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**Title:** Emotional scars : impact of childhood trauma on depressive and anxiety disorders  
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Chapter 2
Childhood Life Events and Childhood Trauma in Adult Patients with Depressive, Anxiety and Comorbid Disorders vs Controls

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Abstract

**Objective:** To investigate the association between childhood life events, childhood trauma and the presence of anxiety, depressive or comorbid anxiety and depressive disorders in adulthood.

**Method:** Data are from 1,931 adult participants in the Netherlands Study of Depression and Anxiety (NESDA). Childhood life events included divorce of parents, early parental loss and 'placed in care', whereas childhood trauma was assessed as experienced emotional neglect, psychological, physical and sexual abuse prior to age 16.

**Results:** Childhood life events were not associated with psychopathology, except for 'placed in care' in the comorbid group. All types of childhood trauma were increasingly prevalent in the following order: controls, anxiety, depression, and comorbid group ($P < 0.001$). The higher the score was on the childhood trauma index, the stronger the association with psychopathology ($P < 0.001$).

**Conclusion:** Childhood trauma rather than childhood life events are related to anxiety and depressive disorders. The strong associations with the comorbid group suggest that childhood trauma contributes to the severity of psychopathology. Our study underscores the importance of heightened awareness of the possible presence of childhood trauma, especially in adult patients with comorbid anxiety and depressive disorders.
Emotional Scars
Impact of childhood trauma on depressive and anxiety disorders

Introduction

Childhood abuse and other adverse childhood experiences have been linked to the later emergence of psychopathology, in particular depressive and anxiety disorders in adulthood (1-3). Adverse childhood experiences may alter the child’s belief system and subsequently contribute to the development of cognitive vulnerability, in particular learned helplessness and an external locus of control (4). Consistent with these theoretical expectations (5, 6), childhood loss events were found to be more strongly related with subsequent onset of depressive disorders than with anxiety disorders (7, 8). In addition, it has been hypothesized that adverse childhood experiences affect this risk through their impact on neurobiology and neurochemistry (9).

Although depression and anxiety are closely related and frequently co-occur (10, 11), different environmental antecedents and specific vulnerability factors have been suggested in past research (4, 12, 13). Comorbidity of depression and anxiety has been associated with a distinct risk profile compared to pure depression and pure anxiety, usually involving more severe symptoms and longstanding vulnerability factors such as family history (10).

Considering adverse childhood life events, domestic conflict and parental psychopathology (over and above the genetic effects) are the most common childhood adversities in the Western world (1, 14). Considering childhood trauma, most studies have focused on the sequela of childhood sexual abuse into adulthood (2, 15-20). The association between childhood physical or sexual abuse and psychopathology appears stronger for women than men (19, 21). The association between emotional neglect and psychological abuse in childhood and subsequent vulnerability to the development of depressive and anxiety disorders has received much less attention (22-26). Most studies found that the different forms of childhood trauma were rather non-specific risk factors for adult psychiatric disorders (1, 2, 16).

Limited research has been done on the differential effects of emotional neglect, psychological, physical and sexual abuse on the onset and development of either anxiety disorders, depressive disorders or comorbid anxiety and depressive disorders (25, 26).

Aims of the study

The primary aims of the present study were: (i) to identify and describe the associations between reported childhood life events and childhood trauma and the presence of either pure anxiety, pure depressive or comorbid disorders and (ii) to explore which types of childhood life events and childhood trauma predominate in the prediction of pure anxiety, pure depressive or comorbid disorders.
Patients and methods

Sample
Data were obtained from baseline data of the Netherlands Study of Depression and Anxiety (NESDA), an 8-year longitudinal cohort study that includes 2,981 participants, aged 18 through 65 years. A detailed description of the study design and sample has been previously published (27). Participants were stratified for different settings (general population, primary care and mental health care) and for different phases of illness (controls, high familial risk, first and recurrent episodes of depression and anxiety). Participants were recruited from different locations in the Netherlands (Amsterdam, Leiden and Groningen). For the current study, data were used from the baseline interviews conducted between September 2004 and February 2007. All interviews were tape-recorded to control the quality of the data. Analyses were carried out on 1,931 (64.7%) of 2,981 participants (213 from the general population, 1,012 from primary care and 706 from mental health care). Participants with a lifetime diagnosis of any anxiety and/or depressive disorder, which was not currently present, were excluded to maximize the likelihood of detecting contrast between anxiety and depressive disorders and thus be able to better differentiate the specific effects of childhood life events and childhood trauma on psychopathology. The exclusion of these subjects was thought to reduce the potential confounding influence of prevalent lifetime depressive disorders in the group of current anxiety disorders, and vice versa of prevalent lifetime anxiety disorders in the group of current depressive disorders. In other words, we used strict case definitions.

Diagnosis
During a 4-h baseline assessment, including written questionnaires, a face-to-face interview, a medical exam, an experimental computer task and blood and saliva collection, extensive information was gathered about psychopathology, demographic and psychosocial characteristics and clinical, biological and genetic determinants. Demographic data used in our study were gender, age and attained education level based on years of education. Depressive and anxiety disorders were defined according to DSM-IV criteria and diagnosed with the Composite International Diagnostic Interview (CIDI) (WHO version 2.1), a fully structured diagnostic interview. The CIDI is used worldwide and WHO field research has found high interrater reliability, high test-retest reliability and high validity for depressive and anxiety disorders (28, 29). The CIDI was conducted by specially trained clinical staff.

In the present study current diagnosis of major depressive disorder, dysthymia, panic disorder with or without agoraphobia, agoraphobia without history of panic, social phobia, and generalized anxiety disorder were used. Having a ‘current’ disorder was defined by the presence of a diagnosis within the preceding 12 months. Controls (n=520) were defined as participants, who were neither having a current nor a lifetime anxiety or depressive disorder, nor a current or lifetime alcohol abuse or dependence. The number of subjects with current
diagnoses in this sample was 252 with a pure anxiety disorder, 314 with a pure depressive disorder and 845 with both a current anxiety and depressive disorder.

**Trauma assessment**

Childhood life events and childhood trauma were assessed retrospectively by a Dutch semi-structured interview, previously used in the Netherlands Mental health Survey and Incidence Study (30-32).

**Childhood life events.** Participants were asked if any of the following life events had happened before the age of 16 years: death of either biological father or mother, divorce of the parents, being placed in a children's home, being placed in a juvenile prison or being brought up in a foster family. Each childhood life event was coded in a dichotomous format (0 absent / 1 present). Because of low prevalence rates, whether someone was placed in a children's home, in juvenile prison or brought up in a foster family was collapsed to a single life event in analyses, further referred to as ‘placed in care’. The childhood life events were analysed per item separately, as well as cumulative. The childhood life event index (i.e. sum score ranging from 0 to 3), which we constructed ourselves, reflects the number of life events experienced.

**Childhood trauma.** The participants were asked whether they had experienced any kind of emotional neglect, psychological, physical or sexual abuse before the age of 16. The definition of emotional neglect included lack of parental attention or support and ignorance of one’s problems and experiences. Psychological abuse was defined as being verbally abused, undeserved punishment, subordinated to siblings and being blackmailed. Physical abuse was defined as being kicked or hit with hands or an object, beaten up or physical abuse in any other way. Sexual abuse was defined as being sexually approached against your will, meaning being touched or having to touch someone in a sexual way. Participants answered ‘yes’ or ‘no’ to each of the 4 forms of childhood trauma and were asked to give an indication about the frequency on a five-point scale, ‘1’ once, ‘2’ sometimes, ‘3’ regularly, ‘4’ often and ‘5’ very often. In the analyses, the frequencies were categorized into three groups (0: absent, 1: once or sometimes, 2: regularly, often, and very often). Subsequently, if any abuse had happened, the participants were asked for the perpetrator: biological father, biological mother, step-father or friend of mother, step-mother or friend of father, siblings, any other relative or someone else. For the analyses, the perpetrators were categorized as parents or others. In case of repeated sexual abuse, the duration in months was asked for and specified as: 0 until 11 months, 12 until 35 months and longer than 36 months. The self constructed childhood trauma index (sum scores of frequency ranging from 0-8) was calculated with a higher score indicating more types and a higher frequency of childhood trauma.
**Statistical analyses**

The four study groups (controls, anxiety disorder, depressive disorder, comorbid group) were compared by analysis of variance for continuous variables and $X^2$-tests for categorical variables. Variables used in the main analysis included childhood trauma and childhood life events. Odds ratios for having anxiety, depressive or comorbid disorders according to trauma and life event status were calculated by multinomial logistic regression analysis adjusted for age, sex and education. The control group was regarded as reference and $P$-values were derived by the likelihood ratio tests. Odds ratios were also analysed for each gender separately and the interaction term of gender-trauma was added to the analyses to assess whether the strength of associations differed between gender. A two-tailed $P < 0.05$ was considered statistically significant; the statistical software used was SPSS 14.0.

**Results**

Characteristics of the four study groups are summarized in Table 1. The sample consisted of 66.6% women and 33.4% men, equally distributed over the four groups. Mean age was about 41 years and did not significantly vary between the groups. The level of education was highest in the controls and lowest in the comorbid group ($P < 0.001$). The controls originated predominantly from the general population or primary care, whereas the majority of the participants with current anxiety and/or depressive disorders came from mental health settings ($P < 0.001$) (Table 1). Among the life events, divorce of parents was the most common (14.2%), whereas ‘placed in care’ was the least common (6.6%). Emotional neglect and psychological abuse were the most prevalent types of childhood trauma reported in the study, with a prevalence of 38.3% and 25.1% respectively. Sexual abuse was more prevalent (18.5%) than physical abuse (14.4%). More females were found in the emotional neglect ($P = 0.014$), psychological ($P = 0.002$) and sexual abuse ($P < 0.001$) domains.

Correlations between emotional neglect, psychological abuse, physical abuse and sexual abuse were modest to large in magnitude. The highest correlations were found between emotional neglect and psychological abuse (Spearman $r = 0.63$, $P < 0.001$) and the lowest correlations were found with sexual abuse. The correlation between the childhood life event index and the childhood trauma index was weak ($r = 0.22$) illustrating that life events and trauma largely represent separate childhood indicators.

**Childhood life-events**

The prevalence of parental divorce and early parental loss did not differ between the groups, whereas ‘placed in care’ was lowest in controls and highest in the comorbid group ($P = 0.03$) (Table 1). No significant associations were found between childhood life events and pure current anxiety, pure current depression and current depression and anxiety, except for ‘placed in care’ in the latter group (Table 2).
**Table 1.** Childhood trauma according to diagnosis in 1,931 study participants.

<table>
<thead>
<tr>
<th></th>
<th>Controls (n=520)</th>
<th>‘Pure’ current anxiety (n=252)</th>
<th>‘Pure’ current depression (n=314)</th>
<th>Current depression and anxiety (n=845)</th>
<th>P-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female gender (n, %)</td>
<td>349 (67.1%)</td>
<td>163 (64.7%)</td>
<td>196 (62.4%)</td>
<td>579 (68.5%)</td>
<td>.54</td>
</tr>
<tr>
<td>Age (years, ± SD)</td>
<td>41.8 ± 14.6</td>
<td>40.7 ± 13.5</td>
<td>40.2 ± 12.5</td>
<td>40.8 ± 12.0</td>
<td>.16</td>
</tr>
<tr>
<td>Education level attained (years, ± SD)</td>
<td>12.7 ± 3.2</td>
<td>12.1 ± 3.3</td>
<td>12.1 ± 3.3</td>
<td>11.4 ± 3.3</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

**Setting:**
- General population: 107 (20.6%), 18 (7.1%), 27 (8.6%), 61 (7.2%) < .001
- Primary care: 413 (79.4%), 140 (55.6%), 138 (43.9%), 321 (38.0%)
- Mental health care: 0 (0.0%), 94 (37.3%), 149 (47.5%), 463 (54.8%)

**Childhood life-events before age 16:**
- Divorce parents: 66 (12.7%), 40 (15.9%), 43 (13.7%), 125 (14.8%) .39
- Early parental loss: 35 (6.7%), 15 (6.0%), 20 (6.4%), 69 (8.2%) .26
- Placed in care: 23 (4.4%), 18 (7.1%), 21 (6.7%), 65 (7.7%) .03

**Childhood trauma before age 16:**

**Emotional neglect:**
- No: 437 (84.0%), 176 (69.8%), 184 (58.6%), 393 (46.4%) < .001
- Once or sometimes: 45 (8.7%), 45 (17.9%), 67 (21.3%), 182 (21.5%)
- Regularly, often or very often: 38 (7.3%), 31 (12.3%), 63 (20.1%), 269 (31.9%)

**Psychological abuse:**
- No: 470 (90.4%), 211 (83.7%), 234 (74.5%), 530 (62.8%) < .001
- Once or sometimes: 32 (6.2%), 28 (11.1%), 48 (15.3%), 158 (18.7%)
- Regularly, often or very often: 18 (3.5%), 13 (5.2%), 32 (10.2%), 156 (18.5%)

**Physical abuse:**
- No: 490 (94.2%), 221 (88.1%), 274 (87.3%), 666 (78.9%) < .001
- Once or sometimes: 19 (3.7%), 15 (6.0%), 21 (6.7%), 69 (8.2%)
- Regularly, often or very often: 11 (2.1%), 15 (6.0%), 19 (6.1%), 109 (12.9%)

**Sexual abuse:**
- No: 463 (89.0%), 209 (82.9%), 264 (84.1%), 636 (75.4%) < .001
- Once or sometimes: 30 (5.8%), 14 (5.6%), 27 (8.6%), 80 (9.5%)
- Regularly, often or very often: 27 (5.2%), 29 (11.5%), 23 (7.3%), 128 (15.2%)

Data are number (percentage) or mean (± SD), when appropriate. ‘Pure’ current anxiety indicates patients with anxiety disorders during the last 12 months without lifetime depression. ‘Pure’ current depression indicates patients with depressive disorders during the last 12 months without lifetime anxiety. *: P-values by ANOVA linear term or Chi square tests (for linear association).
Table 2. Odds ratio's for risk of having 'pure' current anxiety, ‘pure’ current depression or 'pure' current comorbid anxiety and depression versus no disorder according to trauma status in 1,931 participants.

<table>
<thead>
<tr>
<th></th>
<th>A: ‘Pure’ current anxiety (n=252)</th>
<th>B: ‘Pure’ current depression (n=314)</th>
<th>C: Current depression and anxiety (n=845)</th>
<th>Over-all P*</th>
<th>P B vs. A</th>
<th>P C vs. B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Childhood life events before age 16:</strong></td>
<td></td>
<td></td>
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<tr>
<td>Divorce parents</td>
<td>1.25 (0.81-1.92)</td>
<td>1.04 (0.68-1.57)</td>
<td>1.11 (0.80-1.54)</td>
<td>.76</td>
<td>.44</td>
<td>.67</td>
</tr>
<tr>
<td>Early parental loss</td>
<td>1.07 (0.57-2.01)</td>
<td>0.99 (0.56-1.75)</td>
<td>0.73 (0.47-1.12)</td>
<td>.33</td>
<td>.85</td>
<td>.22</td>
</tr>
<tr>
<td>Placing in care</td>
<td>1.60 (0.84-3.06)</td>
<td>1.54 (0.83-2.87)</td>
<td>1.67 (1.01-2.76)</td>
<td>.21</td>
<td>.91</td>
<td>.73</td>
</tr>
<tr>
<td><strong>Childhood trauma before age 16:</strong></td>
<td></td>
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<td><strong>Emotional neglect:</strong></td>
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<tr>
<td>No</td>
<td>&lt; .001</td>
<td>.006</td>
<td>&lt;.001</td>
<td></td>
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<tr>
<td>Once or sometimes</td>
<td>2.65 (1.68-4.17)</td>
<td>3.90 (2.56-5.94)</td>
<td>4.88 (3.40-7.02)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regularly, often or very often</td>
<td>2.23 (1.34-3.72)</td>
<td>4.56 (2.92-7.13)</td>
<td>9.03 (6.19-13.2)</td>
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<td><strong>Psychological abuse:</strong></td>
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<tr>
<td>No</td>
<td>&lt; .001</td>
<td>.01</td>
<td>.001</td>
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<tr>
<td>Once or sometimes</td>
<td>2.03 (1.19-3.47)</td>
<td>3.23 (2.00-5.21)</td>
<td>4.59 (3.06-6.89)</td>
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<tr>
<td>Regularly, often or very often</td>
<td>1.61 (0.77-3.36)</td>
<td>3.79 (2.07-6.95)</td>
<td>7.50 (4.50-12.5)</td>
<td></td>
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<td><strong>Physical abuse:</strong></td>
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<tr>
<td>No</td>
<td>&lt; .001</td>
<td>.93</td>
<td>.004</td>
<td></td>
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<tr>
<td>Once or sometimes</td>
<td>1.78 (0.89-3.57)</td>
<td>2.03 (1.07-3.86)</td>
<td>2.73 (1.61-4.62)</td>
<td></td>
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</tr>
<tr>
<td>Regularly, often or very often</td>
<td>2.90 (1.31-6.45)</td>
<td>3.06 (1.43-6.56)</td>
<td>6.69 (3.54-12.6)</td>
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<td><strong>Sexual abuse:</strong></td>
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<tr>
<td>No</td>
<td>&lt; .001</td>
<td>.13</td>
<td>.006</td>
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<tr>
<td>Once or sometimes</td>
<td>1.07 (0.55-2.06)</td>
<td>1.65 (0.96-2.85)</td>
<td>1.95 (1.25-3.03)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Regularly, often or very often</td>
<td>2.48 (1.42-4.34)</td>
<td>1.66 (0.92-2.98)</td>
<td>3.41 (2.19-5.31)</td>
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Reference=controls
Odds-ratios were adjusted for age, sex, and education.
*: Chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model.

**Childhood trauma**

Emotional neglect was the most frequent type of abuse (Table 1). Compared to the controls, the prevalence of emotional neglect, psychological and physical abuse was about twice as high in the anxiety and depression groups and more than three times as high in the comorbid group. If emotional neglect, psychological or physical abuse were present, approximately 40% reported a frequency of 'regularly, often or very often', with the highest frequency (approximately 60%) in the comorbid group. In comparison with the controls, the prevalence of sexual abuse was only slightly higher in the anxiety and depression groups,
but twice as high in the comorbid group. If sexual abuse was present, 45-65% reported a frequency of ‘regularly, often or very often’.

In case of emotional neglect, psychological and physical abuse, over 80% of the identified perpetrators were the parents, whereas in sexual abuse the identified perpetrator was most often (86.4%) someone else than the parents. These findings did not differ among the four groups. The duration of sexual abuse was also similar among the four groups (mean 10.2 months, range 0-52 months).

In age, sex and education adjusted multinomial regression analysis, emotional neglect, psychological and physical abuse were associated with pure current anxiety, pure current depression and current depression and anxiety in increasing order (all P values <0.001) (Table 2). The odds ratios were higher in the comorbid depression and anxiety group. Associations were also stronger in the depression group than in the anxiety group, as shown by the post hoc P-values (P = 0.006 for emotional neglect and P = 0.01 for psychological abuse).

The associations between sexual abuse and pure current anxiety, pure current depression and current depression and anxiety appeared not as strong as for other types of abuse. However, the overall P-value shows a highly statistical difference. The associations were again strongest in the comorbid depression and anxiety group, whereas those for the depression and anxiety group were of equal strength.

To investigate whether gender played an important role, the adjusted odds ratio’s for men and women were analyzed separately using multinomial regression analysis. Emotional neglect, psychological, physical and sexual abuse was associated with pure current anxiety, pure current depression and current depression and anxiety, for both men and women (P < 0.001). Subsequently, the interaction term of gender*trauma was added to the analyses. For all types of abuse, no significant effect of the interaction term was found in the anxiety, depression and comorbid groups.

**Childhood life event and childhood trauma indices**

For all groups, higher childhood trauma indices corresponded with higher odds ratios for psychopathology (all P values <0.001), suggesting a dose-response relationship (Figure 1). The dose was defined as the frequency of exposure to childhood trauma and the number of childhood trauma types. The strongest associations were found with current comorbid anxiety and depression. In contrast, the childhood life event index did not show any significant relationship with psychopathology (Figure 1).
Figure 1. Odds ratios (with bars representing 95% confidence intervals) for ‘pure’ anxiety, ‘pure’ depression, and comorbid depression and anxiety versus controls according to the childhood life event and childhood trauma indices in 1,931 subjects, adjusted for age, gender and education.
Discussion

Our study demonstrates that a reported history of childhood trauma is associated with a higher risk of anxiety and depressive disorders in adulthood and with an increasing order from anxiety to depressive to comorbid anxiety and depressive disorders. Emotional neglect and psychological, physical and sexual abuse in childhood were all associated with the presence of anxiety and depressive disorders in adulthood. The results showed a strong dose-response relationship between the types and frequency of exposure to childhood trauma and the presence of psychopathology. The magnitude of the risk associated with childhood trauma was substantially larger than with childhood life events such as early parental loss, parental divorce and ‘placed in care’. Emotional neglect and psychological abuse had a stronger correlation with pure current depression than pure current anxiety. In all trauma domains, the strongest associations were found in the comorbid group.

Our findings are consistent with previous studies reporting a relationship between a history of childhood trauma and anxiety and depressive disorders in adulthood (15-25). Both clinical (3, 20) and population-based community studies (15-19, 23) have examined the relationship between child abuse and lifetime psychopathology among adults. However, most studies focus on lifetime psychopathology only (3, 16-19). In the US National Comorbidity Study (1), Kessler et al. investigated the persistence of psychopathology until the year preceding the CIDI diagnostic interview. The effects of childhood adversities were consistently associated with risk of onset, but not with recency of disorders. The US National Comorbidity Study assessed childhood trauma emphasizing only physical and sexual abuse items, but did not address emotional neglect and psychological abuse. Considering a mean age in our population of 41 years, the presence of current anxiety or depressive disorders suggests that the effects of childhood trauma are indeed longstanding. Our findings are in line with two studies investigating current symptoms of psychopathology (23, 24), but in contrast with our study, without use of diagnostic interviews.

This study puts emphasis on testing the specificity of various types of abuse to different psychiatric diagnoses. Only one study has compared the differential effects on psychopathology across the subtypes of childhood trauma. Gibb et al. described a cohort of 857 adult psychiatric outpatients focussing on current diagnosis, using the Childhood Trauma Questionnaire (CTQ), which investigates childhood emotional, physical and sexual abuse (25, 26). In line with our findings, childhood emotional abuse was more strongly related to depressive than anxiety disorders, whereas childhood physical and sexual abuse showed an association with anxiety and depressive disorders of equal strength. To address the issue of specificity, in our analyses we adjusted for lifetime comorbidity, because many studies have documented pervasive lifetime and current comorbidity among anxiety and depressive disorders (10-12). The different types of childhood trauma have frequently been identified as non-specific risk factors for adult psychiatric disorders (1, 2, 16). Emotional neglect and
psychological, physical and sexual abuse were all consistently and strongly associated with adult psychopathology. The lack of specific interrelationships between childhood trauma and psychopathology supports the hypothesis of general vulnerability for psychopathology among individuals exposed to early childhood trauma. The childhood trauma index, which reflects the number and frequency of childhood trauma, is indicative of the emergence of psychopathology. This observation agrees with previous studies linking the number and severity of abuse to increased risk of psychopathology (1, 16-19). In all trauma domains, the results of the current study are compelling with respect to the strong relation between childhood trauma and comorbidity and may imply that childhood trauma contributes to the severity of psychopathology.

The observation that childhood life events were not associated with anxiety, depressive or comorbid disorders, is a remarkable finding and (partially) inconsistent with both theoretical expectations (5, 6) and past research (7, 8). Childhood loss events (death of a parent, divorce parents) in the US National Comorbidity Study (1) were more strongly associated with the subsequent onset of mood disorders than anxiety disorders. However, these loss events were found to predict only mania and dysthymia and not major depression. Parental loss in childhood is associated with an increased likelihood of a depressive disorder in adulthood only if the quality of the surviving family relationship is poor (33). Previous studies (1, 34) have shown that parental divorce is a stronger predictor of subsequent psychopathology than other loss events and more likely to cause depression than anxiety. In our study the prevalence of parental divorce was relative low, which may affect our findings. In a high-risk cohort of children from parents with bipolar disorder, Hillegers et al. found that stressful life events increase the liability to mood disorders, but the effects slowly diminish with time (35). If we extrapolate this finding, the impact of adverse childhood life events could have been extinguished with advancing age, as shown in our adult population in which we focused on current diagnoses. Furthermore, our results support the assumption that life events per se are not pivotal, but rather the quality of the childhood holding environment. In this perspective, a suggestion for future research may be to examine the impact of more subjectively perceived life events such as family dysfunction and the quality of the relationship with either the parents or other principal caregivers.

Rosenman et al. described the phenomenon “context of abuse”, referring to the frequent co-occurrence of adverse childhood life events and various types of childhood abuse (14). However, the overlap and co-existence of adverse childhood life events and childhood trauma in our study was relatively low, which suggests that these variables represent separate and rather independent adverse childhood indicators for adult psychopathology.

Strengths of the current study include a large representative sample in which childhood life events and different types of childhood trauma have been considered, use of a structured diagnostic interview, a control group and a focus on pure current depressive and pure current anxiety disorders to test the specificity of the relationship of adverse life events and
trauma with psychopathology. The use of a semi-structured interview to question childhood trauma is favourable, because the relationship between childhood trauma and psychiatric disorders is frequently underestimated by researcher’s reliance on records rather than direct questioning (36).

Methodological limitations include the retrospective, cross-sectional design and the substantial collinearity between the various types of trauma which precluded the use of multivariate analyses. The cross-sectional design may incur the possibility of reverse causation: patients with current anxiety and/or depressive disorders might perceive and report more childhood trauma in retrospection, which may be secondary to their mental problems. Although studies of retrospective reports of childhood trauma conclude that there is little evidence that psychopathology is associated with less reliable or less valid recollections (37, 38), caution is still necessary. The definition of sexual abuse was rather broad and we speculate that this might explain why sexual abuse was not the adversity with the largest impact on adult mental disorders. Given the cross-sectional design, we can not draw any conclusions about the causal role of childhood trauma in the onset and development of anxiety and depressive disorders. Longitudinal studies are needed to understand the biological and psychological mechanisms by which the different types of childhood trauma may contribute to the development and course of psychopathology.

In conclusion, this cross-sectional study demonstrates that childhood trauma rather than childhood life events appears to be an important risk factor for depressive and anxiety disorders, in particularly in cases of comorbid depression and anxiety. Emotional neglect and psychological abuse may play a more pivotal role in the emergence of pure current depression compared to pure current anxiety. Nevertheless there does not appear to be a unique predictive relationship between types of childhood trauma and specific psychiatric disorders.

Implications
Clinical practice may benefit from early interventions aimed at prevention of the negative impact of childhood trauma in later life. Current evidence-based treatments of anxiety and depressive disorders take little notice of childhood trauma. Depressive and anxiety disorders associated with a history of childhood trauma may respond differently to treatment (39) or are associated with treatment resistance (40). Among those with a history of early childhood trauma, psychotherapy alone was superior to antidepressant monotherapy (39). These results suggest that psychotherapy may be an essential element in the treatment of patients with a history of childhood trauma. Interventions that focus on childhood trauma may contribute to the development of more effective treatments for a subgroup of anxiety and depressive disorders, preceded by childhood trauma. Our study underscores the importance of heightened awareness of the possible presence of childhood trauma, especially in adult patients with comorbid anxiety and depressive disorders.
References


