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Can protective factors moderate the detrimental effects of child maltreatment on personality functioning?

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ABSTRACT

Objective: The aim of this study was to examine whether, and if so, to what extent, education and coping strategies may reduce the detrimental effects of childhood maltreatment on personality functioning.
Methods: We assessed dimensional trait-scores of all 10 DSM-IV personality disorders (PDs), childhood maltreatment, education and three coping styles in 511 subjects of the general population of Zurich, Switzerland, using data from the ZInEP Epidemiology Survey.
Results: Childhood maltreatment was associated with all 10 PDs. Low education was related to antisocial, borderline and histrionic PD. Low emotion-focused coping was associated with paranoid, schizoid, borderline, avoidant, and obsessive–compulsive PD. Low problem-focused coping was related to schizoid PD and high problem-focused coping to histrionic PD. High dysfunctional coping was significantly related to all 10 PD dimensions. Obsessive–compulsive trait scores were significantly lower in maltreated subjects with high emotion-focused coping. Antisocial, borderline and narcissistic trait scores were significantly higher in maltreated subjects with high dysfunctional coping.
Conclusion: Education and adaptive coping may have a protective effect on PD symptomatology. Promotion of adaptive coping and suppression of dysfunctional coping may additionally reduce PD symptoms specifically in maltreated subjects. Those findings have important clinical implications. Longitudinal research is needed to address questions of causality and to evaluate potential effects of treatment and intervention.

1. Introduction

In recent decades it has consistently been shown that childhood maltreatment is associated with adult personality disorders (PDs). Most importantly, that finding applies not only to the highly burdened population of psychiatric patients (Battle et al., 2004; Bierer et al., 2003), but also to the general population (Afifi et al., 2011; Hengartner et al., 2013b; Johnson et al., 1999a). Another crucial factor related to PDs is education. It has repeatedly been reported that PDs are associated with low qualification and educational failure (Coid et al., 2006; Johnson et al., 2005; Samuels et al., 2002; Torgersen et al., 2001). However, instead of conceiving low education as a PD risk factor one may also consider high education as a protective factor. Unfortunately, almost nothing is known about protective factors in PDs, a situation probably engendered by the framework of psychiatric research with its focus on aetiopathological processes and risk factors rather than on resilience and protective factors. Instead of examining what causes a disorder we can also just look at what prevents a disorder. Another important protective factor beside education is, presumably, coping. In this respect it has been found that adaptive coping resources such as problem-focused and emotion-focused coping were related to better personality functioning, while dysfunctional coping was related to personality pathology (Bijttebier and Vertommen, 1999; van Wijk-Herbrink et al., 2011; Vollrath et al., 1998). Such findings would be especially applicable in association with childhood maltreatment, which has a detrimental effect on psychological adjustment and is quite prevalent in Western societies (Gilbert et al., 2009). In fact it has been found that avoidant coping was significantly related to various PDs in a sample of females with a history of childhood sexual abuse (Johnson et al., 2003). Accordingly, low avoidant coping could be interpreted as a protective factor, but more research is needed that specifically addresses this subject.

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Since all the studies focusing on coping cited above used clinical samples, there is an urgent need for studies replicating these findings in a sample of the general population. Thus, this is the first study that was conceived to examine the protective effects of education and coping in relation to childhood maltreatment and personality disorders in a large community sample.

2. Materials and methods

2.1. Study design and sampling

This study was conducted within the scope of the Epidemiology Survey of the "Zurich Programme for the Sustainable Development of Mental Health Services" (ZInEP; in German: **Z**ürcher **I**mpulsprogramm zur **n**achhaltigen **E**ntwicklung der **P**sychiatrie), a research and health care programme involving several psychiatric research divisions and mental health services from the canton of Zurich, Switzerland. The Epidemiology Survey is one of the six ZInEP subprojects and consists of four components: 1) a short telephone screening, 2) a comprehensive semi-structured face-to-face interview followed by self-report questionnaires, 3) tests in the sociophysiological laboratory, and 4) a longitudinal survey (see Fig. 1). Telephone screening and semi-structured interviews started in August 2010, the tests at the sociophysiological laboratory in February 2011, and the longitudinal survey in April 2011. The screening ended in May 2012, and all other components in September 2012.

First, a total of 9829 Swiss males and females aged 20–41 years at the onset of the survey and representative of the general population of the canton of Zurich, Switzerland, were screened by computer assisted telephone interview (CATI) using the Symptom Checklist-27 (SCL-27) (Hardt et al., 2004). All participants were randomly selected through the residents' registration offices of all municipalities of the canton of Zurich. Residents without Swiss nationality were excluded from the study. The CATI was conducted by GfK (Growth for Knowledge), a major marketing and field research institute, in accordance with instructions from the research team. The overall response rate was 53.6%. Reasons for non-response were no answer, only telephone responder, incorrect telephone number, communication impossible, unavailability during the study period, or refusal by a third person or the target person him/herself. In cases where potential subjects were available by telephone, the response rate was 73.9%.

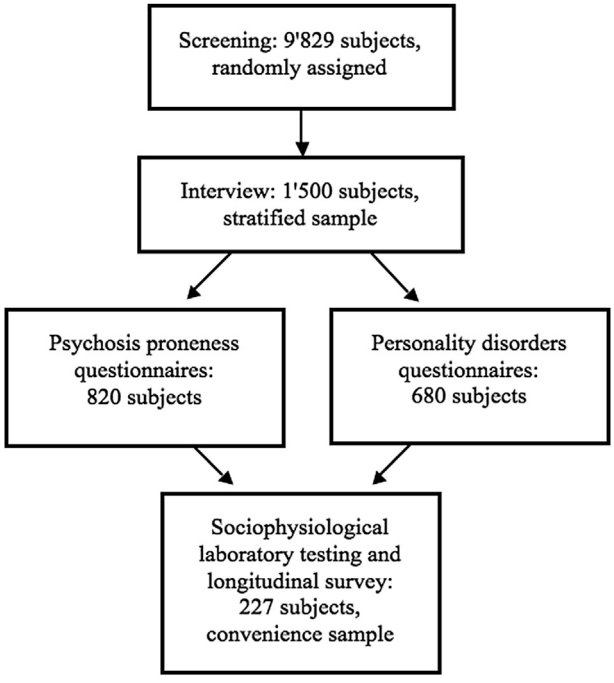

Fig. 1. The sampling design of the ZInEP Epidemiology Survey.

Second, 1500 subjects were randomly selected from the initial screening sample for subsequent face-to-face interviews (response rate: 65.2%). We applied a stratified sampling procedure including 60% high-scorers (scoring above the 75th percentile of the global severity index of the SCL-27) and 40% low-scorers (scoring below the 75th percentile of the global severity index). The basic sampling design was adapted from the longitudinal Zurich cohort-study (Angst et al., 2005) and was chosen to enrich the sample with subjects at high risk for mental disorders. Such a two-phase procedure with initial screening and subsequent interview with a stratified subsample is fairly common in epidemiological surveys (Dunn et al., 1999).

Face-to-face interviews were conducted by experienced and extensively trained clinical psychologists. The interviews took place either at the participants' homes or at the Zurich University Hospital of Psychiatry. All participants who completed the semi-structured interview were required to complete additional questionnaires. For this purpose, the participants were randomly assigned to subsamples focusing either on psychosis ($N = 820$) or on PDs ($N = 680$), respectively. Out of a total of 680 subjects in the PD subsample, 169 (24.9%) refused to return or to complete all questionnaires required for the present study, resulting in a reduced final sample size of $N = 511$.

The ZInEP Epidemiology Survey was approved by the Zurich State Ethical Committee (KEK) to fulfil all legal and data privacy protection requirements and is in strict accordance with the declaration of Helsinki of the World Medical Association. All participants gave their written informed consent.

2.2. Instruments and measures

To provide dimensional PD scores we used the Assessment of DSM-IV Personality Disorders Questionnaire (ADP-IV) (Schotte and de Doncker, 1994). The ADP-IV design allows a dimensional trait-score and a categorical PD diagnosis for each of the DSM-IV PDs. The ADP-IV is a paper-pencil self-report instrument consisting of 94 items, which represent the 80 criteria of the 10 DSM-IV PDs and the 14 research criteria of the depressive and the passive-aggressive PD. Each trait-question is rated on a 7-point Likert scale, ranging from "totally disagree" to "totally agree". The dimensional score of a given PD is computed by adding all scores of its respective items and by dividing this value by the number of items. For the present study we used the German translation by Doering et al. (2007). Internal consistency of the ADP-IV dimensional PD scales is good for the original Dutch version (Schotte et al., 1998) and for the German adaptation (Doering et al., 2007) (median Cronbach's $\alpha = 0.77$ and 0.76, respectively). Test–retest reliability and concurrent validity of the dimensional ADP-IV trait-scores is also satisfactory (Doering et al., 2007; Schotte et al., 1998). Most importantly, the ADP-IV showed good concordance with the SCID-II interview (Schotte et al., 2004) and may be considered an economical and valid alternative to semi-structured interviews.

Child maltreatment was assessed with the Childhood Trauma Questionnaire (CTQ) (Bernstein and Fink, 1998). The CTQ is a popular retrospective measure of child abuse and neglect. The short-form (Bernstein et al., 2003) consists of 28 items divided into a control-scale named *denial* and the 4 domains *emotional abuse*, *emotional neglect*, *sexual abuse*, *physical abuse* and *physical neglect*. The items are rated on a 5-point Likert scale ranging from "never true" to "very often true". Child maltreatment was dichotomized by separating subjects scoring 1 standard deviation above the mean