

# A Longitudinal Study of Suicidal Ideation in Sexually Abused Adolescent Girls: Depressive Symptoms and Affect Dysregulation as Predictors

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Child sexual abuse (CSA) is associated with many repercussions on adolescents' mental health, including suicidal ideation. Yet, the mechanisms linking CSA to adverse outcomes have rarely been investigated within a longitudinal design. The current study aimed to examine the role of affect dysregulation in the association between depressive symptoms and suicidal ideation 1year after the first assessment in a sample of 119 sexually abused adolescent girls. An integrative mediational model was conceptualized to examine the explicatory role of affect dysregulation (Time 2) in the association between depressive symptoms (Time 1) and suicidal ideation (Time 3). Approximately 31% of the girls reported suicidal ideation at Time 3. Path analysis with logistic regressions revealed that the association between depressive symptoms and suicidal ideation presence was partly explained by affect dysregulation, which increased the risk of suicidal ideation presence by 18.4%, OR = 1.18, 95% CI [1.07, 1.33]. The integrative model explained 21.5% of the variance in suicidal ideation. These findings identify potential predictors of suicidal ideation among sexually abused adolescent girls. This present study highlights the role of affect dysregulation in the presence of suicidal ideation and provides potential targets for intervention practices when working with adolescent girl victims of CSA. As such, interventions for this vulnerable population should aim to decrease depressive symptoms and affect dysregulation to reduce suicidal risk.

Child sexual abuse (CSA) is associated with many adverse impacts on mental health in adolescent girls (Hébert et al., 2016). One particularly harmful repercussion of CSA is suicidal ideation (Bakken & Gunter, 2012), or suicidal thoughts, which can act as an indicator of psychological distress and lead to suicidal attempts and completed suicide (O'Connor et al., 2013). Empirical studies have demonstrated that sexually abused adolescent girls are distinctly at risk of suicidal ideation (Miller et al., 2013). The results of a recent study conducted in a sample of 147 sexually abused adolescent girls aged 14–18 years indicated that nearly half (46%) of the participants reported having

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suicidal ideation in the last 3 months (Alix et al., 2017). Yet, despite the heightened risk of suicidal ideation in sexually abused adolescent girls, not all will experience suicidal ideation, hence the importance of gathering a better understanding of the determinants that influence the risk trajectories of suicidality.

Depressive symptoms appear to be one of the best predictors of suicidal ideation among adolescent girls, as higher rates of suicidal ideation have been found in adolescents with more severe depressive symptoms (Avenevoli et al., 2015). The link between depressive symptoms and suicidal ideation appears to be particularly salient among CSA victims. In fact, several studies have shown the association between depressive symptoms and suicidal ideation in sexually abused adolescent girls (Alix et al., 2017; Brabant et al., 2013, 2014). As such, depressive symptoms may act as an important predictor of suicidal ideation in this population.

The findings from empirical and theoretical studies have suggested that interpersonal traumas experienced in childhood, such as CSA, may interrupt a child's development, resulting in disturbances or deficits in self-capacities, such as affect regulation (Briere et al., 2010). The child's inability to cope with negative emotions related to the traumatic event may lead them to resort to drastic affect regulation strategies, such as those that involve affect avoidance. As such, CSA victims may be

more likely to experience affect dysregulation (Briere et al., 2010), which is defined as the difficulty or inability to identify one's own emotions, differentiate and express them appropriately, and modulate and regulate them adequately (Cook et al., 2005). The association between depressive symptoms and suicidal ideation in sexually abused adolescent girls may be explained by the presence of affect dysregulation. Despite this, affect dysregulation is poorly documented in this population. A recent study found a significant association between emotional reactivity and suicidal ideation in adolescent psychiatry inpatients with a history of CSA (DeCou & Lynch, 2019). In addition, affect dysregulation has been associated with a large spectrum of psychiatric symptoms and conditions, such as depression and suicidality (Bekh Bradley et al., 2011). Consequently, affect dysregulation may ensue from overwhelming negative emotions, including those associated with depressive symptoms, that are linked to a history of trauma exposure and exacerbate the development of multiple mental health problems, such as suicidal ideation, thus emphasizing the need for further research that uses longitudinal designs to better ascertain its role.

Despite previous literature that has identified significant associations between depressive symptoms and suicidal ideation in adolescent CSA victims, to our knowledge, no studies have yet examined the potential underlying role of affect dysregulation in an integrative longitudinal model. The present exploratory study aimed to examine affect dysregulation as a mediator between depressive symptoms and suicidal ideation among sexually abused adolescent girls. We expected that higher initial levels of depressive symptoms at Time 1 (T1) would be associated with higher levels of affect dysregulation as assessed 6 months later (Time 2 [T2]), which, in turn, would be associated with suicidal ideation 1 year after the first assessment (Time 3 [T3]). As such, it was expected that depressive symptoms would be linked to suicidal ideation through affect dysregulation over a 1-year assessment period.

## Method

# **Participants and Procedure**

Individuals aged 14–18 years were recruited in Quebec (Canada) through four specialized clinical settings that offered services (i.e., psychological treatment or support services) following disclosure of CSA. The sample was composed of 119 adolescent girl victims of sexual abuse. In total, 58.8% (n=70) of the sample completed all three assessments and 41.2% (n=49) completed assessments at only two points. At T1 (N=119), the mean participant age was 15.5 years (SD=1.1). Participants were reevaluated approximately 6 months (i.e., T2; n=108) and 12 months after the first assessment (i.e., T3; n=81). Sociodemographic and abuse characteristics of the sample are presented in Table 1.

The study consisted of three assessments that involved meetings between a research assistant and the adolescent, who com-

**Table 1**Sociodemographic and Abuse Characteristics

Characteristic	%
Age at first assessment (years)	
14–15	53.8
16	23.5
17–18	22.7
Nationality	
Born in Canada, parents born in	69.5
Canada	
Born in Canada, one or two parents	19.5
born outside Canada	
Born outside of Canada	11.0
Language spoken at home	
French	87.4
English	4.2
Other	8.4
Age of onset of sexual abuse (years)	
$\leq 6$	7.0
≥ 7	93.0
Type of abuse	
Less severe (i.e., fondling or no	16.0
contact)	
Severe (i.e., penetration or attempted	84.0
penetration)	
Frequency of abuse	
One or a few episodes	67.8
Chronic or repetitive episodes (> 6	32.2
months duration)	
Relationship to the abuser	
Stranger	14.7
Acquaintance	40.5
Dating partner	6.9
Family member	37.9
Presence of at least one other type of	
abuse	
No	61.6
Yes	38.4
Cooccurrence of other abuse by type	
Physical abuse	16.0
Psychological abuse	22.3
Neglect	18.9
Exposure to domestic violence	15.7
Bullying	17.9

pleted self-report questionnaires either alone or with the assistance of the research assistant. Participants received a gift card as compensation for each assessment. The study was approved by the Human Research Review Committee of the Université du Québec à Montréal and the Ethics comity of Centre Hospitalier Universitaire Sainte-Justine.

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### Measures

# **Depressive Symptoms**

Depressive symptoms were measured at T1 using the 20-item Negative Affectivity subscale of the French version of Youth Self-Report for Ages 11–18 (YSR; Achenbach & Rescorla, 2001). Participants indicated the frequency with which they experienced depressive symptoms within the past 3 months, rating responses on a 3-point Likert scale ranging from 0 (not true) to 2 (very true or often true). The scale originally contained 21 items, including one item related to suicidal ideation, which was excluded from the analyses to properly examine the association between depressive symptoms and suicidal ideation. Total scores ranged from 0 to 40, with higher scores reflecting more severe depressive symptoms. The original scale has demonstrated high internal consistency (Cronbach's  $\alpha = .81$ ; Achenbach & Rescorla, 2001). In the present sample, the Cronbach's alpha value was .87.

# Affect Dysregulation

Affect dysregulation was assessed at T2 using seven items from a French version of the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004). This short-form instrument measures five dimensions of affect dysregulation; lack of awareness of emotional responses, nonacceptance of emotional responses, limited access to emotion regulation strategies perceived as effective, difficulties controlling impulses when experiencing negative emotions, and difficulties engaging in goaldirected behaviors when experiencing negative emotions (Gratz & Roemer, 2004). Participants indicated the extent to which they use dysfunctional affect regulation strategies (e.g., "When I'm upset, I lose control over my behavior"), rating responses on a 5-point Likert scale ranging from 1 (false) to 5 (true). Total scores ranged from 7 to 35, with higher scores reflecting more intense affect dysregulation. Internal consistency was marginal in the current sample, Cronbach's  $\alpha = .63$ .

### Suicidal Ideation

Suicidal ideation was assessed at all time points using the suicidal ideation evaluation item within the National Longitudinal Survey of Children and Youth (Statistics Canada, 2007). The item asks, "In the last 6 months, have you seriously thought of committing suicide?" In the present study, suicidal ideation was considered at T3 in the final model.

# Abuse-Related and Sociodemographic Characteristics

A questionnaire was used at T1 to gather information on participants' age, nationality, primary language, and occupation. Characteristics related to CSA (i.e., the severity of abuse, frequency of abuse, relationship to the abuser, age of onset) and cumulative interpersonal traumatic experiences were collected using an adapted version (Hébert & Cyr, 2010) of the History of Victimization Form (HVF; Wolfe et al., 1987), which was completed by the caseworker.

Participants' age, recruitment setting, CSA severity, and cumulative trauma history were used as control variables in the present study. Settings that offered only referral services were coded as 0 (i.e., nonpsychological treatment), whereas settings that offered individual or group intervention were coded as 1 (i.e., psychological treatment). A CSA severity score (range: 0-4) was summed based on the following indicators: severity of abuse (0 = less severe abuse involving fondling or nocontact; 1 = severe abuse involving penetration or attempted penetration), frequency of abuse (0 = one or a few episode(s);1 = chronic or repeated episodes), relationship to the abuser (0 = stranger, acquaintance, partner, distant family member; 1= parental figure), age of onset of sexual abuse (0 = 7 years orolder; 1 = 6 years or younger). A score of cumulative trauma exposure (range: 0-5) was compiled based on the presence of a history of physical abuse, psychological abuse, neglect, exposure to domestic violence, and bullying.

# **Data Analysis**

Descriptive analyses and multiple regressions were conducted using SPSS (Version 26) to examine the distribution of and associations between all variables. There were missing data on the independent variable—depressive symptoms (n=3)—which was handled using listwise deletion. A missing values analysis indicated that Little's (1988) Missing Completely at Random (MCAR) test was not significant,  $\chi^2(4, N=119)=2.98$ , p=.562, meaning that there was no evidence to suggest that the data were not MCAR.

To test the hypothesized mediational model, correlations and path analyses were tested using Mplus (Version 8.4; Muthén & Muthén, 1998–2017). This software accounted for missing data on the dependent variables—affect dysregulation (n=11) and suicidal ideation (n=38)—through the use of full information maximum likelihood (FIML) and Monte Carlo integration, which uses randomly generated integration points. The maximum likelihood estimator was used to obtain odds ratios (ORs; i.e., logistic regression with logit function) and accomplish bootstrapping analyses using Mplus (Muthén & Muthén, 1998–2017).

To examine affect dysregulation as a mediator, the significance of direct effects (i.e., path coefficients from depressive symptoms to suicidal ideation) and indirect effects (i.e., the product of the path coefficients from depressive symptoms to affect dysregulation and from affect dysregulation to suicidal ideation) were processed using 95% bootstrap confidence intervals (MacKinnon et al., 2007).

#### Results

## **Descriptive Statistics and Correlations**

## Depressive Symptoms

At T1, the mean participant score on the YSR Negative Affectivity subscale was 17.49 (SD = 8.28). The results of t tests

**Table 2** *Means, Standard Deviations, Reliability, and Correlation Coefficients* 

Variable	1	2	3	4	5	6	7	М	SD	Cronbach's α
1. Age	_	12	16	01	.16	08	.02	15.45	1.14	
2. Setting <sup>a</sup>		_	.33***	.48***	.21*	03	.02	_		
3. CSA characteristics <sup>b</sup>			_	.30**	.29**	.01	.11	1.51	.88	_
4. Cumulative trauma exposure c				_	.09	01	.16	.77	1.24	_
5. Depressive symptoms <sup>d</sup>					_	.41***	.37***	17.65	7.98	.87
6. Affect dysregulation <sup>e</sup>						_	.47***	19.54	5.38	.63
7. Suicidal ideation f							_	_	_	_

*Note.* CSA = childhood sexual abuse.

and one-way analyses of variance (ANOVAs) between control variables and depressive symptoms indicated that the scores for depressive symptoms did not differ across CSA characteristics, F(4, 106) = .99, p = .415, but did differ with regard to setting, t(117) = -2.35, p = .020, and age, F(4, 114) = 3.12, p = .018, whereby older participants who were recruited from settings that offered psychological treatment presented with higher levels of depressive symptoms. Although there is no cutoff score for the YSR Negative Affectivity subscale, the clinical score for internalizing problems (i.e., anxious/depressed symptoms, withdrawal/depressed symptoms, somatic complaints; Achenbach & Rescorla, 2001) was examined to assess the general level of psychological distress in the sample. A total of 67.2% of the girls reached the clinical threshold for internalizing problems at T1.

## Affect Dysregulation

Participants presented a mean score of 19.54 (SD = 5.41) on the affect dysregulation questionnaire at T2. Results of t tests and one-way ANOVAs between control variables and affect dysregulation indicated that the scores for affect dysregulation did not differ across CSA characteristics, F(4, 98) = 1.22, p = .307; age, F(4, 103) = 1.44, p = .226; or setting, t(106) = 26, p = .798.

#### Suicidal Ideation

Among participants, 30.9% (n=25) reported suicidal ideation at T3, indicating that approximately 1 in 3 sexually abused adolescent girls had experienced suicidal ideation in the last 6 months. Among participants who reported suicidal ideation at T3, 56.0% reported having suicidal ideation at T1

and T2 as well, indicating that 13.1% (n = 14) of all participants maintained suicidal ideation across the three assessments.

#### **Correlations**

Point-biserial and Pearson correlations were computed between all study and control variables and are presented in Table 2 along with descriptive statistics (i.e., mean values, standard deviation, score range, reliability) for each variable.

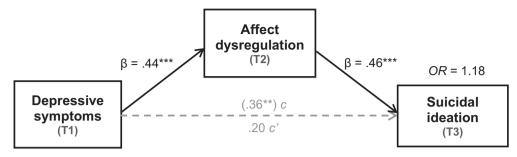
# Integrative Model of the Mediating Role of Affect Dysregulation in the Association Between Depressive Symptoms and Suicidal Ideation

First, the direct path from depressive symptoms to suicidal ideation was found to be significant,  $\beta = .36$ , SE = .12, 95% CI [.12, .60], p = .008, indicating a positive association. Depressive symptom severity increased the odds of suicidal ideation presence by 8.5%, OR = 1.09, 95% CI [1.02, 1.15]. Second, when the mediator was added, the direct path became nonsignificant,  $\beta = .20$ , SE = .13, 95% CI [-.06, .46], p = .136. As shown in Figure 1, the relation between depressive symptoms and affect dysregulation was statistically significant,  $\beta = .44$ , SE = .08, 95% CI [.26, .57], p < .001, as was the relation between affect dysregulation and suicidal ideation,  $\beta = .46$ , SE =.12, 95% CI [.10, .64], p = .003. The results showed a statistically significant indirect association between depressive symptoms and suicidal ideation through affect dysregulation,  $\beta =$ .19, SE = .07, 95% CI [.07, .31], p = .004, with significant bootstrap confidence intervals, B = 0.05, 95% CI [0.02, 0.11]. Affect dysregulation increased the odds of the presence of suicidal ideation by 18.4%, OR = 1.18, 95% CI [1.07, 1.33]. More precisely, path analyses showed that depressive symptoms were positively associated with affect dysregulation, which, in turn,

<sup>&</sup>lt;sup>a</sup>Coded as 0 = does not involve a psychological treatment, 1 = psychological treatment. <sup>b</sup>Coded as a sum of severity indicators (possible scores range: 0-4). <sup>c</sup>Coded as a sum of abuse experiences (possible scores range: 0-5). <sup>d</sup>Measured using the YSR (possible scores range: 0-40). <sup>e</sup>Measured using the DERS (possible scores range: 7-35). <sup>f</sup>Coded as 0 = absence of suicidal ideation, 1 = presence of suicidal ideation.

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Figure 1
Integrative Model of the Mediating Role of Affect Dysregulation in the Association Between Depressive Symptoms and Suicidal Ideation



*Note.* T1 = Time 1; T2 = Time 2; T3 = Time 3. OR = odds ratio. \*p < .05. \*\*p < .01. \*\*\*p < .001.

increased the odds of suicidal ideation. Overall, the integrative model accounted for 21.5% (i.e., pseudo  $R^2$ ; McKelvey & Zavoina, 1975) of the variance in suicidal ideation. There were no significant effects of age, setting, CSA characteristics, and cumulative trauma exposure in the tested model; thus, these variables were removed from the final model, as controlling for the effect of these variables did not change the significance or strength of the associations between the study variables.

To assess the strength of the present mediational model across participants, the presence of suicidal ideation at T1 and T2 was added as a covariate in the final model. The results of these additional analyses revealed that controlling for the effect of suicidal ideation at T1 did not predict suicidal ideation at T3,  $\beta = .20$ , SE = .12, p = .094. However, the results also revealed that controlling for the effect of suicidal ideation at T2 predicted suicidal ideation at T3,  $\beta = .65$ , SE = .09, p < .001, and the indirect path became nonsignificant. These additional results must be considered carefully, as the small sample size may have impacted the statistical power and may not have allowed for the inclusion of additional variables in the model. These exploratory outcomes, therefore, need to be replicated within larger samples.

### Discussion

The current study aimed to explore whether the association between depressive symptoms and suicidal ideation in sexually abused adolescent girls can be partly explained by their level of affect dysregulation. More specifically, we tested the hypothesis that higher levels of depressive symptoms at T1 would exacerbate affect dysregulation 6 months later (i.e., T2), which would, in turn, instigate the presence of suicidal ideation 1 year after the first assessment (i.e., T3). In our sample, approximately 1 in 3 girls (30.9%) reported suicidal ideation 1 year after the first assessment (T3). More than half (56.0%) of the participants reported having suicidal ideation at the two prior assessments as well, indicating that more than 1 in 10 girls (13.1%) in the total sample maintained suicidal ideation across the three assessments. The prevalence of suicidal ideation at T3 in our study differs from those reported in previous studies con-

ducted within samples of sexually abused adolescent girls (e.g., approximately 64%; Brabant et al., 2013). This is not surprising, as some previous studies have measured lifetime suicidal ideation, whereas our study measured suicidal ideation within the past 6 months.

Following our hypothesis, all study variables were related. Although to our knowledge, the proposed mediational model was never examined before within a sample of sexually abused adolescent girls, the current results corroborate past findings that have shown the various associations between depressive symptoms, affect dysregulation, and suicidal ideation (Alix et al., 2017; Bekh Bradley et al., 2011; Brabant et al., 2013). Yet, previous studies have had significant methodological differences (e.g., cross-sectional vs. longitudinal; community sample vs. clinical sample) and have failed to examine affect dysregulation as an explicative mechanism in the association between depressive symptoms and suicidal ideation. Overall, our study palliated gaps in the empirical literature, namely the considerable contribution of affect dysregulation within a clinical sample of sexually abused adolescent girls. More precisely, affect dysregulation was shown to act as an explanatory mechanism in the association between depressive symptoms and suicidal ideation. As such, higher levels of depressive symptoms led to higher ratings of affect dysregulation 6 months later, which in turn, was associated with the presence of suicidal ideation 1 year after the first assessment.

The conceptualized model within the present study suggests that affect dysregulation, like affect avoidance, may result from a perceived overwhelming psychological distress (i.e., a depressed mood) that can result from a traumatic experience. Faced with the lack of adequate affect regulation strategies, the incomprehension of their feelings, or suppression of their emotions, girls may start thinking about suicide as a way to cope with their psychological and emotional burden.

Surprisingly, CSA characteristics were not associated with suicidal ideation in the current study. However, the limited assessment of the characteristics of the abuse experienced and the overall high degree of severity of CSA among our sample might have precluded significant associations with suicidal ideation in this study. The findings from previous studies have been

inconsistent regarding associations between suicidal ideation and CSA characteristics (Miller et al., 2013). The current results highlight that in CSA victims, depressive symptoms increase the risk of suicidal ideation, through affect dysregulation, independently of the characteristics of the abuse. This study, therefore, adds to the corpus of empirical data showing that CSA victims' symptomatology is one of the best predictors of suicidal risk (Brabant et al., 2013).

Our findings provide information regarding the potential mechanism through which sexually abused adolescent girls susceptible to depressive mood may experience suicidal ideation. The understanding of the mechanism through which sexually abused adolescents may represent a suicide risk is a major priority in treatment. As such, the present findings offer an empirical basis for future intervention programs aimed at adolescent girl victims of CSA. The results support the need to assess past depressive symptoms and subsequent affect regulation difficulties to better prevent suicidal ideation. In a clinical sample, individuals who participated in an adaptation of dialectical behavior therapy for suicidal adolescents were shown to exhibit significant reductions in affect dysregulation and suicidal ideation after 12 weeks of treatment (Rathus & Miller, 2002).

The present findings support the necessity to consider affect dysregulation as a more proximal predictor of suicidal ideation than depressive symptoms. The results also emphasize the need to focus on the improvement of adaptive emotion regulation strategies in psychological treatment with adolescents. Beyond the general capacity to regulate one's emotions, Rajappa and colleagues (2012) indicated that the regulation of negative emotions specific to depression, such as hopelessness, should be targeted in interventions aimed at youth. Other researchers have also recommended improving adolescents' repertoire of affect regulation strategies as a valuable treatment target (Hatkevich et al., 2019). Therefore, suicidality prevention in sexually abused adolescent girls should not only focus on negative affect but also emphasize how these negative emotions can be dealt with. When adolescent girls are upset or depressed, their perception of losing control over their behaviors or the lack of acknowledgment of their emotions may put them at risk for thinking about suicide as a way to cope with negative feelings. Thus, some authors have recommended adding emotional regulation components to trauma-focused interventions for sexually abused adolescent girls, as sexual abuse history may remain a serious predictor of suicidal ideation (Yoon et al., 2018). Furthermore, as the presence of suicidal ideation is a known predictor of suicidal behaviors (O'Connor et al., 2013), practitioners should target the prevention and reduction of suicidal ideation to better diminish the risk of suicide among adolescent girls. The present findings also suggest that depressive symptoms and affect dysregulation should be thoroughly assessed as a means to evaluate suicide risk.

Although the scientific literature (e.g., Cash & Bridge, 2009) and some of our findings suggest that a history of suicidal ideation is the most potent predictor of future suicidality, the proposed mediational model identifies potential malleable

mechanisms that can be integrated into treatment and provides new avenues regarding therapeutic goals to be considered. It appears relevant for clinical practice to identify various correlates and determinants that can influence suicidality to gather a more comprehensive picture of adolescents' difficulties and examine how these correlates interact with each other. Thus, our study identified depressive symptoms and affect dysregulation as important interrelated components of suicidal thoughts in sexually abused adolescent girls.

Several study limitations deserve mention. First, the use of self-report measures may convey social desirability bias. Yet, adolescents appear to be in a unique position to report their own subjective experiences of mental health problems (Waters et al., 2003). Second, although the current results demonstrated that depressive symptoms may lead to affect dysregulation, empirical literature could support the hypothesis of alternate directions of the effect that were not examined in this study. Third, the assessment of suicidal ideation relied on a single item and therefore may be subject to statistical misclassification (Millner et al., 2015). Fourth, the attrition rate between each assessment was still noticeable despite multiple strategies to improve participation rates. Fifth, it is impossible to make firm assumptions about the generalizability of the results, as the sample was limited to mostly White, educated adolescent girls who disclosed their abuse and sought services. Sixth, the sample size was small, and a larger sample would be recommended for the detection of the desired indirect effect (i.e., power = .80). However, the p values and effect sizes obtained in our study indicated moderate effects. To overcome some of those limitations, future studies should consider strategies to recruit more diverse participants, as the correlates of suicidal ideation may underline specificities unobserved in the present study. In addition, future studies should rely on more comprehensive measures of suicidality and emotion dysregulation and should control for the lagged effect of each variable. Nonetheless, the longitudinal design of the current study remains an asset, as few longitudinal and prospective studies have investigated suicidal ideation among sexually abused adolescent girls.

The present study identified potential predictors of suicidal ideation, thus determining a possible trajectory of suicidality among sexually abused adolescent girls. To our knowledge, this was the first time that affect dysregulation was investigated as a mediator in the link between depressive symptoms and suicidal ideation in a clinical sample of sexually abused adolescent girls. Our findings contribute to the existing knowledge on suicidality in girl victims of CSA and enhance our understanding of the association between depressive symptoms and suicidal ideation. An important conclusion of the study is that sexually abused adolescent girls' symptomatology emerged as an important indicator of suicidal risk. The results accentuate the necessity of investigating and decreasing affect dysregulation rather than depressive symptoms alone throughout the treatment process among adolescent girl victims of CSA. Fundamentally, the present findings suggest potential targets in intervention practices and valuable guidelines for practitioners. In the future, 1138 Girard et al.

more informed practices might eventually lessen CSA repercussions for the victim and reduce youth suicidality.

# **Open Practices Statement**

Neither of the studies reported in this article was formally preregistered. Neither the data nor the materials have been made available on a permanent third-party archive; requests for the data or materials should be sent via email to the corresponding author at hebert.m@uqam.ca.

#### References

- Achenbach, T. M., & Rescorla, L. A. (2001). Manual for the ASEBA schoolage forms and profiles: An integrated system of multi-informant assessment. Research Center for Children, Youth, & Families.
- Alix, S., Cossette, L., Hébert, M., Cyr, M., & Frappier, J. Y. (2017). Posttraumatic stress disorder and suicidal ideation among sexually abused adolescent girls: The mediating role of shame. *Journal of Child Sexual Abuse*, 26(2), 158–174. https://doi.org/10.1080/10538712.2017.1280577
- Avenevoli, S., Swendsen, J., He, J. P., Burstein, M., & Merikangas, K. R. (2015). Major depression in the National Comorbidity Survey—Adolescent Supplement: Prevalence, correlates, and treatment. *Journal of the American Academy of Child & Adolescent Psychiatry*, 54(1), 37–44. https://doi.org/10.1016/j.jaac.2014.10.010
- Bakken, N. W., & Gunter, W. D. (2012). Self-cutting and suicidal ideation among adolescents: Gender differences in the causes and correlates of self-injury. *Deviant Behavior*, 33(5), 339–356. https://doi.org/10.1080/ 01639625.2011.584054
- Bekh Bradley, D., DeFife, J. A., Guarnaccia, C., Phifer, M. J., Fani, M. N., Ressler, K. J., & Westen, D. (2011). Emotion dysregulation and negative affect: Association with psychiatric symptoms. *The Journal of Clinical Psychiatry*, 72(5), 685–691. https://doi.org/10.4088/JCP.10m06409blu
- Brabant, M. E., Hébert, M., & Chagnon, F. (2013). Identification of sexually abused female adolescents at risk for suicidal ideations: A classification and regression tree analysis. *Journal of Child Sexual Abuse*, 22(2), 153–172. https://doi.org/10.1080/10538712.2013.741666
- Brabant, M. E., Hébert, M., & Chagnon, F. (2014). Predicting suicidal ideations in sexually abused female adolescents: A 12-month prospective study. *Journal of Child Sexual Abuse*, 23(4), 387–397. https://doi.org/10.1080/ 10538712.2014.896842
- Briere, J., Hodges, M., & Godbout, N. (2010). Traumatic stress, affect dysregulation, and dysfunctional avoidance: A structural equation model. *Journal of Traumatic Stress*, 23(6), 767–774. https://doi.org/10.1002/jts.20578
- Cash, S. J., & Bridge, J. A. (2009). Epidemiology of youth suicide and suicidal behavior. *Current Opinion in Pediatrics*, 21(5), 613–619. https://doi.org/10.1097/MOP.0b013e32833063e1
- Cook, A., Spinazzola, J., Ford, J., Lanktree, C., Blaustein, M., Cloitre, M., DeRosa, R., Hubbard, R., Kagan, R., Liautaud, J., Mallah, K., Olafson, E., & van der Kolk, B. (2005). Complex trauma in children and adolescents. *Psychiatric Annals*, 35(5), 390–398. https://doi.org/10.3928/00485713-20050501-05
- Decou, C. R., & Lynch, S. M. (2019). Emotional reactivity, trauma-related distress, and suicidal ideation among adolescent inpatient survivors of sexual abuse. *Child Abuse & Neglect*, 89, 155–164. https://doi.org/10.1016/j. chiabu.2019.01.012
- Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and ini-

- tial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment*, 26(1), 41–54. https://doi.org/10.1023/B:Joba.0000007455.08539.94
- Hatkevich, C., Penner, F., & Sharp, C. (2019). Difficulties in emotion regulation and suicide ideation and attempt in adolescent inpatients. *Psychiatry Research*, 271, 230–238. https://doi.org/10.1016/j.psychres.2018.11.038
- Hébert, M., Cénat, J. M., Blais, M., Lavoie, F., & Guerrier, M. (2016). Child sexual abuse, bullying, cyberbullying, and mental health problems among high school students: A moderated mediated model. *Depression and Anxi*ety, 33(7), 623–629. https://doi.org/10.1002/da.22504
- Hébert, M., & Cyr, M. (2010). Adaptation française du History of Victimization Form [French version of the History of Victimization Form] Unpublished document. Department of Sexology, Université du Québec à Montréal.
- Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, 83(404), 1198–1202. https://doi.org/10.2307/2290157
- MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology*, 58(1), 593–614. https://doi.org/10.1146/annurev.psych.58.110405.085542
- McKelvey, R. D., & Zavoina, W. (1975). A statistical model for the analysis of ordinal level-dependent variables. *Journal of Mathematical Sociology*, 4(1), 103–120. https://doi.org/10.1080/0022250X.1975.9989847
- Miller, A. B., Esposito-Smythers, C., Weismoore, J. T., & Renshaw, K. D. (2013). The relation between child maltreatment and adolescent suicidal behavior: A systematic review and critical examination of the literature. Clinical Child and Family Psychology Review, 16(2), 146–172. https://doi.org/10.1007/s10567-013-0131-5
- Millner, A. J., Lee, M. D., & Nock, M. K. (2015). Single-item measurement of suicidal behaviors: Validity and consequences of misclassification. *PLoS One*, 10(10), e0141606. https://doi.org/10.1371/journal.pone.0141606
- Muthén, L. K., & Muthén, B. O. (1998–2017). *Mplus user's guide* (8th ed.). Muthén & Muthén.
- O'Connor, R. C., Smyth, R., Ferguson, E., Ryan, C., & Williams, J. M. G. (2013). Psychological processes and repeat suicidal behavior: A four-year prospective study. *Journal of Consulting and Clinical Psychology*, 81(6), 1137–1143. https://doi.org/10.1037/a0033751
- Rajappa, K., Gallagher, M., & Miranda, R. (2012). Emotion dysregulation and vulnerability to suicidal ideation and attempts. *Cognitive Therapy and Research*, *36*(6), 833–839. https://doi.org/10.1007/s10608-011-9419-2
- Rathus, J. H., & Miller, A. L. (2002). Dialectical behavior therapy adapted for suicidal adolescents. *Suicide and Life-Threatening Behavior*, 32(2), 146–157. https://doi.org/10.1521/suli.32.2.146.24399
- Statistics Canada. (2007). National Longitudinal Survey of Children and Youth—Cycle 7 survey instruments. http://www23.statcan.gc.ca/imdb-bmdi/pub/instrument/4450\_Q2\_V6-eng.pdf
- Waters, E., Stewart-Brown, S., & Fitzpatrick, R. (2003). Agreement between adolescent self-report and parent reports of health and well-being: Results of an epidemiological study. *Child: Care, Health, and Development*, 29(6), 501–509. https://doi.org/10.1046/j.1365-2214.2003.00370.x
- Wolfe, V. V., Gentile, C., & Bourdeau, P. (1987). History of victimization form [Unpublished measure]. London Health Science Centre, London, Ontario, Canada.
- Yoon, Y., Cederbaum, J. A., & Schwartz, A. (2018). Childhood sexual abuse and current suicidal ideation among adolescents: Problem-focused and emotion-focused coping skills. *Journal of Adolescence*, 67, 120–128. https://doi.org/10.1016/j.adolescence.2018.06.009