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Research article

Experiences of (young) women after out of home placement: An examination of personality disorder symptoms through the lens of child maltreatment

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ABSTRACT

Background: Child maltreatment has been associated with the development of various mental health problems, including the development of personality disorders.

Objective: This study investigated the association between child maltreatment and personality disorder symptoms in 125 women who transitioned out of residential care.

Method: The Child Trauma Questionnaire was used for the measurement of child maltreatment, and Personality disorder symptoms were measured using the Personality Diagnostic Questionnaire 4 + . The Psychological Distress Index was used to control for symptoms of distress.

Results: A Stepwise regression analysis showed that the majority of the associations were found between self-reported emotional abuse, neglect and personality disorder symptoms. Emotional abuse was significantly related to the Paranoid ($\beta = .42, p < 0.001$), Schizoid ($\beta = .18, p < 0.05$), Schizotypal ($\beta = .18, p < 0.05$), Histrionic ($\beta = .22, p < 0.05$), Avoidant ($\beta = .31, p < .001$), Dependent ($\beta = 0.31, p < .001$), Obsessive Compulsive ($\beta = 0.29, p = .001$), Passive Aggressive ($\beta = 0.23, p < 0.01$) and the Depressive personality disorder ($\beta = .38, p < .001$). Emotional neglect was significantly associated to the Borderline Personality Disorder ($\beta = .32, p < 0.001$) and the Paranoid Personality Disorder ($\beta = -0.22, p < 0.05$).

Conclusions: The current study underlines the detrimental effects of childhood maltreatment, and in particular the effects of emotional abuse and neglect.

1. Introduction

Childhood development can be both stimulated and harmed through the actions of parents (Bornstein, 2011; Stormshak, Bierman, McMahon, & Lengua, 2000). Child maltreatment is a clear example of how parenting behavior can have damaging effects on children (Belsky & Jaffee, 2006; Hankin, 2005). The World Health Organization estimated that one in four children is subjected to at least one form of child maltreatment, among which sexual, physical, and emotional abuse and emotional and physical neglect (World Health Organization, 2014). Research has demonstrated that child maltreatment can have lifelong consequences, and can cause severe mental health problems including the development of personality disorders (Johnson, Smailes, Cohen, Brown, & Bernstein, 2000; Lobbastael, Arntz, & Bernstein, 2010; Tyrka, Wyche, Kelly, Price, & Carpenter, 2009; Waxman, Fenton, Skodol, Grant, & Hasin,

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2014).

Prevalence rates of child maltreatment are particularly high among children and adolescents in the child welfare or juvenile justice systems (Collin-Vézina, Coleman, Milne, Sell, & Daigneault, 2011; Kerig, Chaplo, Bennett, & Modrowski, 2016; Van Vugt, Lanctôt, Paquette, Collin-Vézina, & Lemieux, 2014). Prevalence rates of 37%–98% have been reported for these youths, compared to prevalence rates varying between 4% and 16% for youths from community samples (Collin-Vézina et al., 2011; Gilbert et al., 2009). Girls in residential treatment centers show higher reports of sexual abuse compared to boys (Collin-Vézina et al., 2011; Connor, Doerfler, Toscano, Volungis, & Steingard, 2004; Spertus, Yehuda, Wong, Halligan, & Seremetis, 2003), but further research is needed to determine if this gender discrepancy is true for other forms of maltreatment (Chaffin, 2006; Trickett, Mennen, Kim, & Sang, 2009).

Child maltreatment has been associated with the development of various mental health problems, including the development of personality disorders (Johnson et al., 2000; Lobbetael et al., 2010; Tyrka et al., 2009; Waxman et al., 2014). A personality disorder is a type of mental disorder characterized by unhealthy patterns of thinking, feeling, perceiving and relating to others (Tyrer, Reed, & Crawford, 2015). A broad range of personality disorders have been identified and classified in three different clusters (American Psychiatric Association, 2000). Cluster A consists of the Paranoid, Schizoid and Schizotypal disorders. Common features of personality disorders from cluster A are social awkwardness and social withdrawal, which is expressed in seeming 'odd and eccentric'. Cluster B includes the Antisocial, Borderline, Histrionic and Narcissistic personality disorders. Features of individuals with cluster B personality disorders are characterized by over emotionality and theatrical behavior. Finally, cluster C consists of the Avoidant, Dependent and Obsessive-Compulsive personality disorders. Individuals with a personality disorder within cluster C generally appear to be frightful and anxious. The diagnosis of a personality disorder can only be given when the personality characteristics lead to interpersonal difficulties. In the appendix of the DSM-IV-TR the Passive Aggressive and Depressive personality disorders have been added (American Psychiatric Association, 2000), which are derivatives from the Dependent personality disorder (World Health Organization, 1992).

While the prevalence of personality disorders varies from 9% to 14% in community samples (Lenzenweger, 2008; Samuels et al., 2002; Torgersen, Kringlen, & Cramer, 2001), prevalence rates are nearly 4-fold greater for boys and girls in the child welfare system. A meta-analysis issued from eight studies that included a total of 3104 children and adolescents in the child welfare system reported a 49% pooled prevalence for any mental disorder. The most common mental health disorder was disruptive disorder, followed by anxiety and depressive disorders and attention-deficit/hyperactivity disorder (Bronsard et al., 2016). Similar prevalence rates were reported in samples composed of justice-involved adolescents (Kerig et al., 2016; Morin, Laurier, & Simard, 2016).

Women tend to develop different personality disorders compared to men. For instance, men are more likely to develop Antisocial, Narcissistic, Schizotypal, Passive Aggressive or Obsessive-Compulsive personality disorders (Cale & Lilienfeld, 2002; Torgersen et al., 2001; Waxman et al., 2014). Consequences experienced as a result of these disorders are delusions, as well as problems conforming to social norms and values. The Avoidant, Borderline, Dependent, Paranoid and Depressive personality disorders, on the other hand, are more prevalent in women (Grant et al., 2004; Torgersen et al., 2001; Waxman et al., 2014). Some difficulties experienced by individuals with these types of disorders include anxiety, depression and social withdrawal (Waxman et al., 2014).

Follow-up studies conducted with women who were in care of the child welfare or juvenile justice system show that a substantial percentage of this clientele develop one or more personality disorders by the time they reach emerging adulthood. A longitudinal study conducted with adolescent girls in juvenile detention centers – mainly in response to serious problem behaviors, drug use and/or prostitution – reported that 40% of these participants present a personality disorder in emerging adulthood (Krabbendam et al., 2015). Moreover, Van der Molen et al. (2013) showed that, on average 4.5 years after detention, a quarter (24.5%) of the justice-involved women developed a Borderline Personality Disorder, while one third (31%) met the diagnosis for an Antisocial Personality Disorder. In addition, those women with a Personality Disorder reported more adjustment problems in emerging adulthood compared to women without mental health problems. These adjustment problems led to increased risk of occupational, educational and financial problems, and higher levels of reoffending (Van der Molen et al., 2013). This may explain why women who have transitioned out of care may continue to heavily rely on adult mental health services (Corneau & Lanctôt, 2004).

To date, few studies have linked child maltreatment to personality disorders among girls transitioning out of the welfare or the juvenile justice system and into emerging adulthood. Krabbendam et al. (2015) examined the effects of child maltreatment on the development of Antisocial and Borderline Personality Disorder, and reported that exposure to aggressive, sexual or other traumatic events did not predict Borderline Personality Disorder, Antisocial Personality Disorder, nor the co-occurrence of these two Personality Disorders. Further, only marginal relations were reported between sexual trauma and Borderline Personality Disorder. However, the analytical strategy used in this study could have limited the scope of the results obtained. First, the assessment of past traumatic events relied on categorical measures, examining only the occurrence (presence/absence) of an aggressive or a sexual traumatic event. Yet, it is documented that different forms of child maltreatment predict different outcomes, and that the severity of the maltreatment event is one of the most consistent predictors of later outcomes (English et al., 2005; Van Vugt, Lanctôt, Paquette, & Lemieux, 2017). Second, Krabbendam et al. (2015) assessed Personality Disorders within a categorical approach, while it is known that much heterogeneity is presented among clients, and symptomology may change over the lifespan (Cuijpers, 2014; Morizot & Maranda, 2007). Third, in the study of Krabbendam et al. (2015) logistic regression analyses were conducted on small groups of adolescent girls. Within these small subgroups only the presence of the Borderline Personality Disorder ($n = 17$), Antisocial Personality Disorder ($n = 27$) or both disorders ($n = 28$) was assessed instead of the full range of personality disorders.

Despite these limitations Krabbendam et al. (2015) made an important contribution by stating that depressive symptoms in adolescence, but not conduct problems, were predictive of Borderline personality disorder in women who were previously in juvenile detention centers. This result is supported by other studies showing that personality disorders in women often co-occur with depression and anxiety (Friborg et al., 2014; Van & Kool, 2018). Similarly, anxiety also functions as a risk factor for the development of

a personality disorder (Friborg et al., 2014; Goodwin & Hamilton, 2003; Tomko, Trull, Wood, & Sher, 2014). Therefore studies on the association between child maltreatment and personality disorders in women should take into account the developmental role of symptoms of distress.

The present study seeks to establish the differential relationships between specific types of child maltreatment and specific personality disorder symptoms reported in young adulthood among women who have transitioned out of residential care. The objectives are (1) to describe the severity of diverse types of child maltreatment and of different personality disorder symptoms reported by young adult women who have transitioned out of residential care and (2) to assess the strength of the relationships between these types of child maltreatment and personality disorder symptoms. Considering that the most prevalent personality disorder symptoms among women are more likely to co-occur with symptoms of anxiety and depression than with manifestations of opposition to social norms and values (Waxman et al., 2014, Krabbendam et al., 2015), our study will also (3) control for these distress symptoms presented in adolescence.

2. Method

2.1. Participants

The present study relied on the Montreal Longitudinal Study on Adolescent Girls in Residential Care (Lanctôt, 2011). This longitudinal study was carried out among 182 girls who were admitted to a residential youth care center and placed for a minimum of three months. Children and adolescents who are mandated to a residential youth care center experience important difficulties in social and behavioral adaptation. In reference to the present sample, most of the girls had been placed under Quebec's provincial Youth Protection Act, with behavior problems as the most common official reason for the placement (46.0% of the sample); the official reasons for the other placements under this statute were neglect (23.4%), psychological abuse (4.8%), physical abuse (5.6%), sexual abuse (8.1%) and abandonment (3.2%). Only one (0.8%) of the girls had been placed for delinquency, under Quebec's Youth Criminal Justice Act, while 8.1% had been placed under Quebec's Health and Social Services Act, after other services had proven insufficient to deal with crises in their families.

The longitudinal study consisted of six data collection waves, covering the period from mid-adolescence to emerging adulthood. The present study used data from the first and sixth wave and consisted of 134 young adult women with an average age of 19.41 ($SD = 0.13$). At the sixth assessment all participants were out of care.

2.2. Procedure

The data collection procedure was approved by (removed for blind review). The participants consented to participate at each wave of the data collection. After obtaining the consent, an interviewer administered the questionnaire individually. The interviewer was available to assist the participants in completing the questionnaire. The interviewers consisted of university students in psychoeducation who were trained in child development, as well as in research ethics and techniques. Filling out the questionnaires took approximately 90 min.

2.3. Measures

Child maltreatment was measured using a French adaptation (Paquette, Laporte, Bigras, & et Zoccolillo, 2004) of the Childhood Trauma Questionnaire (CTQ, Bernstein & Fink, 1998). The CTQ is a retrospective self-report instrument that evaluates the severity of five types of child maltreatment: emotional, physical and sexual abuse as well as emotional and physical neglect. An example of the emotional abuse scale is: "People in my family said hurtful or insulting things to me". The physical and sexual abuse scales consist of items such as: "I was punished with a belt, a board, a cord or some other hard object" and "Someone tried to make me do sexual things or watch sexual things". Examples of the emotional and physical neglect scales were "I did not feel loved" and "I did not have enough to eat". Each scale consists of five items which are rated on a 5-point Likert scale ranging from "never true" to "very often true". The items of each scale were summed so that higher scores represented more severe forms of child maltreatment. The reliability and validity of the CTQ has been proven in different studies, with both clinical and community samples (Bernstein, Ahluvalia, Pogge, & Handelsman, 1997; Paivio & Cramer, 2004). The Cronbach's alphas of the various child maltreatment scales for our sample ranged from 0.76 to .95.

Personality disorder symptoms were assessed using a French adaptation (Morizot, 2012) of the Personality Diagnostic Questionnaire 4+ (PDQ4+, Hyler, 1994). The different personality disorders are described in Appendix A. An example of a question is: "I know that people will take advantage of me or cheat on me if I let them". Each scale comprised between 7 and 9 items, which were rated from the following response options "often true", "sometimes true" or "false". For analytic purposes, a sum score was computed, with higher scores representing more severe symptoms of a specific personality disorder. The psychometric properties of the PDQ4+ have shown to be sufficient for both continuous and dichotomous response formats (Davison, Leese, & Taylor, 2001; Fonseca-Pedrero, Paino, Lemos-Giráldez, & Muñiz, 2013; Huang, Ling, Yang, & Dou, 2007). The alphas of the various personality disorder scales for our sample ranged from 0.64 to .88, after polychoric correlation. Polychoric correlation takes into account the ordinal nature of the Likert type response scales and corrects for the attenuation caused by the scaling of the items (Gadermann, Guhn, & Zumbo, 2012; Zumbo, Gadermann, & Zeisser, 2007).

Distress was added as a control variable using the Psychological Distress Index Quebec Health Survey (IDPESQ; Prévile, Boyer,

Potvin, Perreault, & Légaré, 1992). The IDPESQ measures the level of psychological distress in a person. The IDPESQ questionnaire was validated among an adolescent sample from Quebec (Préville et al., 1992). For each item, women had to report whether, during the past 2 weeks, they had experienced various feelings of depression and anxiety (e.g. whether she had felt lonely or hopeless or felt like crying), using a 4-point Likert scale, ranging from 1 = *never* to 4 = *very often*. The alpha coefficient for this scale in our sample was 0.90. Following the study of Préville et al. (1992) the validity and reliability of the questionnaire were concluded to be adequate.

2.4. Data analysis

Statistical analyses were conducted using SPSS statistics version 20. First, descriptive analyses were performed on the different forms of child maltreatment and personality disorder symptoms. For descriptive purposes, categorical scores were used. With regard to child maltreatment, the established cut-off points of the CTQ (Bernstein & Fink, 1998) were used to describe the proportions of women who reported maltreatment experiences with severity scores ranging from “low to minimal”, “low to moderate”, “moderate to severe”, and “severe to extreme”. With regard to personality disorders, three categories attested of their severity: “None”, “Minimal to Moderate”, and “Moderate to Severe”.

Second, Pearson's correlation analyses were performed on continuous scores to examine the association between all study variables, respectively age, distress, the twelve personality disorders scales and the five types of child maltreatment ($n = 128$). Cohen's (1988) criteria were used to interpret the strength of the observed correlations, wherein $r = .10$ – $.29$ was considered to be a small, $r = .30$ – $.49$ a moderate, and $r \geq 0.5$ a strong correlation.

Third, to better identify which type of child maltreatment was more strongly associated to each type of personality disorder, twelve linear regression analyses were conducted ($n = 128$). Each regression analysis included one type of personality disorder and five types of child maltreatment, to control for the association between the maltreatment types. A standard stepwise procedure was used, for an exploratory purpose. The analysis was conducted with all variables in an exploratory mode to identify which types of maltreatment were significant. Finally, we re-ran the analysis in a non-stepwise model only using the significant variables. Age and distress were included as a control variables in both the stepwise and non-stepwise model. We applied a Bonferroni correction to reduce the chance for type 1 errors, given that multiple similar tests were run on the same data (Armstrong, 2014). The analyses were conducted on $n = 128$. In total for 6 participants there was missing data. For the Child Trauma Questionnaire (CTQ), one participant had missing data, while for the Personality Diagnostic Questionnaire (PDQ) 5 participants had missing data. Since there was just one participant for the CTQ that has missing data it was not possible to perform a comparison test. However, for the missing data on the PDQ a non-parametric distribution test (U Mann Whitney) was conducted to compare the subjects. The participants with missing data (5) were compared to the rest of the research population (129). No significant differences were found for: age; $p = 0.288$, distress; $p = 0.459$, emotional abuse; $p = 0.588$, physical abuse; $p = 0.964$, sexual abuse; $p = 0.302$, emotional neglect; $p = 0.184$, and physical neglect; $p = 0.847$.

3. Results

3.1. Prevalence of the different types of self-reported child maltreatment in terms of severity

Table 1 presents the prevalence of child maltreatment using the severity classification. One third of the women reported low levels of emotional neglect, while approximately half of the sample reported low levels of emotional abuse and physical neglect. Two thirds of the women reported low levels of physical and sexual abuse. Further 17.6% and 34.4% of women reported low to moderate levels of child maltreatment for emotional abuse and neglect. Moderate to severe levels of child maltreatment were mainly found for physical neglect, reported among 16.8% of the women. Finally, a quarter to one third of women reported severe to extreme forms of child maltreatment, with the largest percentages reported by women for emotional abuse (31.2%).

3.2. Prevalence of the different personality disorder symptoms in terms of severity

Table 2 shows the results on the prevalence of personality disorder symptoms, categorized in the clusters A, B, C and Other, according to the three categories of the severity of the symptoms. Few women reported no symptoms of any particular disorder. On the contrary, for all personality disorders between 66.4% and 97.6% of the women reported symptoms within the minimal to moderate category. In the category ‘moderate to severe’, symptoms of the Paranoid (30.4%), Borderline (11.2%), Avoidant (11.2%), OCD (14.2%) and Depressive (22.4%) personality disorders were most frequently reported.

Table 1

Prevalence of maltreatment measured using self-reports expressed in percentages ($n = 128$).

	None to Minimal	Low to Moderate	Moderate to Severe	Severe to Extreme
Emotional Abuse	45.6	17.6	5.6	31.2
Physical Abuse	64.8	8.8	4.0	22.4
Sexual Abuse	64.0	7.2	7.2	21.6
Emotional Neglect	29.6	34.4	9.6	26.4
Physical Neglect	46.4	11.2	16.8	25.6

Table 2

Prevalence of personality disorder symptoms in terms of severity expressed in percentages (n = 128).

Cluster	Type	None	Minimal to Moderate	Moderate to Severe
A	Paranoid	3.2	66.4	30.4
	Schizoid	8.8	84.0	7.2
	Schizotypal	9.6	84.8	5.6
B	Histrionic	6.4	86.4	7.2
	Narcissistic	4.8	90.4	4.8
	Borderline	1.6	87.2	11.2
	Antisocial	0.8	97.6	1.6
C	Avoidant	12.8	76.0	11.2
	Dependent	25.6	68.0	6.4
	OCD	2.4	83.2	14.4
Other	Passive Aggressive	16.8	76.0	7.2
	Depressive	8.8	68.8	22.4

3.3. The relationship between child maltreatment and personality disorder symptoms

Table 3 presents the correlations between the types of child maltreatment and personality disorder symptoms. All child maltreatment experiences were weakly to moderately related to each other (r varied from .28 to .70), assuming co-occurrence of maltreatment experiences. Additionally, all personality disorder symptoms were weakly to strongly associated with one another (r varied from 0.17 to .71), except for the antisocial personality disorder and respectively the avoidant and narcissistic personality disorders.

Overall, no strong associations were observed for any of the child maltreatment types in relation to the personality disorder symptoms. Notably, the majority of the associations were small to moderate. Emotional abuse had the largest number of associations with personality disorder symptoms compared to other forms of maltreatment, followed by sexual abuse, emotional and physical neglect, while the least associations were found for physical abuse. The Antisocial and Narcissistic personality disorder symptoms were not associated to any child maltreatment type. Distress was significantly associated to sexual abuse and all types of personality disorders. Lastly, age was neither associated with the different types of child maltreatment nor any type of personality disorder.

3.4. The strength of the differential relations between child maltreatment and personality disorder symptoms

Table 4 shows the results of the stepwise regression analysis, which included the five types of child maltreatment simultaneously. Age was included as a control variable, but did not render significant results. Distress was also added as a control variable and was

Table 3

Correlation matrix of the study variables (n = 128).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Age T6	–																	
2. Distress	.09	–																
3. Emotional abuse	–.15	.14	–															
4. Physical abuse	–.13	.00	.63***	–														
5. Sexual abuse	–.09	.21*	.54***	.56***	–													
6. Emotional neglect	.05	.15	.64***	.37***	.28**	–												
7. Physical neglect	–.05	.14	.63***	.40***	.31***	.70***	–											
8. Paranoid	–.03	.31***	.30**	.20*	.22*	.10	.20*	–										
9. Schizoid	–.05	.25**	.21*	.13	.06	.18*	.16	.51***	–									
10. Schizotypal	–.04	.34***	.22*	.12	.20*	.12	.22*	.64***	.64***	–								
11. Histic	–.05	.23*	.23*	.07	.20*	.15	.10	.45***	.31***	.48***	–							
12. Narcissistic	.01	.22*	.13	.09	.08	.05	.05	.51***	.42**	.51***	.59***	–						
13. Borderline	–.06	.26**	.24**	.08	.13	.35***	.19*	.46***	.32**	.48***	.59***	.39***	–					
14. Antisocial	.01	.18*	.09	–.01	.17	.13	.08	.24*	.18*	.24*	.26**	.15	.41***	–				
15. Avoidant	–.03	.31***	.37***	.21*	.20*	.22*	.25**	.42***	.28*	.53***	.42***	.35***	.44***	–.03	–			
16. Dependent	–.16	.26**	.35***	.11	.25**	.30**	.24**	.33***	.29*	.38***	.51***	.33***	.56***	.20*	.59***	–		
17. OCD	.01	.33**	.32***	.22*	.22*	.16	.18*	.51***	.41***	.56***	.44***	.45***	.40***	.21*	.35***	.24**	–	
18. Passive Aggressive	–.12	.26**	.27**	.07	.07	.21*	.16	.51***	.44***	.55***	.61***	.46***	.64***	.25**	.51***	.56***	.43***	–
19. Depressive	–.02	.34***	.42***	.20*	.25**	.31***	.26**	.52***	.36***	.56***	.57***	.39***	.63***	.17*	.71***	.60***	.49***	.63***

* $p < .05$.** $p < .01$.*** $p < .001$.

Table 4
Stepwise Regression Analysis for the association between child maltreatment and symptoms of personality disorders (n = 128).

	Cluster A			Cluster B			Cluster C			Other		
	1**	2	3	4	5	6	7	8	9	10	11	12
Distress	.27* (p = .001)	.23* (p < .01)	.32* (p < .001)	.20* (p < .001)	.21* (p < .05)	.22* (p < .05)	.18* (p < .05)	.27* (p = .001)	.23* (p < .01)	.28* (p = .001)	.24* (p < .01)	.28 (p = .001)
Emotional abuse	.42* (p < .001)	.18* (p < .05)	.18* (p < .05)	.22* (p < .05)				.31* (p < .001)	.31* (p < .001)	.29* (p = .001)	.23* (p < .01)	.38* (p < .001)
Physical abuse												
Sexual abuse												
Emotional neglect	–.22* (p < 0.05)											
Physical neglect						.32* (p < .001)						

**1 = Paranoid, 2 = Schizoid, 3 = Schizotypal, 4 = Histrionic, 5 = Narcissistic, 6 = Borderline, 7 = Antisocial, 8 = Avoidant, 9 = Dependent, 10 = OCD, 11 = Passive Aggressive, 12 = Depressive.
* Bonferroni corrected.

significantly associated to all types of personality disorders. There were no indications that multicollinearity would be a problem in this data given that the highest VIF and tolerance values were respectively 1.023 (VIF) and 0.998 (tolerance), and therefore not exceeding the general rules of thumb (O'Brien, 2007).

Significant associations were observed between emotional abuse and personality disorder symptoms from Cluster A, C and Other, as well as with the Histrionic personality disorder symptoms from Cluster B. In sum, young adult women who reported more severe levels of emotional abuse reported more symptoms of respectively the Paranoid ($\beta = .42, p < 0.001$), Schizoid ($\beta = .18, p < 0.05$), Schizotypal ($\beta = .18, p < 0.05$), Histrionic ($\beta = .22, p < 0.05$), Avoidant ($\beta = .31, p < .001$), Dependent ($\beta = 0.31, p < .001$), Obsessive Compulsive ($\beta = 0.29, p = .001$), Passive Aggressive ($\beta = 0.23, p < 0.01$) and the Depressive personality disorder ($\beta = .38, p < .001$). Only one other type of child maltreatment was significantly associated to personality disorder symptoms. Emotional neglect was positively associated to the Borderline Personality Disorder ($\beta = .32, p < 0.001$). Also emotional neglect was negatively related to the Paranoid Personality Disorder ($\beta = -0.22, p < 0.05$).

4. Discussion

The aim of the present study was to explore the association between child maltreatment and personality disorder symptoms in young adult women who transitioned out of residential care. Our descriptive results showed that symptoms of maltreatment were most prevalent for emotional abuse (31.2%) and emotional neglect (26.4%) as compared to the other forms of abuse (21.6–25.6%). These results are in line with previous research by Collin-Vézina et al. (2011) who also found that one third of the youth in residential care reported extreme to severe symptoms of emotional abuse (32%). Yet, due to the focus on physical and sexual abuse in research and clinical practice, the specific effects of emotional abuse have remained largely unknown (Chaffin, 2006; Trickett et al., 2009). The current study demonstrates the importance of examining all forms of child maltreatment, including those types that are often less visible, such as emotional abuse and neglect (Spinazzola et al., 2014).

With regard to the prevalence of personality disorders in young adulthood, almost one quarter of the women reported severe symptoms of depressive personality disorder and one third reported similar levels of symptoms of paranoid personality disorder. However, it is important to be cautious not to draw conclusions as the definition and categorization of personality disorders continues to be developed (Roberts, 2009). Different studies have suggested the use of a dimensional over a categorical approach, assessing personality functioning by means of the clusters (A, B and C) (Clark, 2007; Morey et al., 2011; Tyrer et al., 2007). To date, in the DSM-5, a categorical approach with the ten different personality disorders is maintained, but an alternative dimensional-categorical model is added to encourage the use of the new model by both researchers and clinicians (American Psychiatric Association, 2013).

All personality disorder symptoms assessed in young adulthood were associated to symptoms of distress reported in adolescence. This result suggests that personality disorder symptoms have overlapping symptoms with depression and anxiety (Perugi, Fornaro, & Akiskal, 2011). This is in line with research showing that symptoms of depression in childhood are precursors of personality disorders in adulthood (Kasen et al., 2001; Krabbendam et al., 2015).

In the present study, only emotional abuse and emotional neglect, and not sexual physical abuse or neglect, were associated with various personality disorders. Controlling for the effect of distress symptoms presented in adolescence and for the covariance between the multiple forms of child maltreatment, emotional abuse was significantly and positively related to the symptoms of personality disorders in the A, C and the Other domain, as well as to the Histrionic personality symptoms. Additionally, emotional neglect was positively associated to the borderline personality symptoms, while it was negatively associated with the Paranoid symptoms.

Our results add to the growing body of literature on the detrimental effects of childhood emotional abuse and neglect. For example, in a study conducted with women receiving hospital-based primary care, higher levels of psychopathology were observed among women with emotional abuse and neglect experiences after controlling for physical and sexual abuse and other lifetime traumas (Spertus et al., 2003). Also, in a study conducted with college students, emotional abuse and neglect were the strongest predictors of later psychological distress among the five types of child maltreatment (Gong & Chan, 2018). Research has repeatedly shown that emotional abuse and neglect have a great impact on negative cognitive schemas, which in turn alter psychological functioning (Estévez, Jauregui, Ozerinjauregi, & Herrero-Fernández, 2017; Gong & Chan, 2018; Harper & Arias, 2004; Wright, Crawford, & Del Castillo, 2009). Following the theory of Beck (1979) on depression, maladaptive cognitive patterns are triggered in response to stressful events and cognitive vulnerabilities may then foster depressive symptoms. Negative beliefs and rigid thinking patterns are also at the core of personality disorders (American Psychiatric Association, 2013; Beck et al., 2001), suggesting a continuity in maladaptive cognitive patterns in a life course perspective. More research is needed to better understand which factors underlie the developmental course of personality disorders.

Our results can also be interpreted from a trauma perspective. In other studies we have conducted with the same sample of women but with a different set of measures pertaining to trauma-related symptoms rather than personality disorders (Van Vugt et al., 2014, 2017), our results suggested very similar symptoms: women with child abuse and neglect experiences exhibited high levels of symptoms related to anxiety, depression, avoidance, and insecure attachment. Symptoms of various personality disorders may overlap with trauma related symptoms that stem from child maltreatment. Therefore, no matter the theoretical position that is taken to assess mental health outcomes among out-of-care women, be it from a trauma perspective or from a personality perspective, it remains, that women who were exposed to child maltreatment present a wide range of symptomatology that could imply the presence of complex trauma (Briere & Scott, 2015; Cloitre et al., 2009; D'Andrea, Ford, Stolbach, Spinazzola, & van der Kolk, 2012). A thorough evaluation of complex trauma symptoms (Van der Kolk, Roth, Pelcovitz, Sunday, & Spinazzola, 2005) and a differential diagnostic assessment seems warranted. Notably, the detrimental effects of emotional abuse need greater consideration.

Several limitations should be mentioned for the current study. First, the current study did involve participants from a clinical

setting, and the results should thus be interpreted with caution and therefore cannot be generalized to the general population. All participants were placed out of home and interviewed after transitioning out of care. The perspective of these young women is valuable to better understand the influence of maltreatment, but future research is needed in a other subgroups as well. Second, no perfect method for measuring child maltreatment is available. As a result of denial, minimization, amnesia and feelings of shame and guilt, individuals may underreport child maltreatment when questioned (Swahn et al., 2006). Third, the retrospective assessment of maltreatment did not allow to draw conclusion on causal inference between child maltreatment and personality disorder symptoms. Fourth, the different maltreatment types were studied separately to understand the value of each different form of maltreatment. Different studies suggested that the multiplicity and the severity of maltreatment interact and result into greater psychopathology (Clemmons, Walsh, DiLillo, & Messman-Moore, 2007; Higgins & McCabe, 2000). In clinical practice, it is important to be sensitive to the presence of all forms of maltreatment and not merely one single form. The current study illustrates the importance of emotional abuse and neglect but does not intend to discount the importance of other forms of maltreatment and its co-occurrence with other forms (Edwards, Holden, Felitti, & Anda, 2003). These limitations are important to take into account when interpreting the results of the current study, and bring forth potential areas for future research.

Appendix A. Description of the different personality disorders

Category	Personality disorder	Description
A	Paranoid	A pattern of distrust and suspiciousness such that others' motives are interpreted as malevolent.
	Schizoid	A pattern of detachment from social relationships and a restricted range of emotional expression.
	Schizotypal	A pattern of acute discomfort in close relationships, cognitive or perceptual distortions, and eccentricities in behavior.
B	Antisocial	A pattern of disregard for and violation of the rights of others.
	Borderline	A pattern of instability in interpersonal relationships, self-image, and affects, and marked impulsivity
	Histrionic	A pattern of excessive emotionality and attention seeking.
	Narcissistic	A pattern of grandiosity, need for admiration, and a lack of empathy.
C	Avoidant	A pattern of social inhibition, feelings of inadequacy, and a hypersensitivity to negative evaluation.
	Dependent	A pattern of submissive and clinging behavior related to an excessive need to be taken care of.
	OCD	A pattern of preoccupation with orderliness, and control.
Other	Passive Aggressive	A pattern of passive resistance for adequate social and occupational achievements.
	Depressive	A pattern of negativistic and pessimistic beliefs about oneself and others.

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