The effect of childhood adversity on 4-year outcome in individuals at ultra high risk for psychosis in the Dutch Early Detection Intervention Evaluation (EDIE-NL) Trial

Tamar C. Kraan\(^a\), Helga K. Ising\(^b\), Marjolein Fokkema\(^c\), Eva Velthorst\(^a\), David P.G. van den Berg\(^b\), Margot Kerkhoven\(^b\), Wim Velinge\(^e\), Filip Smits\(^f\),\(^g\),\(^h\), Don H. Linszen\(^a\), Dorien H. Nieman\(^i\), Lex Wunderink\(^j\), Nynke Boonstra\(^k\), Rianne M.C. Klaassen\(^l\), Sara Dragt\(^a\), Judith Rietdijk\(^b,\)\(^l\), Lieuwe de Haan\(^a\), Mark van der Gaag\(^b,\)\(^l\),\(^*\)

\(^a\) Department of Psychiatry, Academic Medical Center, University of Amsterdam, The Netherlands
\(^b\) Department of Psychosis Research, Parnassia Psychiatric Institute, The Hague, The Netherlands
\(^c\) Department of Methods & Statistics, Faculty of Social Sciences, Leiden University, The Netherlands
\(^d\) Departments of Psychiatry and Preventive Medicine, Icahn School of Medicine, Mount Sinai, New York, US
\(^e\) Department of Psychiatry, University Medical Center Groningen and University of Groningen, Groningen, The Netherlands
\(^f\) Department of Epidemiology and Biostatistics, VU University Medical Center, Amsterdam, The Netherlands
\(^g\) Department of Public Mental Health, Trimbos Institute (Netherlands Institute of Mental Health and Addiction), Utrecht, The Netherlands
\(^h\) Department of Clinical Psychology, VU University and EMGO Institute for Health and Care Research, Amsterdam, The Netherlands
\(^i\) Department of Research and Education, Friesland Mental Health Services, Leeuwarden, The Netherlands
\(^j\) Universitair Centrum Psychiatrie, UMCG, The Netherlands
\(^k\) Bascule, Child and Adolescent Psychiatry, Amsterdam, The Netherlands
\(^l\) Department of Clinical Psychology, VU University, Amsterdam, The Netherlands

**ABSTRACT**

Childhood adversity is associated with a range of mental disorders, functional impairment and higher health care costs in adulthood. In this study we evaluated if childhood adversity was predictive of adverse clinical and functional outcomes and health care costs in a sample of patients at ultra-high risk (UHR) for developing a psychosis. Structural Equation Modeling was used to examine the effect of childhood adversity on depression, anxiety, transition to psychosis and overall functioning at 4-year follow-up. In addition, we evaluated economic costs of childhood adversity in terms of health care use and productivity loss. Data pertain to 105 UHR participants of the Dutch Early Detection and Intervention Evaluation (EDIE-NL). Physical abuse was associated with higher depression rates (\(b=0.381, p=0.012\)) and lower social functional outcome (\(b=-0.219, p=0.017\)) at 4-year follow-up. In addition, emotional neglect was negatively associated with social functioning (\(b=-0.313, p=0.018\)). We did not find evidence that childhood adversity was associated with transition to psychosis, but the experience of childhood adversity was associated with excess health care costs at follow-up. The data indicate long-term negative effects of childhood adversity on depression, social functioning and health care costs at follow-up in a sample of UHR patients.

1. Introduction

The experience of childhood adversity has been associated with a range of mental disorders, social functional impairment and health care costs in adulthood (Walker et al., 1999). For instance, two recent meta-analyses showed that childhood adversities were associated with post-traumatic stress disorder (PTSD), depression, panic disorder, social phobia, generalized anxiety disorder, drug and alcohol abuse (Teicher and Samson, 2013) and psychotic disorders (Varese et al., 2012). These mental disorders and impaired functioning may subsequently impact on health care costs by direct (use of mental health care) and/or indirect costs (work productivity loss). Hence, childhood adversity is associated with more severe psychopathology in adulthood. One of the outcomes of childhood adversity that now has been recognized is psychosis (Varese et al., 2012). Since the establishment of criteria to detect individuals at ultra-high risk (UHR) for psychosis an
increasing number of studies have focused on the association between childhood adversity and psychotic symptoms within these cohorts (Addington et al., 2013; Thompson et al., 2014; Tikka et al., 2013). Overall, these studies indicate that childhood adversity is more prevalent in UHR individuals than in the general population (Addington et al., 2013; Kraan et al., 2015b). To date, studies on the effect of childhood adversity on transitioning to psychosis are inconsistent. While two studies reported a significant association between the experience of sexual abuse during childhood and higher transition rates (Bechdolf et al., 2010; Thompson et al., 2014), two more recent UHR studies could not confirm these findings (Kraan et al., 2015a; Stowkowy et al., 2016).

Irrespective of transitioning to a first episode of psychosis a large number of UHR subjects that do not transition to psychosis experience persistent subclinical psychotic symptoms, depression, general symptoms and poor social functioning at follow-up (Addington et al., 2011; Kraan et al., 2015a; Lin et al., 2015; Yung et al., 2015). These findings raise the question whether childhood adversity increases the risk for transition to psychosis in UHR subjects, or whether childhood adversity is associated with poor clinical and social functional outcome in this stage. However, the association between childhood adversity and clinical outcomes other than psychosis in UHR subjects has yet to be explored.

Therefore, the present study aimed to examine the association between childhood adversity and various clinical and functional outcomes in a prospective UHR cohort. Our aims were to (i) examine the association between childhood adversity and transition to psychosis, (ii) examine whether childhood adversity is similarly associated with psychotic symptoms as with depression or social anxiety, (iii) examine whether childhood adversity is associated with poor functional outcome, and (iv) examine whether childhood adversity is associated with health care costs.

2. Method

2.1. Study design

Data pertain to 105 participants of a multi-centered randomized controlled trial examining a cognitive behavioral intervention aimed at the prevention of psychosis Early Detection and Intervention Evaluation (EDIE-NL) (Rietdijk et al., 2010; van der Gaag et al., 2012). In the EDIE-NL trial participants were randomized to either the experimental or control group. Participants from both groups were included in the present study. Clinical and functional assessments took place at baseline, 6, 12, 18, and 48-month follow-up. In the present study, we used baseline and 4-year follow-up data. The 4-year follow-up assessments were conducted between June 2012 and January 2014. Participants were first contacted by telephone and asked if they would consent to a face-to-face interview. If participants did not consent to a face-to-face interview, they were asked if they would consent to a brief telephone assessment, enabling a minimal set of clinical and functional outcome data to be collected. Participants were included after providing written informed consent. Participants who consented to a brief telephone assessment provided informed consent by mail. The Dutch Central Committee on Research Involving Human Subjects approved the study design.

2.2. Sample

Participants, aged 14–35 years, were eligible for the study if they met criteria for at least one of the UHR groups as defined by the PACE clinic (Yung et al., 2008): (1) Vulnerability Group: a first-degree relative with a psychotic disorder or diagnosed with schizotypal personality disorder, (2) Attenuated Psychotic Symptoms (APS) Group: the presence of sub-threshold positive psychotic symptoms for at least one month during the past year, or (3) Brief Limited Intermittent Psychotic Symptoms (BLIPS) Group: an episode of frank psychotic symptoms that lasted no longer than one week, which abated spontaneously. In addition, in all three groups functioning had to be chronically impaired, or there had to be a significant drop in functioning during at least one month in the previous year.

Exclusion criteria were: (1) presence of a current or past psychotic disorder, (2) severe learning impairment (3) known organic cause for presentation, (4) insufficient mastery of the Dutch language and (5) current or previous use of antipsychotic medication equivalent to a total cumulative haloperidol equivalent of ≥15 mg.

2.3. Instruments

The Comprehensive Assessment of At Risk Mental State (CAARMS) (Yung et al., 2005) was used to assess subclinical psychotic symptoms in the year prior to assessment. The CAARMS is a semi-structured interview conducted to determine presence, severity (0–6), frequency (0–6), distress (0–100) and type of UHR symptoms. The CAARMS consists of seven subscales: 4 positive symptoms items, 2 cognitive symptom items, 3 emotional disturbance items, 3 negative symptoms items, 4 behavioral change items, 4 motor changes items and 8 general psychopathology items. Criteria for UHR are based on the 4 positive symptoms items only (unusual thought content, non-bizarre ideas, perceptual abnormalities and disorganized speech). This instrument uses the severity and frequency of UHR symptoms to discriminate between status groups (UHR criteria, psychosis, or not at risk).

Childhood adversity was retrospectively assessed with the Childhood Trauma Questionnaire-Short Form (CTQ-SF) (Bernstein et al., 2003). This self-report questionnaire consists of 25 items about traumatic events before the age of 17 years and 3 items about minimization and denial. The three items about minimization and denial were not included in our analyses. The 25 trauma items consist of five domains: emotional abuse, emotional neglect, sexual abuse, physical abuse and physical neglect. All items range from 1 (never) to 5 (almost always). For each of the five domains sum scores were calculated. An overall total trauma score was calculated as the sum of the five subscales (range 25–125). The CTQ was administered at the 4-year follow-up assessment.

The Beck Depression Inventory-II (BDI-II) was used to assess depression (Beck et al., 1996). Scores of the BDI-II range from 0 to 63, with higher scores reflecting more depressive symptoms.

Social anxiety was assessed with the Social Interaction Anxiety Scale (SIAS) (Mattick and Clarke, 1998). This is a self-report questionnaire in which items are ranged from 0 (not at all characteristic to me) to 4 (extremely characteristic to me).

The Social and Occupational Functioning Scale (SOFAS) (Goldman et al., 1992) is a semi-structured questionnaire that assessed social impairment and global functioning in the previous year. The questionnaire provides a score ranging from 0 to 100, with higher scores indicating better functioning.

Health care costs were evaluated with the Trimbos Institute and Institute of Medical Technology Assessment Questionnaire for Costs associated with Psychiatric Illness (TiCP) (Hakkaart-van Roijen et al., 2002). The present study included: (1) intervention costs, (2) direct medical costs (other than the intervention), and (3) participants’ travel costs. See Ising et al. (2016b) for a detailed description on health care cost calculations at 4-year follow-up in the EDIE-NL trial.

2.4. Statistical analysis

2.4.1. Structural equation models (SEM)

Analyses involving multiple independent and/or dependent variables were performed within a SEM framework. SEM is a multivariate analysis in which a set of regression equations is tested simultaneously. It allows for incorporating multiple independent variables in a model, like standard linear regression, but also allows for incorporating
دریافت فوری متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات