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Factors associated with resilience in preschoolers reporting sexual abuse: A typological analysis

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Abstract:

Objectives: The objectives of this study were to explore the diversity of profiles in sexually abused preschoolers and identify possible protective factors associated with individual differences in outcomes. **Methods:** A sample of 68 sexually abused children (ages 3½ – 6 ½ years old) and a comparison group of 78 children participated in the study. Parents evaluated children's level of internalizing and externalizing behavior problems with the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2000; 2001). They also reported on within-child protective factors by completing the Devereux Early Childhood Assessment (DECA; LeBuffe & Naglieri, 1999), their resilience capacity (CD-RISC 10; Campbell-Sills & Stein, 2007) and coping strategies (WOC; Folkman & Lazarus, 1988). A two-step cluster analysis was used to identify relevant subgroups of children. **Results:** A three-cluster solution identified: a) High symptomatology subgroup whose members had clinically elevated scores on internalizing and externalizing behavior problems scales; b) moderate symptomatology group displaying significant externalizing behavior problems when compared to non-abused children, and c) resilient group of children displaying few behavior problems and benefiting from a host of protective factors. **Conclusions and Implications:** Results underscore the relevance of incorporating screenings for protective factors in addition to behavioral concerns in the assessments of sexually abused preschool-age children. Such an approach is likely to optimize the implementation of interventions for this vulnerable population.

Keywords:

Child sexual abuse, preschoolers, resilience

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Introduction

Child sexual abuse (SA) has been associated with deleterious consequences in adulthood (Trickett, Noll, & Putnam, 2011) and is now recognized as a significant risk factor for depression, suicidal ideations, post-traumatic stress symptoms and risky sexual behaviors in adult survivors (Maniglio, 2009). While scholarly reports have documented the long-term outcomes associated with SA, few empirical studies have explored its impact on preschool-agechildren despite the fact that almost 30% of minors that experienced SA in 2012, in the United States, were aged 7 and under (U.S. Department of Health and Human Services, 2013).

While little is known about the outcomes of SA in preschoolers, studies conducted up to now have underscored the diversity of possible outcomes in older children, without being able to definitively conclude as to the factors and processes involved (Hébert, 2011). Person-oriented approaches, in contrast to variable-oriented approaches, have provided some insights into the differential profiles of sexually abused children. Person-oriented approaches focus on individuals or homogeneous subgroups of individuals and highlight inter-individual differences and characteristics rather than sample means of specific variables (Bergman & Magnusson, 1997; von Eye, Bogat, & Rhodes, 2006). Cluster analysis is one of the methods that can be used to uncover these patterns of individual distinctive features (Mun, Bates, & Vaschillo, 2010). Trickett, Noll, Reiffman and Putnam (2001) performed such an analysis with a sample of SA girls aged 6 to 16. Three subgroups were identified with the following variables discriminating between clusters: presence of physical violence and of more than one assailant (Cluster 1), presence of a single assailant that is not the biological father (Cluster 2) and victims of chronic abuse perpetrated by the biological father (Cluster 3). Victims of prolonged SA involving a biological father were found to display more antisocial and aggressive behaviors, while victims abused for a shorter period of time showed more depressive symptoms. Victims of physical violence or of chronic abuse by a biological father were more likely to manifest important dissociation symptoms. These results identified characteristics of the abuse as linked to the diversity of outcomes found among sexually abused girls.

Hébert, Parent, Daignault and Tourigny (2006) also conducted a typological analysis with a sample of both boys and girls aged 6 to 12 who were victims of intra-familial or extra-familial SA and contrasted them to a comparison group. Four subgroups of sexually abused children were identified: victims of less severe abuse (as defined by the absence of penetration or attempted penetration), children displaying mainly internalizing symptoms and two other clusters at the opposite ends of a spectrum. At one end, a subgroup of children was described as highly symptomatic by their caregivers: achieving very high scores of behavior problems on all subscales of the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001) and more likely to have experienced penetration or attempted penetration. At the other end of the spectrum, a subgroup of resilient children was identified. These children did not present clinically significant behavior problems despite the fact that the abuse was of comparable severity, indicating that characteristics of the SA did not account for the differential outcomes. Resilient children were found to benefit from a series of protective factors, such as a harmonious family environment, reliance on approach coping strategies and a higher level of self-esteem. The differences observed between the highly distressed and the resilient group indicate that, even after experiencing a similar adverse life event, children's trajectories can vary considerably and such a typological approach offer cues as to the factors leading to these opposite trajectories. Thus, personal and environmental factors can lead to a resilient trajectory, even after having experienced a devastating trauma such as SA. Studies involving maltreated children have highlighted this possibility (Afifi & MacMillan, 2011) and argue for the relevance of investigating factors related to resilience in at-risk populations.

Resilience has been defined in multiple ways but two elements appear essential in all definitions: the presence of a threat to a healthy development and of a subsequent positive adaptation (Zolkoski & Bullock, 2012). Cicchetti's (2013) definition appears particularly relevant to the population of interest in the present analysis: "a dynamic developmental

process encompassing the attainment of positive adaptation despite exposure to significant threat, severe adversity, or trauma that typically constitute major assaults on the processes underlying biological and psychological development" (p. 404). Resilience is not a fixed characteristic that can be seen as present or absent in a person, but rather a process. Resilience can also be modulated or influenced by developmental changes in biology, psychology and environmental demands (Afifi & MacMillan, 2011; Cicchetti, 2013).

Studies on protective factors linked to resilience in children show that these factors include individual features, such as personality and temperament characteristics, or that they can be family- or community-related. Zolkoski and Bullock's review (2012) indicates that, at the individual level, an easy temperament, high autonomy and sociability, optimism, good coping skills, intelligence, self-perception and self-regulation are associated with resilience. Regarding family characteristics, a close relationship to a stable and supportive caregiver, authoritative parenting style, family cohesion, a stimulating environment and a stable and adequate source of income are the main variables linked to resilience in children. Finally, at the community level a number of factors are correlated with resilience: presence of role models outside of the family, early intervention and prevention programs, safe neighborhood, accessibility to health and support services and presence of recreational facilities (Zolkoski & Bullock, 2012).

One of the most important threats to a child's healthy development is maltreatment. A host of negative outcomes across lifespan is associated with maltreatment experienced in childhood. Nevertheless, some children and adults survivors appear to adapt well despite the trauma (Houshyar, Gold, & DeVries, 2013). This observation has paved the way for studies that investigate the pathways leading to positive adaptation in the hope of identifying factors associated with resilience in maltreated children. Identifying such personal, family or community-related factors could offer precious information for the design of interventions (Houshyar et al., 2013). Yet the child maltreatment field has only begun to focus on positive adaptation following trauma (Walsh, Dawson, & Mattingly, 2010). In their review, Walsh et al. (2010) note that the main criteria used as evidence of resilience in most child maltreatment studies is exhibiting competence – that is performing within the normal range – across domains of functioning (behavioral, emotional, social and academic).

Studies to date have shown that one of the most important protective factors, capable of consistently distinguishing between maltreated children with a positive development and those exhibiting a negative developmental trajectory, is the presence of a supportive and stable non-offending caregiver (Afifi & MacMillan, 2011; Cicchetti, 2013; Houshyar et al., 2013). Interestingly, Kim and Cicchetti (2003) found that relationship factors were more important in predicting resilience in non-maltreated children than in maltreated children, and that conversely, personality characteristics and self-system processes were more critical to maltreated children than they were for children in the comparison group. As reported by Cicchetti (2013), ego-resilience and self-esteem are highly associated with adaptive functioning in maltreated children. Low neuroticism, being a girl, coping strategies, ability to trust others and easy temperament are individual characteristics also found to be associated to resilience in maltreated children (Afifi & MacMillan, 2011).

Yet, preschoolers tend to evolve in a more restrained social setting and, therefore, may be limited to their parental figures as sources of support in situations of distress (Wood, Emmerson, & Cowan, 2004). Given preschoolers' greater dependency on their caregivers as well as their limited development in terms of coping strategies and problem-solving skills when compared to older children and teenagers, relational and familial factors may be particularly critical to their capacity in overcoming trauma. Studies have shown that familial factors, including maternal history of child SA and symptomatology following disclosure, can impact on sexually abused children's behavioral problems (Berthelot, Langevin, & Hébert, 2012). Furthermore, mothers' ability to cope with adverse life events may influence their capacity to support their children's recovery following SA (Cyr, McDuff, & Hébert, 2013). Levels of behavior problems were found to be lower for children of mothers

described as resilient (i.e. mothers presenting low levels of traumatic symptoms, anger and neuroticism) and children whose mothers relied extensively on avoidant coping strategies (Cyr et al., 2013). These findings underline the relevance of considering caregivers' own level of resiliency and capacity to cope with adverse life events to better understand individual differences in outcomes in preschoolers.

Few studies have investigated protective factors associated with resilience in victims of specific subtypes of maltreatment, despite their potential differential effects (Afifi & MacMillan, 2011). Sexual abuse may be one of the most distinctive forms of maltreatment since it can be perpetrated not only by a caregiver, but also by a member of the extended family, family acquaintances, siblings, or strangers, which is usually not the case for other forms of maltreatment. In a longitudinal study of women survivors of childhood SA, Hyman and Williams (2001) found resilience to be associated with a stable family environment and less severe SA. Banyard and Williams (2007) identified social connection, life satisfaction and adaptive coping as correlates of resilience in adulthood in adult survivors of SA. Ability to form a secure attachment in childhood and to maintain it through adulthood also appeared to be a predictor of positive adaptation in women survivors of child SA (Leifer, Kilbane, & Kalick, 2004). Only a handful of empirical studies have investigated the short-term correlates of resilience in children victims of maltreatment (Walsh et al., 2010) and, to our knowledge, none has specifically explored these correlates in sexually abused preschoolers. Studies of older children victims of SA underlined the presence of a considerable diversity in the profiles of these children, beyond the simple dichotomy of resilience versus high-symptomatology.

In this context, the present study aims to explore the diversity of outcomes in preschoolers victims of SA by means of a typological analysis. It is expected that a subgroup of highly symptomatic children and a subgroup of children displaying moderate levels of symptoms will be identified. It is further hypothesized that severity of the SA will be associated with higher internalizing and externalizing behavior problems and will characterize highly symptomatic children. We also expect to identify a group of resilient asymptomatic children and predict that within-child protective factors as well as protective factors related to the non-offending parent (resiliency and coping strategies) will distinguish resilient children from those displaying high symptomatology.

Method

Participants

A sample of 68 sexually abused preschoolers (ages 3 ½ – 6 ½ years old) and their non-offending caregiver (92% maternal figure) were recruited at initial evaluation from two specialized intervention settings in Montreal, Quebec, Canada. A sample of 78 non-abused children recruited from daycare centers served as a comparison group. Sexually abused children were found to be comparable to non-abused children on socio-demographic variables, except for family structure, maternal level of education and family income (see Table 1).

Measures

Child Behavior Checklist. Parents completed the CBCL (Achenbach & Rescorla, 2000; 2001) evaluating the presence internalizing (anxiety, depression, somatization, etc.) and externalizing (e.g., aggressivity) behavior problems. Items are rated on a three-point Likert scale that indicates the frequency of the behavior displayed by the child within the past two months (0 = Not true, 1 = Somewhat or sometimes true, 2 = Very or often true). T scores are calculated for each subscale and a higher score is indicative of higher behavior problems. Internal consistencies of internalizing and externalizing subscales are adequate (α = 0.89 and 0.92) and studies support their validity (Achenbach & Rescorla, 2000; 2001).

Devereux Early Childhood Assessment. Children's protective factors were assessed using the DECA (LeBuffe & Naglieri, 1999). In the original validation study, the DECA showed adequate psychometric properties (LeBuffe & Naglieri, 1999). The DECA was also found to be reliable with at-risk populations such as Head Start children and children exposed to intimate partner violence (Howell, Graham-Bermann, Czyz, & Lilly, 2010; Lien & Carlson, 2009). Parents answered items referring to three subscales: Initiative

Table 1: Socio-demographic Variables of the Sample and Group Differences

Variables	SA group (n = 68)	Comparison group (n = 78)	Statistical test
Average age of children (in months)	58.1 (11.55)	56.10 (8.65)	t(144) = -1.21 ns
Gender of children			χ2 (1, N= 146) = .58 ns
Girls	80.9%	75.6%	
Boys	19.1%	24.4%	
Family structure			χ2 (1, N= 143) = 22.31, p < .001
Single-parent family	43.1%	9.0%	
Intact or step-family	56.9%	91.0%	
Maternal level of education			χ2 (4, N= 143) = 66.02, p < .001
Elementary school	6.2%	0.0%	
High school	43.1%	2.6%	
College level	30.8%	12.8%	
Undergraduate level	15.4%	46.2%	
Graduate level	4.6%	38.5%	
Annual family income			χ2 (1, N=135) = 47.94, p < .001
< 40 000$	68.3%	10.7%	
> 40 000$	31.7%	89.3%	

(11 items), Self-control (8 items) and Attachment (8 items) and each item is assessed on a 4-point frequency scale. Higher scores reflect a higher level of protective factors. The Initiative subscale refers to child's use of independent thought and actions to meet his or her needs; the Self-control subscale assesses the child's ability to experience a range of feelings and express them appropriately, while the Attachment subscale is designed to measure whether the child has developed mutual and solid relationships with other children and adults (Naglieri, LeBuffe, & Ross, 2013). In the present study, all subscales of the DECA present an adequate internal consistency coefficient (α = .78 to .88). A total protective factor scale is also provided where T-scores above 60 are described as strengths, score between 41 and 59 are considered typical while T-scores below 40 are labeled as concerns.

Connor-Davidson Resilience Scale. Parents completed the 10-item CD-RISC (CD-RISC 10; Campbell-Sills & Stein, 2007), a short version of the original 25-item version (Connor & Davidson, 2003). Questions measuring parent's resilience were rated on a scale from 0 (not true at all) to 4 (true nearly all the time). A total score is obtained by summing the scores for each item; a higher score reflects a better resilience. CD-RISC 10 has demonstrated good internal consistency (α = .85) and when compared to the original 25-item version, scores were highly correlated (r =.92), (Campbell-Sills & Stein, 2007). Data supports the unidimensional structure of the French Canadian version of the CD-RISC 10 (Hébert, Parent, Simard, & Laverdière, submitted). In the present study, the internal consistency coefficient is high (α = .83).

Ways of Coping Questionnaire. Parents completed The Ways of Coping Questionnaire (WCQ; Folkman & Lazarus, 1988), a self-report questionnaire designed to evaluate coping strategies on a four-point Likert scale (0 = Never, 1 = Sometimes, 2 = Often, 3 = Almost always) indicating how often each strategy was used. A brief version was used in this study, assessing three dimensions of coping strategies: Distancing (3 items; α = .61), Problem-solving (4 items; α = .68) and Seeking Social Support (4 items; α = .76) (Folkman & Lazarus, 1988). Parents of sexually abused children were invited to complete the scale in reference to the strategies used following disclosure while parents of the comparison group were asked to refer to an adverse life event experienced by their child. In the

Table 2: Adjusted Mean Scores (SEs; Adjusted residuals) Based on Cluster Membership

	Cluster 1	Cluster 2	Cluster 3	Comparison group	$\chi 2$/F
DECA (T scores)					
Initiative	42.5 (2.0)[a]	39.2 (2.7)[a]	56.7 (1.8)[b]	54.0 (1.8)[b]	16.77***
Self-control	46.2 (1.7)[a]	36.2 (2.3)[b]	61.1 (1.5)[c]	59.1 (1.0)[c]	39.43***
Attachment	39.0 (2.3)[a]	45.1 (3.1)[a]	56.0 (2.0)[b]	53.8 (1.3)[b]	13.44***
DECA (% concern)					
Total score	52.2% (4.7) †	76.9% (5.8) †	3.8% (-2.1) †	2.6% (-5.3) †	65.30***
CBCL (T scores)					
Internalizing	54.7 (2.5)[a]	70.7 (3.4)[b]	47.8 (2.2)[c]	49.8 (1.5)[a,c]	12.34***
Externalizing	54.9 (1.9)[a]	73.5 (2.6)[b]	50.0 (1.7)[c]	47.8 (1.1)[c]	25.75***
CBCL (% clinical)					
Internalizing	17% (-0.3)	92% (7.0) †	12% (-1.1)	10% (-3.0) †	49.67***
Externalizing	17% (0.6)	92% (8.7) †	8% (-1.0)	1% (-4.8) †	79.80***
CD-RISC	25.5 (1.2)[a]	23.0 (1.6)[a]	29.6 (1.1)[b]	30.5 (0,7)[b]	7.29***

Notes. DECA = Devereux Early Childhood Assessment; CBCL = Child Behavior Checklist; CD-RISC = Connor-Davidson Resilience Scale. Scores with the same subscript are not significantly different from each other but are significantly different from those with different subscripts ($p < .05$). † indicate values > 1.96 that flag observed values significantly different than expected.
***p< .001.

present study, internal consistencies of the three subscales are similar to those found with the original version (Distancing α = .61; Problem-Solving α = .67; Seeking Social Support α = .76).

Procedure

Parents of sexually abused children completed questionnaires with assistance, if needed, in the intervention settings. The same procedure was used for parents in the comparison group except that they completed the questionnaires at home. Written informed consent was obtained from parents after explaining the implications of their participation in the study. This study received the approbation of both the Human Research Review Committee of Université du Québec à Montréal and the Ethics Committee of Ste-Justine Hospital.

Results

In order to explore possible clusters within the data, a two-step cluster analysis was performed using the data from children in the SA group. Variables used to derive the clusters included internalizing and externalizing behavior problem scores (CBCL), within-child protective factors (initiative, control and attachment subscales: DECA-I, DECA-C and DECA-A) and mothers' individual features of resilience (CD-RISC). To identify the most significant cluster solution, comparison of solutions was based on practical judgment and conceptual issues as suggested by Hair, Black, Babin and Anderson (2009). Thus, the classification of sexually abused children into two clusters was examined and then interpretation of a three- versus two-cluster solution was attempted. The three-cluster solution provided the most clinically meaningful description and was selected for further analyses.

The comparison group was not included to derive the clusters but was used to allow for a better description of the clusters and the identification of distinctive features regarding severity of behavioral problems and personal and family protective factors characteristics of each cluster. Thus, to further interpret cluster profiles, identify the unique characteristics of each cluster, as well as to contrast each cluster group with children in the comparison group, a series of analyses were conducted and results are presented in Table 2. To control for significant differences regarding socio-demographic variables between the sexually abused children and comparison group children, ANCOVAs were used. Given the high correlations between family structure, maternal level of education and family income (0.52 to 0.65, $p<0.001$), maternal level of education was retained as the control variable. ANCOVAs were followed by

Table 3: Adjusted Mean Scores (SEs; Adjusted residuals) Based on Cluster Membership

	Cluster 1	Cluster 2	Cluster 3	Comparison group	χ2/F
Family structure					
Single-parent	57% (3.9) †	46% (1.9)	31% (0.9)	9% (-4.7) †	26.92***
Gender					
% of boys	22% (0.4)	31% (1.2)	12% (-1.3)	27% (1.0)	2.99 (ns)
Age					
Mean age (months)	61.0a	57.5a	56.9a	56.1a	1.44 (ns)
Type of abuse					
Intra-familial	73% (0.0)	58% (-1.3)	80% (1.1)	NA	
Extra-familial	27% (0.0)	42% (1.3)	20% (-1.1)		1.93 (ns)
Severity of the abuse					
Clothed or unclothed touching	35% (-1.9)	70% (1.3)	58% (0,9)	NA	
Penetration or attempted	65% (1.9)	30% (-1.3)	42% (-0.9)		4.00 (ns)
Length of the abuse					
One or few episodes	72% (-0.2)	63% (-0.8)	78% (0.7)	NA	
Chronic	28% (0.2)	38% (0.8)	22% (-0.7)		0.78 (ns)
Maternal history of sexual abuse	39% (1.5)	69% (3.7) †	40% (1.7)	10% (-4.7) †	26.51***
Coping strategies (WCQ)					
Social support	7.0 (0.7)a	8.1 (1.0)^{a,b}	9.4 (0.7)^{b}	8.7 (0.4)^{b}	2.66 p = .051
Problem-solving	7.7 (0.6)a	7.6 (0.9)^{a}	8.8 (0.6)^{a}	8.1 (0.4)^{a}	0.83 (ns)
Distancing	4.6 (0.6)a	4.4 (0.9)^{a}	3.6 (0.6)^{a,b}	2.7 (0.4)^{b}	2.11 (ns)

Notes. WCQ = Ways of Coping Questionnaire; NA = not applicable. Scores with the same subscript are not significantly different from each other but are significantly different from those with different subscripts ($p < .05$). † indicate values > 1.96 that flag observed values significantly different than expected.
*$p < .05$ *** $p < .001$.

pairwise comparisons using Fisher's Least Significant Difference (LSD) test to analyze the pattern of difference between means (see Table 2).

To further explore the cluster solution, clusters were compared with other variables that were not used in the initial cluster analysis, as proposed by Hair et al. (2009). These variables included socio-demographic characteristics (single-parent families, age and sex of the child), abuse-related characteristics (identity of the perpetrator, severity of the acts involved, length of the abuse), mothers' history of SA and coping strategies. The results of these analyses are provided in Table 3. For categorical variables, chi-square analyses were performed and adjusted standardized residuals are presented (values greater than +/- 1.96 flag observed values significantly different than expected) (see Table 3).

Description of clusters

Standardized adjusted mean scores for each cluster are plotted in Figure 1 (following page). Inspection of the three clusters revealed the following profiles of SA children.

Cluster 1 comprised 37.1% of the sample and included children showing a moderate level of symptomatology. Children in this subgroup differed from those in the comparison group since they displayed higher levels of externalizing behavior problems. Yet, they were not found to display more internalizing difficulties than their non-abused peers of the comparison group. In regards to protective factors, children in Cluster 1 scored significantly lower than children in the comparison group for within-child protective factors (initiative, self-control and attachment) as well as maternal resilience. Results concerning coping strategies indicated a marginal effect (p=0.051) suggesting mothers are less likely to rely on social support than mothers in the comparison group. As well, while the omnibus ANCOVA failed to reach significance level, pairwise comparisons revealed mothers of this cluster tended to use distancing as a coping strategy more frequently.

A second cluster was subsequently named High Symptomatology and regrouped 21.0% of the sample. This cluster consisted of children that displayed the

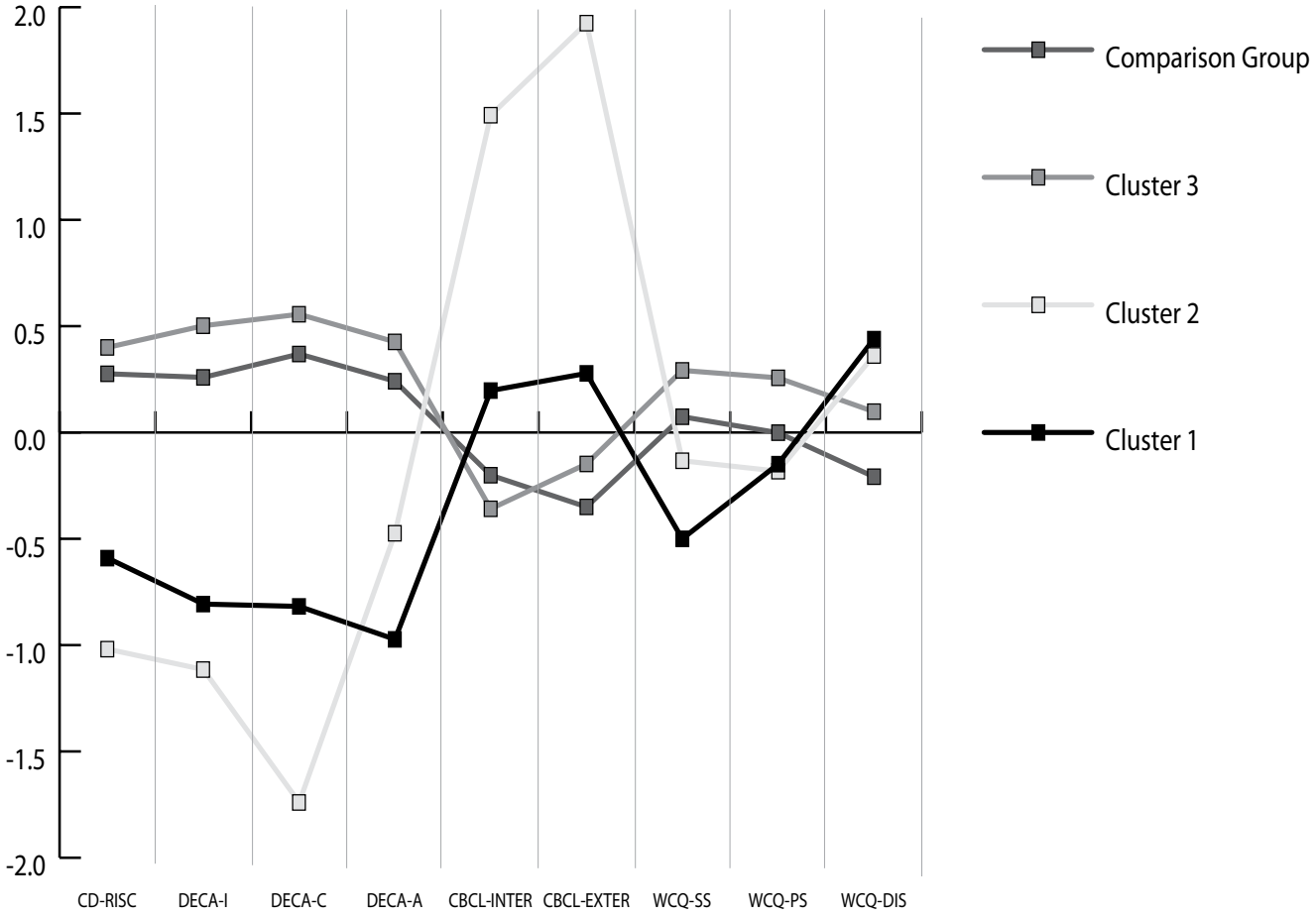

Figure 1: Standardized Adjusted Means of Study Variables x Cluster Group Membership

Notes. CD-RISC = Connor-Davidson Resilience Scale; DECA-I = Devereux Early Childhood Assessment - Initiative subscale; DECA-C = Devereux Early Childhood Assessment - Self-Control subscale; DECA-A = Devereux Early Childhood Assessment - Attachment subscale; CBCL-Inter = Child Behavior Checklist – Internalizing subscale; CBCL-Exter = Child Behavior Checklist – Externalizing subscale; WCQ-SS = Ways of Coping Questionnaire – Social Support Seeking subscale; WCQ-PS = Ways of Coping Questionnaire – Problem-Solving subscale; WCQ-DIS = Ways of Coping – Distancing subscale.

highest scores for internalizing and externalizing behavior problems; problems rated as significantly higher than those of children in all other clusters and from those of children in the comparison group. Another indication of the severity of behavioral problems in this group is that the vast majority of cases (92%) reached clinical levels for both internalizing and externalizing symptoms. Children in the High Symptomatology group showed lower levels of protective factors, as evaluated by the DECA, in relation to their non-abused peers. Furthermore, parents of highly symptomatic children scored lower on resiliency and pairwise comparisons suggest they tended to rely more on distancing coping. Children in Cluster 2 were also rated as displaying lower self-control compared to children in the Moderate Symptomatology group.

Finally, 41.9% of sexually abused children were classified in Cluster 3. In contrast to sexually abused children in Cluster 1 and 2, they are found to display less internalizing and externalizing symptoms. Children in this group can be characterized as resilient, as parents reported that they function within-norms. Indeed, when contrasted to children from the comparison group, no significant differences were apparent in regards to internalizing and externalizing behavior problems as well as all protective factors considered. Analyses performed on additional variables also indicated that coping strategies of mothers from the Resilient Group were

comparable to that of mothers of non-abused children. Children in Cluster 3 further distinguished themselves by presenting significantly higher levels of within-child protective factors than both sexually abused children in Cluster 1 and children in Cluster 2. Thus, children in Cluster 3 are described as presenting high levels of self-control and high capacity for initiative and independence. They are also identified as children having developed strong relationships with other children and adults. Finally, non-offending parents of children in Cluster 3 appear to present higher resiliency than parents of children in both the High and Moderate Symptomatology groups. In addition, pairwise comparisons suggest they are more likely to seek social support to cope with the aftermaths of the child's disclosure than parents of children in the Moderate Symptomatology group.

Additional analyses were performed on socio-demographic variables to explore whether these factors were related to clusters. No significant differences were found on demographic variables except that children in Cluster 1 were more likely to live in single-parent families than children in other clusters. While the percentage of boys appears lower in the resilient children Cluster (12% vs. 22% in Cluster 1 and 31% in Cluster 2), the chi-square analysis did not identify a significant difference regarding the distribution of gender across clusters. Similarly, mean age (in months) of children did not differ across clusters. Characteristics of the SA experienced by the child (identity of the perpetrator, severity of the acts involved and duration of the abuse) failed to be significantly related to clusters. Finally, differences in the prevalence of maternal history of childhood SA were found, with mothers of highly symptomatic children reporting the highest prevalence (69%) and mothers of children in the comparison group the lowest prevalence (10%).

Discussion

Limited research has explored the role of protective factors among at-risk preschoolers (Brinkman, Wigent, Tomac, Pham, & Carlson, 2007). Preschool-aged children confronted with family violence and sexual abuse clearly represents a population at risk for a variety of social and behavioral impairments. Prior studies have brought to light the diversity of profiles in older children and adults confronted with SA and highlighted the possible existence of a subgroup of resilient survivors adapting without significant distress despite the trauma experienced. Against this backdrop, the main objective of this study was to explore the diversity of profiles in preschoolers victims of SA using a person-oriented approach, namely cluster analysis.

Three clusters were derived that show the diversity of symptoms in sexually abused preschoolers. In the present sample, 42% of children were found to score within norms for internalizing and externalizing symptoms. These children, described as resilient, were in fact undistinguishable from the non-abused children of the comparison group. While the SA they experienced was found to be as severe as that of children in the Moderate Symptomatology and High Symptomatology groups, they were rated as displaying lower levels of symptoms by their parents. Indeed, 80% of children in this subgroup reported intra-familial abuse and close to half (42%) penetration or attempted penetration. Children in the Resilient group appeared to benefit from both within-child protective factors, being rated as high in regulation capacities and attachment skills, as well as parent-related protective factors in terms of maternal resiliency and efficient coping skills (seeking social support). The presence of such protective factors may have prevented the development of any symptoms before initial assessment.

Walsh et al. (2010) report that few studies have provided data regarding the percentage of maltreated children who show competence on behavioral or emotional indicators. Studies providing such estimates suggest that between 43% and 66% of children demonstrate competence on any one measure. In their analysis of the National Survey of Child and Adolescent Well-Being data with children ages 8 to 10, Walsh et al. (2010) concluded that 83% achieved non-clinical score for internalizing and 63% for externalizing symptoms. Yet, children demonstrating competence across domains decreased as the number of indicators considered increased, such that only 27% were evaluated as displaying competence in all 3 domains (behavioral, emotional and educational) and were considered resilient.

Unfortunately, 21% of sexually abused children in this study were at the opposite pole of the spectrum, in the highly symptomatic group. This proportion is similar to that found in prior typological analyses of older children victims of SA (26% in both Hébert et al., 2006 and Trickett et al., 2001). Hence, children in this subgroup tend to display higher levels of both internalizing and externalizing symptoms than other children, sexually abused or not, and lower levels of within-child protective factors than children in the resilient or comparison group. Mothers in this cluster also show less resilience capacity and appear to rely on avoidance-type coping to deal with the aftermath of children's disclosure. As 69% of mothers in this group reported a history of childhood SA, it is likely that the child's disclosure may provoke reminiscence of past symptoms. The use of less effective coping strategies, such as distancing may have an impact on the ability to support the child's recovery. These results further validate the importance of both within-child and parent-related protective factors – factors amenable to treatment - in influencing outcomes in young children confronted with SA.

A third cluster characterized 37% of our sample as displaying moderate levels of symptoms, as they scored higher on externalizing symptoms than children in the comparison group, but lower than severely symptomatic children. Yet, they were not found to differ from non-abused children on internalizing symptoms. Interestingly, the only subscale of the DECA that discriminates between these children and highly symptomatic children is self-control as they were rated with having higher self-regulation skills. Therefore, the lower levels of externalizing behavior problems in these children may be associated with their greater self-control skills, which is coherent with literature regarding the close link between self-regulation and behavior problems, especially externalized behavior problems (Eisenberg et al., 2001). Children in this group are nevertheless vulnerable as they presented lower scores on all subscales of the DECA relative to children in the resilient and comparison groups. In fact, with respect to the total protective factor scale, 52% achieved scores considered to be in the Concern range (T-score < 40), which is more than double the rate (23%) found in at-risk Head Start samples (Brinkman et al., 2007), and raises some concerns about the evolution of their symptoms. Children in this subgroup may come to develop more severe and pervasive behavior problems over time if no intervention is provided. This is of concern, as mothers of moderately symptomatic children appear to be less likely than mothers of resilient children to seek social support in order to cope with the aftermath of the child's disclosure.

Contrary to our hypothesis, characteristics of the sexual abuse failed to discriminate between clusters. Therefore, factors such as whether the abuse involved an intra- or extra-familial perpetrator, was chronic or not, or involved penetration or not, did not explain the differential outcomes of SA in our sample of preschool children. Past studies have revealed quite inconsistent results as to the predictive value of abuse-related variables (Hébert, 2011). Obtaining reliable information regarding the duration of the abuse or the specific acts involved may represent a significant challenge when preschoolers are considered given their still developing verbal skills. In addition, the full details of the abuse may not be provided at initial intake, but rather gradually over the course of treatment once a rapport is established.

Limitations

This study presents certain limitations. Sample size, while comparable to other published studies with this population, is small. The low number of sexually abused boys (n = 13) included may have overshadowed possible gender specificities in symptom profiles. Another limitation of this study is linked to the cross-sectional design, which prevents from drawing conclusions regarding the sequencing of studied variables. In addition, resilience is clearly a multidimensional construct and, unfortunately, the different features related to resilience were not integrated in the present analysis. Few standardized assessment measures that evaluate protective factors in preschoolers are currently available (Brinkman et al., 2007; Reddy, 2007). The DECA is one of the rare strength-based assessments designed for preschoolers. Yet, the DECA is clearly focused on within-child protective factors and other relevant features associated with resilience were not assessed, namely extra-familial factors. Furthermore, socio-demographics characteristics of children in the

comparison group, including characteristics that have previously been associated with resilience, differed from that of children in the SA group. While analyses controlled for this disparity, future studies may need to consider pairing samples more closely on socio-demographic variables. Moreover, in the current study both protective factors and child's behavioral problems were evaluated by parental reports and as such, issues related to shared method variance are to be considered. Future studies may gain by relying on daycare workers' evaluation to document the presence or absence of protective factors.

Evidently, future studies are needed to validate the identified clusters. In addition, variables not considered in the present study will need to be included in future investigations, in particular other types of experienced maltreatment and indicators of children's functioning across different domains. Finally, future studies adopting a longitudinal design will better document the trajectories of preschoolers reporting child SA over time and the predictive value of initial protective factors on the recovery process. Notwithstanding these limits, this study has a number of strengths. Reliance on a person-oriented approach that accounts for the diversity of symptoms in such a vulnerable population offers an initial exploration of child- and parent-related factors that may influence outcomes. The inclusion of a comparison group also allows us to draw stronger conclusions regarding the profiles of preschoolers victims of SA, a population that is clearly understudied.

Practical implications

Our results illustrate the diversity of outcomes in preschoolers reporting SA, a diversity that appears to be associated with a host of protective factors. Our data highlight some important practical implications for the evaluation of sexually abused youngsters. A focus on abuse-related variables (for example, whether the child is victim of intra- or extra-familial abuse) may not be sufficient to orient or prioritize services for vulnerable youth, as these variables did not discriminate between children most in need of treatment in our study. Furthermore, a thorough and detailed evaluation, not only of possible behavior problems or trauma symptoms following disclosure of SA, but also of potential protective factors, is clearly required to orient treatment services. Indeed, evaluating children's possible assets or lack thereof - including environmental and interpersonal protective factors that may buffer against negative outcomes - may offer a better indication of which children are most in need of services following disclosure.

For highly symptomatic children, intervention aimed at attenuating behavior problems is evidently required, as well as a focus on the enhancement of protective factors. For children identified in the Moderate symptomatology group, an intervention targeting externalizing behavior problems may be warranted. Moreover, given that half (52%) of the children in this subgroup scored in the Concern range, strengthening the protective factors (self-regulation capacity, problem-solving skills and attachment) in a dyadic context may be relevant in order to avoid a negative course of development or a worsening of symptoms over time. For asymptomatic children at initial intake, periodic reevaluation to explore for possible latent effects that could emerge when children are confronted to new developmental tasks or other possible adverse life events may be well-advised. Children may also benefit from briefer psychoeducation aimed at prevention strategies to reduce the risk of revictimization.

A modular approach to treatment may be a relevant strategy to consider. A component-based approach allowing for flexibility and sequencing using a guiding clinical algorithm has been designed and found to be quite efficient in treating children with anxiety, depression or conduct problems (Chorpita et al., 2013). Such an approach could be implemented for children experiencing SA. Following a detailed assessment of the specific needs of each child and family, different evidence-based practices could be considered and/or combined. Trauma Focused-Cognitive Behavioral Therapy (TF-CBT; Cohen, Mannarino, & Deblinger, 2006) is such an evidence-based treatment that has been found efficient in reducing symptoms in youth confronted with sexual abuse, including preschool-agechildren. This treatment could be used in combination with an attachment-based intervention module for children found to lack a secure relationship with their primary caregiver. In cases where the non-offending parent

is struggling with reminiscence of past trauma experiences impeding on their coping capacities to deal with the child's disclosure, the TF-CBT approach might be combined with a parent-centered therapy module addressing these specific challenges.

In conclusion, the findings of this study underscore the diversity of profiles in preschoolers disclosing SA. While the results of the study await replication, they nevertheless offer some insights as to the individual and familial factors related to this diversity. Hopefully, these insights will pave the way for the creation of services optimizing the development of youngsters confronted with sexual abuse.

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