Table 3 also indicates that greater use of maladaptive emotion regulation strategies to manage CSA-related distress generally was associated with greater internalizing and externalizing difficulties. More specifically, greater internalizing difficulties was significantly associated with greater use of deliberate self-harm ( $r = .53, p < .001$ ), rumination ( $r = .27, p = .044$ ), and behavioral avoidance ( $r = .41, p = .002$ ), while greater externalizing difficulties was significantly associated with greater use of self-medication ( $r = .58, p < .001$ ) and deliberate self-harm ( $r = .32, p = .018$ ). For efficacy, greater internalizing difficulties was associated with higher perceived efficacy of deliberate self-harm ( $r = .60, p < .001$ ) and behavioral avoidance ( $r = .49, p < .001$ ), while greater externalizing difficulties was associated with higher perceived efficacy of self-medication ( $r = .60, p < .001$ ) and deliberate self-harm ( $r = .29, p = .029$ ). Finally, higher perceived efficacy of positive reappraisal was associated with fewer externalizing difficulties ( $r = -.34, p = .011$ ), but there were no links between the perceived efficacy of adaptive strategies and internalizing difficulties.

For the regression analyses, we only retained those emotion regulation strategies that were significantly linked with internalizing and externalizing difficulties in order to maximize our statistical power given our sample size. Among the five variables that were entered into the regression analyses for internalizing difficulties, Table 4 shows that men's greater use of deliberate self-harm ( $B = .50, p < .001$ ), rumination ( $B = .15, p = .044$ ), and behavioral avoidance ( $B = .17, p = .002$ ) to manage their CSA-related distress significantly predicted greater internalizing difficulties. Deliberate self-harm accounted for 28% of the variance in internalizing difficulties, which is a large effect ( $f^2 = 0.38$ ). Rumination accounted for 7% and behavioral avoidance accounted for 17% of the variance, which represents a small ( $f^2 = 0.08$ ) and medium effect ( $f^2 = 0.20$ ),

**Table 3.** Bivariate correlations among study variables (N = 69).

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. INT	–																			
2. EXT	.59***	–																		
3. SSS(F)	-.03	-.02	–																	
4. SSS(E)	.10	.10	.77***	–																
5. SM(F)	.15	.58***	-.09	-.08	–															
6. SM(E)	.10	.60***	.12	.04	.89***	–														
7. DSH(F)	.53***	.37*	-.15	-.05	.12	.14	–													
8. DSH(E)	.60***	.29*	-.14	.04	.08	.09	.86***	–												
9. A(F)	-.12	.01	.31*	.10	-.17	-.00	.12	.02	–											
10. A(E)	-.11	-.14	.45***	.34*	-.27	-.09	.04	.04	.64***	–										
11. PR(F)	-.14	-.24	.55***	.29*	-.37**	-.22	-.24	-.25	.54***	.65***	–									
12. PR(E)	-.26	-.34*	.44**	.35**	-.44**	-.29*	-.17	-.18	.44**	.73***	.76***	–								
13. ES(F)	.01	-.20	-.22	-.23	-.08	-.13	.09	.02	-.15	-.17	-.13	-.04	–							
14. ES(E)	-.20	-.03	-.02	-.14	.09	.15	.14	-.11	.25	.03	.13	.04	.25	–						
15. R(F)	.27*	.02	-.13	-.08	.02	-.09	.23	.14	-.28*	-.15	-.25	-.29*	.21	-.07	–					
16. R(E)	.06	-.10	.03	.01	-.27*	-.23	-.05	-.02	-.12	-.07	-.02	-.00	-.11	-.02	.15	–				
17. BA(F)	.41**	-.06	-.10	.07	-.11	-.10	.31*	.34*	-.20	-.13	-.08	-.08	.19	-.19	.22	.23	–			
18. BA(E)	.49***	.09	-.01	.10	.07	.07	.28*	.40**	-.25	.01	-.20	-.13	.14	-.22	.28*	.22	.71***	–		
19. CA(F)	.19	-.06	-.15	.09	-.04	-.05	.06	.09	-.04	.12	.06	.03	.17	.06	.25	.20	.52***	.32*	–	
20. CA(E)	.11	.07	-.10	.03	.08	.19	.08	.19	-.14	.07	-.16	-.06	.01	-.02	.23	.17	.30*	.47***	.52***	–

INT = internalizing difficulties; EXT = externalizing difficulties; F = frequency of strategy use; E = efficacy of strategy; SSS = social support seeking; SM = self-medication; DSH = deliberate self-harm; A = acceptance; PR = positive reappraisal; ES = expressive suppression; R = rumination; BA = behavioral avoidance; CA = cognitive avoidance.

\**p* < .05, \*\**p* < .01, \*\*\**p* < .001.

**Table 4.** The link between CSA-Related emotion regulation strategies and internalizing difficulties.

Emotion Regulation Strategy	B	95% CI	<i>p</i> value	SE	R <sup>2</sup>
Deliberate self-harm frequency	.50	.28 to .72	< .001	.11	.28
Deliberate self-harm efficacy	6.15	3.89 to 8.41	< .001	1.13	.36
Rumination frequency	.15	.004 to .29	.044	.07	.07
Behavioral avoidance frequency	.17	.067 to .28	.002	.05	.17
Behavioral avoidance efficacy	4.21	2.13 to 6.28	< .001	1.04	.24

B = unstandardized estimate; SE = standard error; R<sup>2</sup> = proportion of variance explained.

**Table 5.** The link between CSA-Related emotion regulation strategies and externalizing difficulties.

Emotion Regulation Strategy	B	95% CI	<i>p</i> value	SE	R <sup>2</sup>
Self-medication frequency	.20	.12 to .28	< .001	.04	.33
Self-medication efficacy	4.02	2.52 to 5.52	< .001	.75	.35
Deliberate self-harm frequency	.26	.05 to .50	.018	.11	.10
Deliberate self-harm efficacy	2.65	.28 to 5.03	.029	1.18	.09
Positive reappraisal efficacy	-2.66	-4.67 to -.64	.011	1.00	.12

B = unstandardized estimate; SE = standard error; R<sup>2</sup> = proportion of variance explained.

respectively. Results indicate that men's greater perceived efficacy of deliberate self-harm ( $B = 6.15$ ,  $p < .001$ ) and behavioral avoidance ( $B = 4.21$ ,  $p < .001$ ) in managing CSA-related distress significantly predicted greater internalizing difficulties. Deliberate self-harm accounted for 36% of the variance in internalizing difficulties, which represented a large effect ( $f^2 = 0.46$ ). Behavioral avoidance accounted for 24% of the variance and represented a medium effect ( $f^2 = 0.31$ ).

Among the five variables that were entered into the regression analyses for externalizing difficulties, Table 5 shows that greater use of self-medication ( $B = .20$ ,  $p < .001$ ) and deliberate self-harm ( $B = .26$ ,  $p = .018$ ) significantly predicted greater externalizing difficulties. Self-medication explained 33% of the variance in externalizing difficulties, which represented a large effect ( $f^2 = 0.49$ ), while deliberate self-harm accounted for 10% of the variance and was a small effect ( $f^2 = 0.11$ ). For the efficacy of CSA-related emotion regulation strategies, men's greater perceived efficacy of self-medication ( $B = 4.02$ ,  $p < .001$ ) and deliberate self-harm ( $B = 2.65$ ,  $p = .029$ ) significantly predicted greater externalizing difficulties. Self-medication accounted for 35% of the variance, which is a large effect ( $f^2 = 0.53$ ). Deliberate self-harm accounted for 9% of the variance, which represented a small effect ( $f^2 = 0.09$ ). Men's greater perceived efficacy of positive reappraisal was also found to significantly predict fewer externalizing difficulties ( $B = -2.66$ ,  $p = .011$ ). Positive reappraisal explained 12% of the variation, which represented a small effect ( $f^2 = 0.14$ ).

## Discussion

Consistent with our first hypothesis, the most frequently-reported strategies that men used to manage their CSA-related distress tended to be maladaptive (e.g., expressive suppression, rumination, and cognitive avoidance), while the least frequently used were adaptive (e.g., social support seeking, acceptance,

and positive reappraisal). These findings can be interpreted within traditional masculine socialization norms that tend to inhibit men's emotional expression, their acknowledgment of vulnerability, and the seeking out of others for support (Easton et al., 2014; Levant et al., 2016). Based on our findings, it might be suggested that men's tendency to rely on certain emotion regulation strategies (e.g., suppressing one's expression of feelings) over others (e.g., seeking out others for emotional support) is representative of the larger male experience.

We also examined the perceived efficacy of certain CSA-related emotion regulation strategies. Contrary to expectations, men who used maladaptive strategies rated all of them as being more efficacious than adaptive strategies in managing their CSA-related distress. These results are interesting because past mixed-gender research has indicated that the use of adaptive strategies (e.g., social support seeking, acceptance) is associated with both reduced emotional distress and mental health difficulties (Ford et al., 2018; Hefner & Eisenberg, 2009; Zainal & Newman, 2019). A possible explanation may be related to men's motivations to either increase or decrease an affective state in the short-term or to obtain long-term benefits (Tamir, 2009). The men in our study may have perceived maladaptive strategies as having greater efficacy because of the immediate impact on relieving distress around their sexual victimization. It is also possible that what might be considered more male-atypical strategies (e.g., seeking support) are perceived as being less helpful because they might not be as common and as encouraged for men for managing emotional distress (Hefner & Eisenberg, 2009; Liddon et al., 2018).

Findings partially supported our second hypothesis in that men's greater use and perceived efficacy of adaptive strategies predicted fewer mental health difficulties, while their greater use of maladaptive strategies predicted greater mental health difficulties. Greater internalizing difficulties were predicted by the greater use of deliberate self-harm, rumination, and behavioral avoidance to manage CSA-related distress, as well as by the greater perceived efficacy of both deliberate self-harm and behavioral avoidance. Consistent with most previous research, engaging in self-harm (Fliege et al., 2009), rumination (Aldao et al., 2010; Nolen-Hoeksema et al., 2008; du Pont et al., 2019) and behavioral avoidance (Grant et al., 2013; Hofmann & Hay, 2018; Lovibond et al., 2009) have tended to be associated with greater internalizing difficulties in adolescent and adult mixed-gender samples. Greater externalizing difficulties were predicted by the greater use of self-medication and deliberate self-harm to manage CSA-related distress, as well as by the greater perceived efficacy of these two strategies. In contrast, fewer externalizing difficulties were predicted by the greater perceived efficacy of positive reappraisal. Although our findings are novel and require replication, they appear consistent with past mixed-gender research, which indicates that the use of self-medication (Boles & Miotto, 2003) and deliberate self-harm (Meszaros et al.,

2017) is associated with greater externalizing problems, while the use of positive reappraisal is associated with fewer mental health difficulties (Szasz et al., 2011). The strategies of social support seeking, acceptance, expressive suppression and cognitive avoidance were not found to be predictive of men's mental health difficulties. This may be partly due to the relative infrequent use of these strategies, at least as it pertains to the adaptive strategies of social support seeking and acceptance. Given the novel and preliminary nature of the current study, it is difficult to offer conclusive explanations.

Focusing on the links between emotion regulation strategies and mental health outcomes, it may be that men's use of maladaptive strategies offers only temporary relief and/or prevents men's active engagement with their CSA-related emotions and, as such, would hinder mental well-being (Chapman et al., 2006; Hofmann & Hay, 2018; Lovibond et al., 2009; Nolen-Hoeksema et al., 2008). One encouraging finding was that the more men perceived positive reappraisal as being helpful in managing their CSA-related distress, the fewer the externalizing difficulties that were reported. This link may lie in this strategy's influence on behavioral and/or physiological responses. As the reevaluation of an event may decrease its impact (John & Gross, 2004), men may have held the belief that positive reappraisal can effectively reduce their affective states (e.g., anger) because strategy use may alter or prevent the occurrence of certain behavioral responses (e.g., aggressive behavior) in response to specific events (e.g., CSA memories).

### ***Limitations and future directions***

There are several limitations that must be considered, the first of which is that men were recruited locally using convenience sampling so the findings may not generalize to other men with CSA histories. We did find, however, that the sample's socio-demographics were mostly representative of adult men within the city and province in which our study was conducted. It would be important for future research to ensure a more representative sample to replicate our findings. Second, men were recruited online through community-based male CSA organizations so our findings may not reflect the experiences of CSA men who do not seek out these informational or support services. Third, the current study's results are based on the CSA-related experiences of primarily White men, so they are limited in their generalizability to the larger male population. Our sample was limited in terms of participants' ethnicity and racial identity, as well as their sexual orientation and gender identity. Future research should utilize more diverse samples to capture the CSA-related experiences of a much wider group of men. Fourth, as our sample size was relatively small due to the comprehensive nature of our data collection, future research should use a larger sample to reduce any potential biases and to increase population representativeness. Fifth, several of the confidence

intervals are close to zero so future research will need to replicate the findings with a larger sample to confirm the interpretation of our preliminary study findings. Sixth, we relied on self-report data and cross-sectional analyses so future research should make use of a larger prospective, mixed-methods study design to lend greater support to causal relationships between emotion regulation strategies and mental health outcomes. Seventh, emotion regulation was examined specifically in the context of men's CSA experience, rather than more broadly in terms of their general approach to regulating difficult emotions. It would be important for future studies to examine emotion regulation across a wider range of contexts to better situate their role on mental health functioning.

### ***Implications***

Examining male-specific CSA-related emotion regulation is needed to more fully understand its role in mental well-being and to continue improving interventions for men who have experienced childhood sexual victimization. This study highlights the need to comprehensively assess the various ways in which men manage their CSA-related distress. Armed with an understanding of how and in what areas emotion regulation is a potential mechanism in the management of an individual's symptoms, psychological interventions can provide targeted skills-based interventions aimed at improving the recognition and effective modulation of CSA-related emotional states. Although distal events that occurred decades ago cannot be changed, the residual effect of these adverse environments and maltreatment experiences (as well as men's interpretation of their meaning) can be examined and processed through therapeutic interventions that address the development of emotional competence and flexibility. Future studies that take a methodological approach similar to that in the current study would aid in continuing to connect CSA-related emotion regulation strategies and psychological outcomes. Such research would bolster efforts to explain the ways in which CSA impacts emotion regulation and, in turn, the psychological well-being and functioning of men – all with the goal of further improving the effectiveness of CSA-related interventions for this population.

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## Disclosure statement

Authors Snow, Moorman, and Romano declare that they have no conflict of interest.

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## Ethical standards and informed consent

All procedures performed in studies involving human participants were in accordance with the ethical standards of the University of Ottawa's Office of Research Ethics and Integrity (H08-13-16) and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

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