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Associations Between Objective and Subjective Experiences of Childhood Maltreatment and the Course of Emotional Disorders in Adulthood

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IMPORTANCE A history of childhood maltreatment is associated with an unfavorable course of illness for emotional disorders. However, the origins and mechanisms underlying these associations are unknown.

OBJECTIVE To examine the relative associations of objective and subjective measures of childhood maltreatment and continuity in psychopathology with the course of emotional disorders in adulthood.

DESIGN, SETTING, AND PARTICIPANTS This prospective cohort study followed up until age 40 years participants residing in a metropolitan county of the US Midwest with substantiated records of childhood physical and sexual abuse and/or neglect between 1967 and 1971 and a demographically matched group of participants experiencing no abuse or neglect in childhood. The collected data were analyzed between October 2021 and April 2022.

EXPOSURES The objective experience of childhood maltreatment before age 12 years was prospectively measured through official court records, whereas the subjective experience was measured through retrospective self-report at a mean (SD) age of 29 (3.8) years. Current and previous lifetime psychopathology was also assessed at a mean age of 29 (3.8) years.

MAIN OUTCOMES AND MEASURES Symptoms of depression and anxiety were measured at mean (SD) ages of 39.5 (3.5) and 41.2 (3.5) years using Poisson regression models.

RESULTS In a cohort of 1196 participants (582 [48.7%] female and 614 [51.3%] male) followed up to age 40 years, those with objective plus subjective measures of childhood maltreatment had a greater number of subsequent follow-up phases with depression or anxiety than controls (depression: incidence rate ratio [IRR], 2.28 [95% CI, 1.65-3.15]; anxiety: IRR, 2.30 [95% CI, 1.54-3.42]), as did those with subjective-only measures (depression: IRR, 1.49 [95% CI, 1.02-2.18]; anxiety: IRR, 1.58 [95% CI, 0.99-2.52]). In contrast, participants with objective-only measures did not have a greater number of follow-up phases with depression or anxiety (depression: IRR, 1.37 [95% CI, 0.89-2.11]; anxiety: IRR, 1.40 [95% CI, 0.84-2.31]). Current and lifetime psychopathology measured at the time the subjective experience was assessed explained its association with a later course of emotional disorders in participants with subjective-only measures but not in those with objective plus subjective measures.

CONCLUSIONS AND RELEVANCE In this cohort study, the associations seen between childhood maltreatment and poor course of emotional disorders over the subsequent decade were largely attributable to the subjective experience of maltreatment, which was partly explained by continuity in psychopathology. Modification of the subjective experience of childhood maltreatment could improve the longitudinal course of emotional disorders.

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Supplemental content

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A self-reported history of childhood maltreatment is associated with an unfavorable course of emotional disorders.[1-3] To relieve the large health burden linked to chronic emotional disorders, it is important to better understand the origins and mechanisms of these associations.

Because of the reliance on retrospective self-reports, previous work has not clarified the origins of the associations observed.[4] Previous work has shown that retrospective self-reports (capturing the subjective experience of childhood maltreatment) and prospective, documented measures (capturing the objective experience of childhood maltreatment) identify different constructs[5] and that self-reports are more strongly associated with current or past lifetime psychopathology than the objective measures.[6] However, the associations with a later course of illness are unknown and clinically most relevant. Studies using different measures of childhood maltreatment are needed to disentangle the relative contribution of the objective and subjective experiences to chronicity of emotional disorders later in life.

Because of the design used, previous work also has not clarified the independent contribution of self-report of childhood maltreatment to the later course of psychopathology over and above prior psychopathology.[7] The cross-sectional design conventionally used cannot test the directionality of the association between self-report of childhood maltreatment and the course of psychopathology.[8] Even in the minority of published studies benefiting from a longitudinal design where self-report of childhood maltreatment was measured prior to the assessment of the course of psychopathology, the contribution of current or past psychopathology at the time of self-report was not comprehensively examined.[9-11] The contribution of current or past psychopathology is important because current or past emotional disorders could negatively bias autobiographical memory,[12] creating an artificial association between self-reported childhood maltreatment and later emotional disorders that simply reflects continuity in psychopathology. Longitudinal prospective studies that account for prior psychopathology are needed to elucidate the role of self-reported childhood maltreatment in later chronic psychopathology.

We studied a unique sample[6,13,14] in which both objective and subjective measures of childhood maltreatment were assessed and psychopathology was assessed repeatedly at the time and after the assessment of the subjective experience (**Figure**). In this study, we capitalize on this sample to investigate the origins and mechanisms of the association between childhood maltreatment and the course of emotional disorders.

Key Points

Question Is a history of childhood maltreatment associated with an unfavorable course of emotional disorders in adulthood?

Findings In this cohort study of 1196 participants followed up to age 40 years, the subjective experience of childhood maltreatment measured through retrospective self-report at age 29 years was associated with the number of subsequent follow-up phases with depression or anxiety, whereas the objective experience measured through official court records was not. Current and lifetime psychopathology at the time the subjective experience was assessed explained its association with the later course of emotional disorders in participants who did not have objective measures of maltreatment but not in those who did.

Meaning The findings suggest that modification of the subjective experience of childhood maltreatment may improve the longitudinal course of emotional disorders.

Methods

Sample

This prospective cohort study was initiated in 1986 with a large group of documented cases of childhood physical and sexual abuse and neglect (n = 908). A comparison group that did not contain any known cases of child abuse or neglect was matched for age, sex, race and ethnicity, and approximate family socioeconomic status at the time of the child maltreatment (n = 667).[15] We assessed race and ethnicity because we were concerned that different racial and ethnic groups may have different base rates of psychopathology. Race and ethnicity were assessed by showing study participants a card with the names of racial and ethnic groups (Black, Hispanic; Black, non-Hispanic; Native American; Pacific Islander; White, Hispanic; White, non-Hispanic; other) and asking them to indicate which race or ethnic group best described them. We report on 3 nonmutually exclusive groups (Black, Hispanic/non-Hispanic; Hispanic; White, Hispanic/non-Hispanic) that made up 98% of the sample. Herein, we used data from 3 follow-up phases, which involved tracing, locating, and interviewing the participants who experienced childhood maltreatment and the comparison group members between 1989 and 1995 (interview 1), between 2000 and 2002 (interview 2), and between 2003 and 2005 (interview 3). Although there was attrition associated with death, refusals, and an inability to locate individuals over the various waves of the study, the composition of the sample has remained approximately the same (details provided in eTable 4 in Supplement 1).

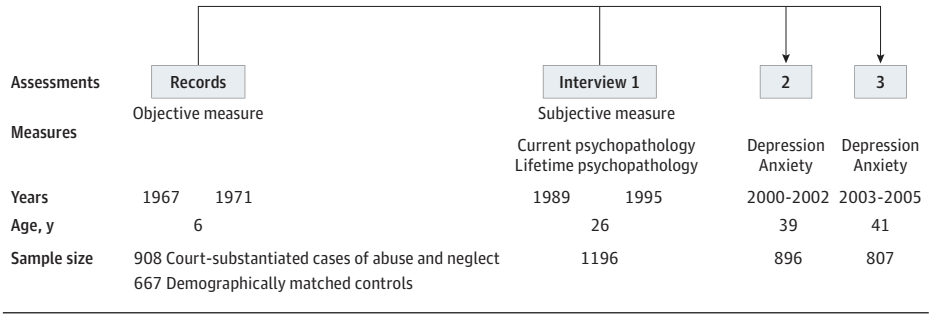
All interviews took place in the participant's home or other convenient location. The interviewers were not aware of the purpose of the study and the participant's group assignment. Similarly, the participants were not aware of the purpose of the study and were told that they had been selected to participate as part of a large group of individuals who grew up in their area in the late 1960s and early 1970s. Indiana University and State University of New York at Albany institutional review board approval was obtained at each wave of the study, and participants provided written, informed consent that they were participating voluntarily. The study followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guideline. Additional information is given in the eMethods in Supplement 1.

Measures

Objective Experience of Child Maltreatment

As previously described,[6] study participants from a metropolitan county of the US Midwest were identified as having an

Figure. Study Design



objective experience of maltreatment if they had court-substantiated records of abuse and/or neglect before the age of 12 years between 1967 and 1971. Court-substantiated records provide the legal standard on which child protection actions are based and thus provide the strongest possible evidence for the objective experience of child maltreatment. The construct captured by these measures is similar to that captured by more recent measures of childhood maltreatment, as evidenced by replication of findings from this cohort in more contemporaneous cohorts.[16,17]

Subjective Experience of Child Maltreatment

Study participants were identified as having a subjective experience of childhood maltreatment if they had retrospectively reported abuse and/or neglect that occurred before the age of 12 years, as assessed during interview 1. Because at the time of the assessment there was no criterion-standard self-reported measure of childhood maltreatment, we used multiple existing measures for each type of maltreatment. With regard to sexual abuse, we used 4 measures, all of which were adapted from previous work by Finkelhor and colleagues[18,19] and Russell[20] and are described by Widom and Morris.[21] With regard to physical abuse, we used 2 measures: the Conflict Tactics Scale[22] and the Self-Report of Childhood Abuse Physical.[23] With regard to neglect, there was no validated measure at the time of our assessment. (There is now a new retrospective measure that reflects distinct components of neglectful experiences and that has been validated against documented cases of childhood neglect.[24]) Therefore, we designed questions to cover a range of neglect experiences (ie, inadequate provision of food, clothing, shelter, and supervision) that were similar to the charges in the official neglect petition. Of note, measures of child neglect that are currently commonly used, such as the Conflict Tactics Scale or the Childhood Trauma Questionnaire,[25] ask questions that are similar to those used in our study.

Lifetime and Current Psychopathology

During interview 1, lifetime and current psychopathology were assessed during a 2-hour in-person interview using the *National Institute of Mental Health Diagnostic Interview Schedule, Version III Revised*[26] to permit *DSM-III*[27] diagnoses. The *Diagnostic Interview Schedule, Version III Revised* is a highly structured interview schedule designed for use by lay interviewers. Lifetime psychopathology represents depression and anxiety meeting diagnostic criteria at any point in a person's life, whereas current psychopathology reflects depression and anxiety diagnoses over the past year (the 12 months before the interview). Widom and colleagues[28,29] have previously published articles from this study using the same psychiatric assessment methods in leading psychiatric journals.

Prospective Measures of Course of Illness

To measure the course of depression and anxiety after the assessment of the subjective experience of childhood maltreatment (interview 1), we examined whether participants met the clinical symptom severity threshold for depression or anxiety diagnosis across the second and third interviews. Depression was assessed at interviews 2 and 3 using the Center for Epidemiologic Studies Depression Scale[30] with a past-week reporting period. The suggested cutoff score for the presence of clinically significant depressive symptoms in the general population is 20.[31] Anxiety was assessed at interviews 2 and 3 using the Beck Anxiety Inventory[32] with a past-week reporting period. The suggested cutoff score for clinically significant anxiety is 16.[33]

Statistical Analysis

Analyses were conducted between October 2021 and April 2022. To test the relative association of objective and subjective measures of child maltreatment with psychopathology, we identified 4 groups: (1) participants who had official records of childhood maltreatment but did not retrospectively recall the experience (objective-only measure), (2) participants who had official records and retrospectively recalled the experience (objective plus subjective measures), (3) participants who retrospectively recalled maltreatment during childhood but did not have official records of childhood maltreatment (subjective-only measure), and (4) participants who did not have official records or retrospective recall (no measure). The number of depressive or anxiety episodes (defined as the count of assessments when participants met the symptom severity clinical threshold for depression or anxiety diagnosis across interviews 2 and 3) in these 3 groups was then compared with the number of episodes in participants with no measures of childhood maltreatment using Poisson regression models.

To test the sensitivity of the results to various sources of artifact and bias, we reran group comparisons (1) using indi-

Table 1. Relative Associations of Subjective and Objective Measures of Childhood Maltreatment With the Number of Depression and Anxiety Episodes

	Measure, IRR (95% CI)			
	None (n = 262)	Objective only (n = 173)	Objective plus subjective (n = 492)	Subjective only (n = 252)
Child maltreatment				
Depression	Baseline	1.37 (0.89-2.11)	2.28 (1.65-3.15)	1.49 (1.02-2.18)
Anxiety	Baseline	1.40 (0.84-2.31)	2.30 (1.54-3.42)	1.58 (0.99-2.52)
Child physical abuse				
Depression	Baseline	0.52 (0.12-2.27)	1.76 (1.21-2.57)	1.61 (1.28-2.03)
Anxiety	Baseline	0.37 (0.05-2.63)	1.43 (0.90-2.25)	1.57 (1.21-2.03)
Child sexual abuse				
Depression	Baseline	2.00 (1.14-3.50)	1.89 (1.18-3.02)	1.73 (1.34-2.22)
Anxiety	Baseline	1.08 (0.47-2.47)	2.48 (1.60-3.86)	2.09 (1.59-2.75)
Child neglect				
Depression	Baseline	1.29 (0.96-1.73)	1.71 (1.32-2.20)	1.42 (1.02-1.99)
Anxiety	Baseline	1.33 (0.96-1.85)	1.92 (1.41-2.60)	1.61 (1.05-2.47)
Child maltreatment, adjusted for current psychopathology				
Depression	Baseline	1.24 (0.77-2.01)	2.04 (1.35-3.08)	1.38 (0.88-2.15)
Anxiety	Baseline	1.32 (0.80-2.17)	2.19 (1.46-3.28)	1.55 (0.98-2.44)
Child maltreatment, adjusted for lifetime psychopathology				
Depression	Baseline	1.33 (0.91-1.97)	1.93 (1.39-2.69)	1.34 (0.90-2.00)
Anxiety	Baseline	1.32 (0.81-2.15)	2.19 (1.46-3.29)	1.54 (0.98-2.45)

Abbreviation: IRR, incidence rate ratio.

vidual types of maltreatment as independent measures, (2) expanding the regression models to account for current psychopathology at the time of assessment of the subjective measure (interview 1), (3) expanding the regression models to account for lifetime psychopathology until the time of assessment of the subjective measure (interview 1), and (4) using the number of depressive or anxiety symptoms (defined as the total number of symptoms of depression or anxiety across interviews 2 and 3) as dependent measures with negative binomial regression models. Missing values in outcomes were imputed assuming missing at random or missing completely at random mechanisms using multiple imputation by chained equations in Stata, version 17 (StataCorp LLC) software. All statistical tests were 2-sided. All analyses were performed using Stata, version 17.

Results

Interviews were conducted for each follow-up phase of the study. Interview 1 (follow-up years 1989 to 1995) included 1196 participants (582 female [48.7%] and 614 male [51.3%]; mean [SD] age, 29.3 [3.8] years; 417 Black [34.9%], 45 Hispanic [3.8%], and 752 White [62.9%]). Interview 2 (follow-up years 2000 to 2002) included 896 participants (457 female [51.0%] and 439 male [49.0%]; mean [SD] age, 39.5 [3.5] years; 421 Black [35.2%], 36 Hispanic [4.0%], and 557 White [62.2%]. Interview 3 (follow-up years 2003 to 2005) included 807 participants (427 female [52.9%] and 380 male [47.1%]; mean [SD] age, 41.2 [3.5] years; 301 Black [37.3%], 32 Hispanic [4.0%], and 487 White [60.4%]).

Associations of Objective and Subjective Experiences of Childhood Maltreatment With Chronicity of Emotional Disorders in Adulthood

Young adults who retrospectively recalled childhood maltreatment had a greater number of depressive and anxiety episodes over the subsequent decade than peers who did not recall maltreatment (depression: incidence rate ratio [IRR], 1.75 [95% CI, 1.39-2.21]; anxiety: IRR, 1.87 [95% CI, 1.40-2.50]). Furthermore, young adults with official records of childhood maltreatment had a greater number of depressive and anxiety episodes than peers without such records (depression: IRR, 1.67 [95% CI, 1.34-2.08]; anxiety: IRR, 1.59 [95% CI, 1.23-2.04]). The groups identified by retrospective recall or official records of childhood maltreatment were largely nonoverlapping (Cohen κ, 0.25) (eTable 1 in Supplement 1), highlighting the need to test the relative contribution of the 2 different constructs by investigating 4 subgroups.

Participants with an objective-only measure had a similar number of depressive or anxiety episodes in adulthood as those with no measure of childhood maltreatment (depression: IRR, 1.37 [95% CI, 0.89-2.11]; anxiety: IRR, 1.40 [95% CI, 0.84-2.31]). In contrast, participants with objective plus subjective measures had a greater number of depressive or anxiety episodes than those with no measure (depression: IRR, 2.28 [95% CI, 1.65-3.15]; anxiety: IRR, 2.30 [95% CI, 1.54-3.42]). Furthermore, participants with a subjective-only measure had a greater number of depressive episodes than those with no measure (IRR, 1.49 [95% CI, 1.02-2.18]) and a greater number of anxiety episodes, although the latter difference was not statistically significant (**Table 1**).

Because the agreement between objective and subjective measures was inconsistent across different types of child maltreatment (eTable 1 in Supplement 1) and because different types of child maltreatment showed inconsistent bivariate associations with depression or anxiety (eTable 2 in Supplement 1), we tested whether the associations of objective or subjective measures of childhood maltreatment with the number of depressive or anxiety episodes varied as a function of maltreatment type. We found that the pattern of associations described earlier was broadly invariant across maltreatment types (Table 1). However, for childhood physical abuse, participants with objective plus subjective measures did not show a greater number of anxiety episodes (IRR, 1.43; 95% CI, 0.90-2.25) than the participants with no maltreatment measure. Furthermore, for sexual abuse, participants with objective-only measures showed a greater number of depressive episodes (IRR, 2.00; 95% CI, 1.4-3.50) than participants with no maltreatment measure.

Contribution of Current and Lifetime Psychopathology

Because current psychopathology could negatively bias autobiographical memory,[12] greater chronicity of depression or anxiety in participants who retrospectively recalled maltreatment in childhood (those with either objective plus subjective or subjective-only measures) could have been artificially inflated. Consistent with this hypothesis, current psychopathology at the time of retrospective recall (interview 1) was associated with both the subjective experience of childhood maltreatment[6] and greater chronicity of emotional disorders in subsequent years (depression: IRR, 2.12 [95% CI, 1.71-2.63]; anxiety: IRR, 2.38 [95% CI, 1.48-3.81]). To test this potential artifactual explanation for the findings, we expanded the regression models to account for current depression or anxiety at the time of retrospective recall. In these analyses, we found that participants with the objective plus subjective measures had a greater number of depressive and anxiety episodes (depression: IRR, 2.04 [95% CI, 1.35-3.08]; anxiety: IRR, 2.19 [95% CI, 1.46-3.28]); however, participants with the subjective-only measure did not (Table 1).

Even in the absence of current psychopathology, residual memory biases might have persisted after remission of lifetime psychopathology as stable vulnerability factors.[6,7] Furthermore, previous psychopathology could have biased previous recall of maltreatment, and such biased recall of maltreatment might have been endorsed after remission.[6,7] Consistent with this hypothesis, lifetime psychopathology (prior to interview 1) was associated with both the subjective experience of childhood maltreatment[6] and greater chronicity of emotional disorders in subsequent years (depression: IRR, 2.14 [95% CI, 1.75-2.61]; anxiety: IRR, 2.18 [95% CI, 1.38-3.45]). To test these potential artifactual explanations for our findings, we expanded the regression models to account for lifetime depression or anxiety until the time of retrospective recall. In these analyses, we found that participants with the objective plus subjective measures had a greater number of depressive and anxiety episodes (depression: IRR, 1.93 [95% CI, 1.39-2.69]; anxiety: IRR, 2.19 [95% CI, 1.46-3.29]); however, participants with the subjective-only measure did not (Table 1).

Relative Associations of Objective and Subjective Experiences of Childhood Maltreatment With Chronicity of Emotional Symptoms in Adulthood

These analyses focused on categorical measures of psychopathology (above the clinical symptom severity threshold) to test the association between childhood maltreatment and the number of depressive or anxiety episodes in adulthood. In addition, we looked at the total number of symptoms across interviews 2 and 3 to investigate the chronicity of depression and anxiety symptoms after the assessment of the subjective experience of childhood maltreatment. In these sensitivity analyses, we found patterns of findings similar to those described earlier (**Table 2**; eTable 3 in Supplement 1).

Discussion

The associations seen in this study between childhood maltreatment and poor course of emotional disorders over the subsequent decade were largely attributable to the subjective experience of maltreatment, which was partly explained by continuity in psychopathology. We have clarified the origins of these associations. The subjective experience of childhood maltreatment was associated with subsequent greater chronicity of emotional disorders, whether or not subjective appraisal was consistent with objective measures based on official court records. In contrast, the objective experience of childhood maltreatment (even for severe cases of maltreatment identified through official court records) was not associated with greater chronicity of emotional disorders in the absence of a subjective appraisal. The findings were largely invariant across different types of maltreatment, emotional disorders, and measures of course of illness. Building on previous work,[6] findings of the longitudinal, prospective analyses reported here show that the subjective experience of childhood maltreatment was also associated with a poor course of emotional disorders in the subsequent decade, whereas the objective experience was not. The clinical implications of these findings are that, even in the absence of documented evidence of childhood maltreatment, clinicians can use information provided by their clients to identify those at greater risk for a subsequent poor course of emotional disorders.

We have also clarified the mechanisms underlying these associations. Current and past psychopathology may contribute to a subsequent poor course of emotional disorders in participants with subjective experiences of childhood maltreatment. Although the associations between objective plus subjective measures and course of emotional disorders remained statistically significant, the associations between subjective-only measures and course of emotional disorders did not. These findings may reflect artifactual explanations, such as memory biases linked to past or current psychopathology.[12] In this scenario, etiologic studies that do not account for the continuity of psychopathology and related memory biases involved in the maintenance of depression and anxiety[34-36] may detect nonspecific and overinflated effect sizes. However, if causal associations between the subjective experience and psychopathology were already present prior to or at the time of

Table 2. Relative Associations of Subjective and Objective Measures of Childhood Maltreatment With the Number of Depressive and Anxiety Symptoms

	Measure, IRR (95% CI)			
	None (n = 262)	Objective only (n = 173)	Objective plus subjective (n = 492)	Subjective only (n = 252)
Child maltreatment				
Depressive symptoms	Baseline	1.21 (0.99-1.47)	1.55 (1.32-1.82)	1.27 (1.05-1.54)
Anxiety symptoms	Baseline	1.05 (0.79-1.41)	1.60 (1.30-1.97)	1.27 (0.99-1.61)
Child physical abuse				
Depressive symptoms	Baseline	1.00 (0.59-1.73)	1.37 (1.10-1.71)	1.30 (1.15-1.47)
Anxiety symptoms	Baseline	0.90 (0.53-1.55)	1.45 (1.10-1.91)	1.36 (1.17-1.58)
Child sexual abuse				
Depressive symptoms	Baseline	1.31 (0.93-1.87)	1.52 (1.12-2.06)	1.37 (1.16-1.62)
Anxiety symptoms	Baseline	1.14 (0.74-1.76)	1.79 (1.30-2.46)	1.49 (1.25-1.78)
Child neglect				
Depressive symptoms	Baseline	1.12 (0.95-1.32)	1.39 (1.20-1.60)	1.18 (0.97-1.43)
Anxiety symptoms	Baseline	1.08 (0.91-1.29)	1.49 (1.23-1.80)	1.34 (1.06-1.69)
Child maltreatment, adjusted for current psychopathology				
Depressive symptoms	Baseline	1.21 (0.99-1.48)	1.47 (1.26-1.72)	1.18 (0.99-1.41)
Anxiety symptoms	Baseline	1.06 (0.82-1.38)	1.57 (1.28-1.93)	1.24 (0.98-1.58)
Child maltreatment, adjusted for lifetime psychopathology				
Depressive symptoms	Baseline	1.19 (0.98-1.43)	1.45 (1.25-1.68)	1.19 (1.00-1.41)
Anxiety symptoms	Baseline	1.07 (0.82-1.39)	1.58 (1.29-1.94)	1.26 (0.99-1.60)

our assessment of the subjective experience (interview 1), the observed attenuation of the associations between the subjective experience and emotional disorders at interviews 2 and 3 could indicate mediation by psychopathology at interview 1 (or before), further supporting the association between the subjective experience and the course of emotional disorders in adulthood.

Limitations

This research should be interpreted in the context of some limitations. First, the results might be affected by misclassification. Because of their lower sensitivity, objective measures might not have captured all study participants with an objective experience of childhood maltreatment. In the presence of this type of misclassification, some participants who had objective-only measures would have been classified as having no measure of childhood maltreatment. However, because participants with no or objective-only measures had a similar course of emotional disorders, this type of misclassification would not have affected the overall conclusions. Furthermore, some participants who had objective plus subjective measures would have been classified as having a subjective-only measure of childhood maltreatment. Because participants with a subjective-only measure had a similar or better course of emotional disorders than those with objective plus subjective measures, this type of misclassification would have either not affected the overall conclusions or would have led to overestimation of risk in participants with a subjective-only measure. Another type of misclassification might have originated from nondisclosure of a subjective experience of childhood maltreatment (eg, because of shame or fear of harming the perpetrator). In the presence of this type of misclassification, some participants who had objective plus subjective measures would have been classified as having an objective-only measure of childhood maltreatment, leading to a possible overestimation of risk in participants with an objective-only measure. This misclassification is a possible explanation for the heightened depression chronicity we observed in participants with an objective-only measure of childhood sexual abuse. Furthermore, some participants who had a subjective-only experience would have been classified as having no measure of childhood maltreatment, possibly leading to an overestimation of the base rate of chronicity among participants with no experience of childhood maltreatment. Therefore, overall, none of these potential mechanisms of misclassification would have significantly biased our interpretation of the results.

Second, our test for the role of continuity of psychopathology focused on past emotional disorders, assuming homotypic continuity because of the proven memory biases linked to emotional disorders.[12] However, heterotypic continuity might also have a role that should be further investigated. In addition, the measures of psychopathology at interview 1 and at interviews 2 and 3 were different. However, we found that caseness on the diagnostic interview at age 29 years was associated with later caseness based on the question-

naires at ages 39 and 41 years, supporting continuity of psychopathology based on these measures.

Third, unmeasured variables such as age at, severity of, or duration of the objective maltreatment experience might be associated with stronger memory encoding and later recall (subjective experience). In this way, the subjective experience may be more likely to become associated with psychopathology than the objective experience, even in the absence of direct associations. Further research is needed to test the role of these variables.

Conclusions

In conclusion, the findings of this cohort study suggest that the subjective experience of childhood maltreatment is associated with the course of emotional disorders in adult life. A better understanding of the mechanisms that maintain and exacerbate the subjective experience could provide novel insight into developing effective therapeutic interventions.

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Concept and design: Both authors.
Acquisition, analysis, or interpretation of data: Both authors.
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