



Short communication

Persistence of symptoms after cognitive therapies is associated with childhood trauma: A six months follow-up study



Caroline Elizabeth Konrad^a, Igor Soares Vieira^a, Taiane de Azevedo Cardoso^{a,c},
Cristian Patrick Zeni^b, Luciano Dias de Mattos Souza^a, Ricardo Azevedo da Silva^a, Karen Jansen^{a,*}

^a Programa de Pós-Graduação em Saúde e Comportamento, Universidade Católica de Pelotas, 373 Gonçalves Chaves, 416C room, Zip code 96015-560. Pelotas-RS, Brazil

^b Department of Psychiatry & Behavioral Sciences, The University of Texas Health Science Center at Houston, USA

^c Department of Psychiatry and Behavioural Neurosciences, McMaster University, Hamilton, ON, Canada

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ABSTRACT

This study aims to assess the effect of childhood trauma on the outcomes of brief cognitive therapies for major depressive disorder. This is a follow-up clinical study nested in a randomized clinical trial of cognitive therapies. Sixty-one patients were assessed at baseline, post-intervention and six-month follow-up. The study showed that brief cognitive therapies improved depressive and anxious symptoms at post-intervention and six-month follow-up. Higher childhood trauma scores at baseline were significantly associated with higher severity of depressive and anxious symptoms at six-month follow-up. Longer courses of psychotherapy may be needed to improve the long-lasting effects of traumatic experiences.

1. Introduction

Major depressive disorder (MDD) has a lifetime prevalence of 19.4% among young adults (Kessler et al., 2010). The treatment of depressive episodes includes psychotherapeutic and pharmacologic interventions. Psychotherapy is one of the first-line treatment options for acute mild or moderate depressive episodes and it is recommended for maintenance phase (Parikh et al., 2016). Brief psychotherapies have emerged as one interesting option in primary health care systems since they have reduced cost when compared to traditional psychotherapies (Scott et al., 1997). Also, brief psychotherapies have shown similar efficacy when compared to traditional cognitive psychotherapies (Cuijpers et al., 2009; Nieuwsma et al., 2012).

Childhood maltreatment has been identified as predictive for a poor longitudinal course of depression, an increased burden of the illness, and poor treatment response (Teicher and Samson, 2013). Early adversity was also associated with an earlier onset of mood symptoms and with the severity of symptoms in clinical samples (Klein et al., 2009; Young et al., 1997). However, the effect of early childhood trauma on brief cognitive therapies outcomes in patients with MDD is still not known.

The aim of the present study is to assess the relationship of early childhood trauma with depressive and anxious symptoms at six-month follow-up after the treatment with brief cognitive therapies for MDD.

2. Methods

2.1. Design and participants

This is follow-up clinical study nested in a randomized clinical trial of two cognitive therapies: Cognitive-Behavioral Therapy (CBT) (Beck et al., 1997) and Narrative Cognitive Therapy (NCT) (Goncalves, 2010). The participants were young adults aged between 18 and 29 years, living in the city of Pelotas, Brazil, without current risk of suicide, who had a clinical diagnosis of MDD according to the Structured Clinical Interview for DSM (SCID) (Del-Ben et al., 2001) and they are not currently using any psychiatric medication. They were recruited from a convenience sample through advertisements in the community health center, centers of psychosocial assistance, and the local media. The randomized clinical trial was approved by the Catholic University of Pelotas Ethics Committee (protocol number: 2009/24). More details of its methodology are described elsewhere (Azevedo Cardoso et al., 2014).

Assessments were performed at baseline, at the post-intervention period (immediately after the 7th session), and at six months after the end of the psychotherapeutic intervention. Both interventions were performed for seven, one-hour long, weekly sessions at the *Hospital Universitário São Francisco de Paula* (HUSFP). Researchers responsible for these assessments were blinded regarding the intervention.

* Corresponding address.

E-mail address: karen.jansen@pq.cnpq.br (K. Jansen).

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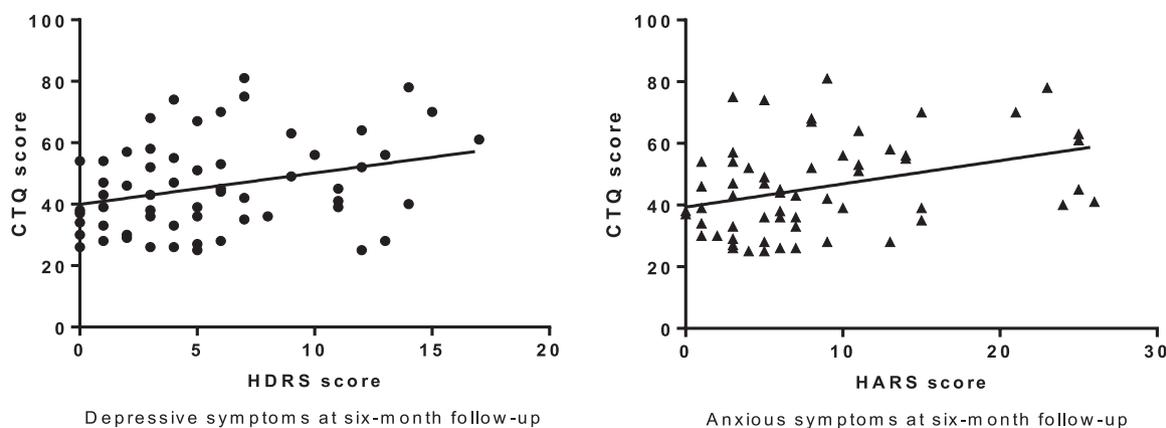


Fig. 1. The effect of early childhood trauma (CTQ score) in the severity of depressive (HDRS score) and anxious (HARS score) symptoms at six-month follow-up.

Considering that there was no difference regarding the CTQ-SF scores between interventions ($p = 0.183$), for the purpose of the present study, we consider both interventions together.

2.2. Measures

Participants were surveyed regarding sociodemographic data. Economic status was measured using the National Economic Index (Barros and Victora, 2005). To evaluate traumatic experiences during childhood, the Childhood Trauma Questionnaire - Short Form (CTQ-SF), originally derived by Bernstein et al. (1994), and further adapted for Brazilian population (Grassi-Oliveira et al., 2014) was used. For the assessment of depressive and anxiety symptoms were used the Hamilton Depression Rating Scale (HDRS) (Hamilton, 1967) and Hamilton Anxiety Rating Scale (HARS) (Hamilton, 1959), respectively.

2.3. Statistical analyses

Statistical analysis was conducted with SPSS 21.0 software. Descriptive data of the variables sex and socioeconomic status are presented as absolute and relative frequency, and means and standard deviations are presented for age, and years of education. χ^2 test and Student t -test were used to test differences regarding the socio-demographic variables between those who drop out and concluded the treatment.

We tested the normality of our data using the Shapiro–Wilk test, and we found that the CTQ-SF score ($p = 0.015$), severity of depressive symptoms at post-intervention ($p < 0.001$), severity of depressive symptoms at six-month follow-up ($p = 0.001$), severity of anxious symptoms at post-intervention ($p = 0.004$), and severity of anxious symptoms at six-month follow-up ($p < 0.001$) showed an asymmetric distribution, while the severity of depressive symptoms ($p = 0.578$), and anxious symptoms ($p = 0.257$) at baseline showed symmetric distribution. In this sense, we performed non-parametric tests to test our hypothesis. Thus, to test the difference regarding CTQ-SF, HDRS and HARS between completers and non-completers, we used the Mann–Whitney U test. To investigate the severity of depressive and anxious symptoms comparing baseline, post-intervention and six-month follow-up, we used the Wilcoxon test. Spearman correlation was used to assess the association between CTQ-SF and HDRS or HARS scores. Statistical significance was considered if $p < 0.05$.

3. Results

Ninety-one subjects were included in this study. At baseline, 75.8% were women, with a mean age of 23.98 ± 3.38 years; they had a mean of 12.64 ± 3.12 years of study and 34.8% belonged to the highest socioeconomic status. At baseline, the median of depressive symptoms

was 12.00 (Interquartile range [IQR]: 9.00–14.00), decreasing significantly to 5.00 (IQR: 1.25–9.00) at post-intervention ($W = -6.413$; $p < 0.001$) and 5.00 (IQR: 2.00–8.50) at the six-month follow-up ($W = -6.265$; $p < 0.001$). Similarly, the median of the anxious symptoms at the baseline was 16.00 (IQR: 11.00–20.00), decreasing to 6.50 (IQR: 3.00–11.00) at post-intervention ($W = -6.139$; $p < 0.001$) and to 6.00 (IQR: 3.00–11.00) at the six-month follow-up ($W = -5.199$; $p < 0.001$). There was no significant difference in the severity of depressive and anxious symptoms comparing post-intervention and six-month follow-up ($p > 0.05$).

The rate of study completion was 74.7% ($n = 68$) at post-intervention. Sixty-one patients were assessed at six-month follow-up. There was no significant difference in sex ($\chi^2(2) = 1.889$; $p = 0.169$), age ($t(89) = -0.107$; $p = 0.915$), economic classification ($\chi^2(2) = 0.689$; $p = 0.709$) and schooling ($t(86) = -0.837$; $p = 0.598$) between those who dropout and concluded treatment. In addition, there was no difference in CTQ-SF total scores at baseline ($U = 707.00$; $p = 0.775$), severity of depressive symptoms at baseline ($U = 658.50$; $p = 0.258$), and severity of anxious symptoms at baseline ($U = 734.00$; $p = 0.661$) between those who completed the treatment and those who did not.

The median of trauma assessed at baseline was 43.00 (IQR: 34.00–55.50). Regarding the specific dimensions of trauma, the median of physical neglect was 7.00 (IQR: 5.00–9.50), for emotional neglect was 12.00 (IQR: 8.00–17.00), for sexual abuse was 5.00 (IQR: 5.00–5.00), for physical abuse was 7.00 (IQR: 5.00–8.00), and for emotional abuse was 11.00 (IQR: 8.00–15.00).

There was a non-significance correlation between CTQ-SF score and the severity of depressive ($r = 0.140$, $p = 0.287$) and anxious ($r = 0.063$, $p = 0.632$) symptoms at baseline, and severity of depressive ($r = 0.145$, $p = 0.269$) and anxious symptoms ($r = 0.097$, $p = 0.461$) at post-intervention. Fig. 1 showed a positive correlation between CTQ-SF score at baseline and severity of depressive ($r = 0.274$, $p = 0.034$) and anxious ($r = 0.340$, $p = 0.008$) symptoms at six-month follow-up.

4. Discussion

The present study showed that higher childhood trauma scores at baseline were associated with higher severity of depressive and anxious symptoms at six-month follow-up. A meta-analysis confirmed that childhood maltreatment may predict an unfavorable course of illness and poor treatment outcome (Nanni et al., 2012). According to Keller (2003), depressed individuals who suffered maltreatment appeared to have less benefit from treatment (and particularly from combined treatment), thereby incurring greater risk of recurrent and persistent depressive episodes, as compared to depressed individuals without a history of childhood maltreatment (Keller, 2003). Also, a recent study including patients with chronic depression receiving 28 sessions of psychotherapy over the course of 8 weeks of acute and 20

weeks of extended treatment, showed that after 8 weeks, a significant interaction between childhood trauma and treatment was found for the severity of depressive symptoms (Bausch et al., 2017). Thus, patients with a history of childhood trauma receiving Cognitive Behavioral Analysis System of Psychotherapy (CBASP) had a significantly lower response rate compared to patients without childhood trauma. However, the presence of childhood trauma did not result in significant differences in treatment response to CBASP on any outcome measure after 28 weeks of treatment (Bausch et al., 2017). These data suggests that childhood trauma may be a predictor of a longer latency of treatment response in the case of psychotherapy. In our study, we included seven sessions of cognitive therapy, and the correlation of childhood trauma at baseline with the severity of depressive symptoms at six-month follow-up also suggests that patients who suffered early childhood trauma would be better outcomes if they receive longer psychotherapy treatments.

Psychotherapy or pharmacotherapy is the first-line recommendation for mild or moderate depression (Kennedy et al., 2009; Parikh et al., 2016). However, a meta-analysis showed evidence that patients who suffered maltreatment have a poor response to combined treatment (structured psychological therapy and antidepressant medications) indicating that simply combining these two common options is not sufficient to treat patients who had previous traumatic events (Nanni et al., 2012). It will be important to further explore the response of patients with depression who suffered maltreatment to new treatments targeting the biological vulnerabilities described in this subgroup (Danese et al., 2008; Uher, 2008), including elevated inflammation levels (Miller et al., 2009).

Both brief cognitive therapies (CBT and NCT) were effective in the reduction of depressive and anxious symptoms at post-intervention, corroborating with results from a previous meta-analysis (Cape et al., 2010). A study conducted by Nemeroff et al. (2003) found that a greater proportion of chronically depressed outpatients with a history of early adversity achieved full remission after cognitive-behavioral psychotherapy than after pharmacotherapy, whereas patients without a history of early adversity had a non-significantly better response to pharmacotherapy. The meta-analysis also revealed that, among the clinical trials using pharmacotherapy, patients had poorer therapeutic responses (Nanni et al., 2012). In fact, results regarding treatment responses differed dramatically from those initially reported by Keller (2003), when groups were stratified according to the presence or absence of childhood trauma.

Early childhood trauma was not associated with short-term response to psychotherapy in our sample. However, we observed a significant impact of early childhood trauma in the maintenance of depressive and anxious symptoms reduction at six-month follow-up. It is interesting to speculate about mechanisms mediating the association of childhood adversity with chronicity and poor treatment response. Early adversity is associated with dysregulation of neurobiological stress response systems and the development of interpersonal difficulties and depressotypic cognitive schemas (Dougherty et al., 2004; Heim et al., 2000; Klein et al., 2009). These factors may maintain depression and require psychosocial treatments that directly target maladaptive coping, interpersonal, and cognitive patterns (Nemeroff et al., 2003). Additionally, biological vulnerability due to early childhood trauma may result in maladaptive stress response (and structural/functional changes in the hippocampus), which may include the observed worse response to short courses of psychotherapy.

The findings of the present study should be interpreted considering some limitations. Because of the lack of a control group (i.e. waitlist), we were unable to test if the psychotherapeutic intervention was the determining factor for the improvement of the symptoms. Another limitation is that we were unable to use linear regression due to the asymmetric distribution of our outcome, thus, we do not know if our results would survive after adjusting for potential confounding factors. Moreover, we had a small sample size, high rate of dropouts, and we did

not assess the duration of illness. The most severe cases of depression are not included in the sample since we exclude cases of moderate and severe suicide risk. Thus, our data are not generalizable for cases of severe depression, being it also a limitation of our study. In contrast, it is a sample of drug-free young adults, possibly recently diagnosed with MDD, and with few previous interventions, a strength of the present study.

This study reports a relationship of childhood trauma with the outcomes of brief cognitive therapy in patients with mild to moderate depression in a follow-up of 6 months. While there was no correlation between self-reported childhood trauma and severity of symptoms at baseline and at post-intervention, correlations were significant at 6-month follow-up, suggesting that patients who suffered early childhood trauma would be better outcomes if they receive longer psychotherapy treatments. Thus, to assess the history of childhood trauma is clinically relevant, once it could affect the efficacy and effectiveness of the psychotherapy.

Conflict of interest

All authors declare no conflicts of interest.

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