

Overgrepsutsatte mødre opplever oftere adferdsproblemer hos barna sine

NKVTS > Aktuelt > Overgrepsutsatte mødre opplever oftere adferdsproblemer hos barna sine

10.01.2014

Mødre som ble utsatt for overgrep i barndommen, opplever mer uro og oppmerksomhetssvikt hos barna sine enn de som ikke var overgrepsutsatt, viser fersk studie. Funnene kan brukes til å hindre at dårlig mental helse videreføres gjennom generasjoner.

– Vi vet at vold og seksuelle overgrep i barndommen har konsekvenser for mental helse senere i livet. Men få studier har hittil sett på om det også kan ha konsekvenser for neste generasjon. Denne studien viser en slik sammenheng, sier barnelege og doktorgradsstipendiat Mia Myhre ved NKVTS.

Artikkelen heter "[Maternal childhood abuse predicts externalizing behaviour in toddlers: A prospective cohort study](#)", og er en del av Myhres doktorgradsavhandling "Infants and toddlers at risk: injuries, abuse and behavioral problems."

Viser tydelig sammenheng

– Mødre som har opplevd emosjonelle, fysiske eller seksuelle overgrep før fylte 18 år, rapporterer om mer uro og oppmerksomhetssvikt hos barna sine enn de som ikke har opplevd slike overgrep, forteller Myhre.

– Vi fant omtrent like stor effekt av emosjonelle overgrep som av fysiske eller seksuelle overgrep, noe som er litt overraskende.

– Selv om det var en klar og robust statistisk sammenheng, er viktig å huske at dataene er hentet fra et stort normalmateriale hvor de aller fleste barna også av overgrepsutsatte mødre hadde adferd innenfor normalvariasjonen, presiserer hun.

25 000 mødre deltok i undersøkelsen

– Datagrunnlaget er hentet fra Den norske mor og barn-undersøkelsen, som gjennomføres i regi av Folkehelseinstituttet, forteller Myhre.

– Vårt utvalg bestod av 25 000 mødre og barn-par, hvor moren har svart på flere spørreskjemaer om blant annet egen helse og barnets oppførsel når det er rundt tre år.

Påvirket av mors mentale helse

– Studien viser at mors mentale helse en viktig overføringsmekanisme, sier Myhre, og forklarer:

– Overgrep i barndommen gir økt risiko for en dårligere mental helse, og en dårlig mental helse hos moren gir økt risiko for adferdsproblemer hos barnet.

– Men vi ser også at det er en sammenheng mellom morens opplevelser i barndommen og hennes barns oppførsel, uavhengig av morens mentale helse. Det må derfor være andre faktorer enn de vi har undersøkt som også har betydning.

Funnene viktige for hjelpeapparatet

– Sammenhengene som er påvist i studien, gir noen råd til helsepersonell. Dersom det er bekymring for adferden til små barn er det viktig å også ha fokus på morens mentale helse. Som ledd i dette er det nyttig å kartlegge om hun har opplevd overgrep i barndommen – enten det er emosjonelle, fysiske eller seksuelle. Dette er viktig for å kunne tilby moren riktig hjelp og behandling, mener Myhre.

– Omvendt er det også viktig å spørre mødre som sliter med mentale problemer om de har bekymringer relatert til adferd hos barnet, for å kunne tilby veiledning og hjelp der dette er nødvendig.

Kan bryte ond sirkel

– Klarer vi å hjelpe moren til å få en bedre mental helse, vil det kunne ha positiv innvirkning på barnets mentale helse og dermed bryte en ond sirkel.

ORIGINAL ARTICLE

Maternal childhood abuse predicts externalizing behaviour in toddlers: A prospective cohort study

MIA C. MYHRE^{1,2}, GRETE A. DYB^{1,3}, TORE WENTZEL-LARSEN^{1,4}, JENS B. GRØGAARD² & SIRI THORESEN¹

¹Norwegian Centre for Violence and Traumatic Stress Studies, Oslo, Norway, ²Department of Paediatrics, Oslo University Hospital, Oslo, Norway, ³Institute of Clinical Medicine, University of Oslo, Oslo, Norway, and ⁴Centre for Child and Adolescent Mental Health, Eastern and Southern Norway, Norway

Abstract

Aims: To investigate the impact of maternal childhood abuse on toddlers' behaviour and assess the potential mediation of maternal mental distress for this pathway. **Methods:** This study was based on the Norwegian Mother and Child Cohort Study, conducted by the Norwegian Institute of Public Health. **The study sample consisted of 25,452 children and their mothers.** Maternal childhood abuse was investigated as a potential predictor for child externalizing behaviour at 36 months of age. Maternal mental distress at child age 18 months was assessed as a potential mediator. Hierarchical linear regressions were used for analyses. **Results:** Childhood emotional abuse alone was reported by 8.3% of the mothers and physical and/or sexual abuse by 8.9%. **Mothers with childhood abuse experiences were younger, less educated, more at risk for adult abuse and mental distress, and fewer were married or lived with a partner compared with women not reporting childhood abuse.** Children of mothers with childhood abuse experiences showed significantly more externalizing behaviour even after adjusting for maternal age, education, single motherhood, gender and adult abuse experiences. When maternal mental health was entered into the model, the associations remained statistically significant, but were substantially attenuated. **Conclusions: Maternal childhood abuse consistently predicted increased externalizing behaviour in the offspring, and this study suggests that childhood abuse impacts subsequent generations. Multiple pathways are possible, but this study identified increased maternal mental distress as a possible pathway between maternal childhood abuse and increased externalizing behaviour in the offspring.**

Key Words: Child behaviour, childhood abuse, mental health, psychological distress, the Norwegian Mother and Child Cohort Study

Introduction

Child abuse is a widespread problem in society. Prevalence estimates vary between studies and populations, but even the lowest estimates describe child abuse as a major public problem with a large number of victims [1,2]. Three forms of abuse are recognized: emotional or psychological abuse, physical abuse and sexual abuse [2]. Studies have shown that the various forms of abuse are interrelated and that exposure to more than one type is common [3–5].

A large body of research supports that all types of abuse experiences in childhood are linked with negative mental health outcomes [1,4,6], and several

studies have demonstrated an association between maternal mental health problems and emotional and behavioural difficulties in their children [7–9]. The life-long consequences of childhood abuse are therefore likely to affect the children, and intergenerational transmission of problems has been described where children of mothers exposed to childhood abuse seem to be at an increased risk of adjustment problems [10–12]. In a previous study, both maternal childhood sexual and physical abuse was found to be associated with increased internalizing and externalizing behaviours in a high risk sample [10], and in one

Correspondence: Mia C. Myhre, Norwegian Centre for Violence and Traumatic Stress Studies, Postbox 181 Nydalen, N-0409 OSLO, Norway.
Email: m.c.myhre@nkvtst.unirand.no

(Accepted 7 October 2013)

© 2013 the Nordic Societies of Public Health
DOI: 10.1177/1403494813510983

population-based study, maternal childhood emotional abuse as well as sexual and physical abuse was found to be associated with poorer behavioural trajectories [11]. In the youngest children, externalizing behaviours are among the most common complaint regarding adjustment [13], and may also be related to maternal childhood abuse [10]. Less is known about the mechanisms involved, but maternal mental health problems with subsequent parenting difficulties are likely to be of importance [7,10–12,14]. Furthermore, several studies have demonstrated that children of abused mothers have an increased risk of growing up in harsh and stressful environments, including an increased risk of being exposed to domestic violence and abusive parenting [15].

In summary, previous research suggests a link between maternal childhood abuse and behavioural difficulties in their offspring. Most of the previous studies that have investigated these relationships are from clinical or high risk samples. However, the large number of childhood abuse victims and the common long-term consequences point to a public health problem, and emphasize the importance of understanding the mechanisms involved. To address this issue further, the aim of this study was to investigate if maternal childhood abuse was associated with increased externalizing behaviour in toddlers in a population-based sample. Mental distress is a well-established consequence of exposure to abuse and a risk factor for problems in offspring. Thus, maternal mental may represent a mechanism through which maternal exposure to abuse in childhood can influence their children's behavior. Maternal mental distress was therefore investigated as a potential mediator. The Norwegian Mother and Child Cohort study (MoBa), with its comprehensive data collection on mother-child dyads over several waves, offered a valuable opportunity to assess this relationship longitudinally.

Material and methods

This study used data from the Norwegian Mother and Child Cohort Study (MoBa). MoBa is a prospective population-based pregnancy cohort study conducted by the Norwegian Institute of Public Health [16]. The main aim of the MoBa study is to detect early signs of childhood diseases including rare conditions for which a very large sample size was needed. Participants were recruited from all over Norway in 1999–2008, through postal invitations prior to routine ultrasound examinations at their local hospitals at approximately week 17 of gestation, and 38.5% of invited women consented to participate. The cohort now includes 108,000 children,

90,700 mothers and 71,500 fathers. Blood samples were obtained from both parents during pregnancy and from mothers and children (umbilical cord) at birth. Follow-up is conducted by questionnaires over several waves and by linkage to national health registries. Several sub-studies are conducting additional collections of data and biological materials. Informed consent was obtained from each participant upon recruitment. The Regional Committee for Medical Research Ethics in South-Eastern Norway and the Norwegian Data Inspectorate approved the study. Details of the MoBa study sampling, design, questionnaires, informed consent processes, and data collection strategies have been reported elsewhere (www.fhi.no/morogbarn) [16].

Although recruitment to the study is complete, data collection is an on-going process. The current study is based on version IV of the quality-assured data files released for research in February 2009. Information from the Medical Birth Registry of Norway, MBRN, was also available (www.fhi.no/mfr). The current sample comprises the first 25,452 mother-child dyads (including 23,805 unique mothers) with children born 2001–2005.

Measures

We used data from four separate waves of the MoBa study, collected at gestational weeks 17 and 30, and at child ages 18 and 36 months. The mother reported both for herself and the child.

Child behaviour. Child externalizing behaviour was assessed when the child reached 36 months of age using 11 items from the Child Behaviour Checklist (CBCL) for ages 1.5 to 5 years [17]. Seven items measured aggressiveness, and four items measured attention problems. All items were rated “not true” = 0, “somewhat or sometimes true” = 1, and “very true or often true” = 2. Cronbach's α was 0.74.

Maternal abuse. Maternal experiences of abuse were assessed in late pregnancy with four items: 1) degradation or humiliation: “Someone has over a long period of time systematically tried to subdue, degrade or humiliate you”, 2) threats: “Someone has threatened to hurt you or someone close to you”, 3) physical abuse: “You have been subjected to physical abuse” and 4) sexual abuse: “You have been forced to perform sexual acts”. The choice of response was “no, never”, “yes, as a child (under 18 years of age)” and/or “yes, as an adult (over 18 years of age)”. The questions were based on the Norvold Abuse Questionnaire (NorAq) [18]. An affirmative answer to item 1 and/or 2 but not 3 or 4 was classified as “Emotional

Table I. Prevalence of maternal childhood abuse in the Norwegian Mother and Child Cohort Study.

Childhood abuse categories	Questionnaire items responses ($N = 24,900$) ^a				
	Degradation or humiliation % (n)	Threats % (n)	Physical abuse % (n)	Sexual abuse % (n)	Total % (n)
Emotional abuse alone	7.5% (1874)	1.6% (397)	–	–	8.4% (2100)
Sexual and/or physical abuse	3.7% (917)	2.2% (541)	4.8% (1207)	6.4% (1592)	9.1% (2260)
Total	11.2% (2791)	3.8% (938)	4.8% (1207)	6.4% (1592)	17.1% (4360)

^aMissing rate 2.2%.

abuse alone”. An affirmative answer to item 3 and/or 4 was classified as “Physical and/or sexual abuse”, including also those with additional emotional abuse due to the likelihood of elements of emotional abuse being present together with physical or sexual abuse. Separate categories were created for childhood (<18 years) and adult experiences.

Maternal mental health. The mother’s mental health was assessed with the Symptom Checklist SCL-8, which is an 8-item short version of the Hopkins Symptom Checklist [19] when the child was 18 months of age. The SCL-8 is designed to measure psychological distress, particularly anxiety and depression, in population surveys. Each item has four response categories, ranging from “not at all” = 1 to “severe” = 4. Cronbach’s α was 0.84.

Sociodemographic information. Demographic information regarding maternal age and education was reported at inclusion. The mother’s marital status at child age 18 months was applied. Information regarding the child’s sex was retrieved from the MBRN. Data on ethnicity were not available at the individual level in this study. However, the MoBa cohort comprised predominantly ethnic Norwegian and Scandinavian families (95%) [16].

Statistical Analyses

For comparison between groups, chi-squared tests were used for categorical variables and one-way ANOVA was used for continuous variables. For pairwise comparisons, post-hoc tests with Holm correction were used for chi-squared tests and Scheffé correction was used for ANOVA.

Maternal childhood abuse was investigated as a predictor for externalizing behaviour in children using hierarchical linear regression with a Generalized Estimating Equation (GEE) approach to account for clustering due to the inclusion of siblings in the study sample. The potential mediation of maternal mental distress was tested using the four steps suggested by

Baron and Kenny [20]: Step 1: The relationship between maternal childhood abuse and child behaviour was assessed without the suggested mediator (maternal mental health) in the model; Step 2: The relationship between maternal childhood abuse and mental health was assessed; Steps 3 and 4: The relationship between maternal childhood abuse and child behaviour was assessed with the suggested mediator in the model. The mediation effect was then tested with the Sobel test.

In all analyses, we used two-sided tests and a significance level of $p < .05$. Multicollinearity among the predictors was assessed by variance inflation factors and did not suggest any problem. Stratification by child gender produced only minor differences in effect estimates. The rate of missing information on single items ranged from 0% to 3.0%. Modelling was based on 20 multiply-imputed datasets. Multivariate Imputation by Chained Equations (MICE) was used for imputations. All analyses were performed using R (The R Foundation for Statistical Computing, Vienna, Austria) with the R packages *gee* for GEE analyses and *mice* for multiple imputation.

Results

Maternal age ranged from 14 to 47 years, with a mean of 29.7 years ($SD = 4.4$). Only 0.9% ($N = 252$) of the sample were teenage mothers. The majority of mothers (60.5%) had completed more than 12 years of education, 4% of mothers were unemployed or disabled, and 3.2% ($N = 801$) were not living with a partner. The study sample comprised 50.7% boys.

A total of 17.5% ($N = 4360$) of the mothers responded affirmatively to at least one out of the four childhood abuse questions. Childhood emotional abuse alone was reported by 8.4% ($N = 2100$), and childhood physical and/or sexual abuse by 9.1% ($N = 2,260$); of the latter, 1074 mothers (41.3%) reported emotional abuse in addition to the physical and/or sexual abuse (Table I).

Mothers, who reported childhood abuse experiences were younger, less educated and fewer were

married or lived with a partner compared with women not reporting childhood abuse (Table II). Childhood abuse was associated with abuse in adult life and mothers with childhood abuse experiences reported more mental distress themselves, as well as more externalizing behaviour in their children at 3 years of age compared with mothers without such experiences. Comparing the two abuse categories, those exposed to physical and/or sexual abuse in childhood were more at risk for adult abuse and mental distress than those who had experienced emotional abuse alone (Table II, b vs. c). However, there was no significant difference in child externalizing behaviour between the two abuse categories.

The association between maternal childhood abuse and child externalizing behaviour withstood adjustment for maternal age, education, single motherhood, gender and adult abuse experiences (Model 1, Table III). To test if maternal mental health was a mediator between maternal childhood abuse and externalizing behaviour in the offspring, maternal mental health was added in Model 2. The relationship remained statistically significant (Model 2, Table III), but was substantially attenuated, as confirmed by the Sobel test (test statistics for emotional abuse alone 11.8, SE 0.017, $p < .001$ and physical and/or sexual abuse 12.7, SE 0.017, $p < .001$). Externalizing behaviour did not differ significantly between the two exposure groups (Table III). An increase in the regression coefficient of 0.5–0.6 in the crude analyses and 0.2–0.4 in the adjusted model for a 0–22-point scale may not be of clear clinical significance, but the results showed a consistent positive prediction towards more behavioural difficulties in children of exposed mothers.

In addition to childhood abuse, adult abuse experiences were also associated with externalizing behaviour in the offspring. Emotional abuse alone did not remain significant after adjustment for maternal mental health, and adult physical/sexual abuse was only marginally significant (Model 2, Table III), indicating a near fully mediation of mental health for these relationships.

Discussion

The current population-based study of mother–child dyads found that mothers who had experienced abuse in childhood reported more externalizing behaviour in their children at 3 years of age compared with mothers without such experiences. This finding indicates that childhood abuse have consequences also for the next generation. Our findings confirm and expand on the limited previous population based research, which has suggested an association between maternal childhood

Table II. Sociodemographic characteristics, maternal mental health and child behaviour at 3 years of age for the different categories of maternal childhood abuse, and comparisons between the categories.

Characteristics	Maternal childhood abuse $n = 24,900$			Comparison between the categories of childhood abuse ^{a, b}			
	No, never (a) 82.5% (20,540)	Emotional abuse alone (b) 8.4% (2100)	Physical and/or sexual abuse (c) 9.1% (2260)	Overall test statistics	a vs. b	a vs. c	b vs. c
	% (n) / mean (SD)			p			
Maternal age	29.9 (4.3)	29.0 (4.6)	29.3 (5.0)	< .001	< .001	< .001	< .001
Maternal education ≤ 12 years	35.3% (7046)	40.9% (829)	50.1% (1088)	< .001	< .001	< .001	< .001
Not living with a partner	2.6% (530)	4.7% (97)	6.3% (140)	< .001	< .001	< .001	.022
Maternal adult abuse				< .001	< .001	< .001	< .001
No, never ($N = 20,423$)	84.6% (17,377)	70.9% (1477)	65.0% (1442)				
Emotional abuse alone ($N = 2602$)	9.0% (1840)	16.9% (352)	17.5% (388)				
Physical and/or sexual abuse ($N = 1990$)	6.4% (1323)	12.2% (254)	17.6% (390)				
Maternal mental distress (mean 1–4)	1.24 (0.32)	1.40 (0.45)	1.43 (0.48)	< .001	< .001	< .001	.025
Child externalizing behaviour (0–22)	5.40 (3.07)	6.03 (3.26)	5.94 (3.34)	< .001	< .001	< .001	.62

^aChi-square tests were used for comparison between categorical variables and one-way ANOVA between continuous variables.

^bPost hoc p values for pairwise comparisons using Scheffé correction for ANOVA and Holm correction for chi-square tests.

Table III. Hierarchical regression with maternal childhood abuse as predictor of externalizing behavior in the offspring ($N = 25,452$).^a

	Univariate		Model 1 ^c		Model 2 ^c	
	B (95% CI) ^b	<i>p</i>	B (95% CI) ^b	<i>p</i>	B (95% CI) ^b	<i>p</i>
Maternal childhood abuse						
Emotional abuse alone vs. no, never	0.64 (0.49, 0.79)	< .001	0.55 (0.41, 0.69)	< .001	0.35 (0.20, 0.49)	< .001
Physical and/or sexual abuse vs. no, never	0.56 (0.41, 0.71)	< .001	0.41 (0.26, 0.56)	< .001	0.19 (0.04, 0.33)	.012
Physical and/or sexual abuse vs. Emotional abuse alone	0.08 (-0.12, 0.28)	.428	0.14 (-0.006, 0.34)	.164	0.16 (-0.0, 0.34)	.105
Maternal adult abuse						
Emotional abuse alone vs. no, never	0.34 (0.21, 0.475)	< .001	0.25 (0.12, 0.39)	< .001	0.11 (-0.022, 0.24)	.10
Physical and/or sexual abuse vs. no, never	0.43 (0.28, 0.58)	< .001	0.32 (0.17, 0.47)	< .001	0.15 (0.005, 0.30)	.043
Maternal mental health	0.19 (0.18, 0.21)	< .001			0.18 (0.16, 0.19)	< .001

^aModelling based on 20 multiply imputed datasets.

^bB = unstandardized regressions coefficient.

^cAdjusted for maternal age, maternal education, maternal marital status and child's gender.

abuse and offspring adjustment [11,12]. In addition, the longitudinal design of the current study made it possible to investigate potential mediation. Our result suggests that increased maternal mental distress partly accounted for the relationship between maternal childhood abuse and increased externalizing behaviour in their children, and may be a partial mediator of the relationship. To our knowledge this has not been demonstrated in other population based studies. However, the association between maternal childhood abuse and child behaviour remained significant also after the adjustment for mental health, indicating that there must be other pathways as well. Important factors not assessed in our study include biological factors, parenting style and paternal factors. On the other hand, the relationship between maternal adult abuse and child externalizing behaviour was almost completely mediated by mental health. This suggests that established mechanisms between maternal mental distress and behaviour in offspring predominantly accounted for the relationship [9].

In line with previous literature describing long-term consequences of childhood abuse on social functioning, mental health and later victimization [1,4–6,12], we found that childhood abuse experiences were associated with lower levels of education, single motherhood, maternal mental distress and later exposure to abuse. However, adjustment for these factors only slightly attenuated the relationship between maternal childhood experiences and increased externalizing behaviour in the children in the children. The stable relationship of childhood experience emphasizes how early adversities may have long-term and intergenerational consequences.

To our surprise, our study showed that maternal childhood emotional abuse alone was as strong a predictor of behavioural problems in the children as

physical and/or sexual abuse. Several studies confirm a strong independent association between childhood emotional abuse and mental health problems later in life [21,22], and one comparable study also found a significant association between childhood emotional abuse and adjustment of offspring [11]. Our study suggests that childhood emotional abuse may affect parenthood, but further research is needed to confirm this association. Nevertheless, the result highlights that it is important to assess also emotional abuse in future studies of the consequence of childhood abuse.

There are some important limitations to this study. A response rate of 38.5% suggests a selection bias, and comparisons with national registry data have shown that women with the highest education level were overrepresented, and that the youngest women (<25 years), those living alone, mothers with >2 previous births and with previous stillbirth were strongly underrepresented [16,23]. The study sample may then be regarded as representing a low-risk population and the prevalence of risk factors and adversities, such as childhood abuse, are likely to be underestimated. However, few significant differences in exposure-outcome associations have been identified in studies of this cohort [23]. Furthermore, the sample comprised predominantly ethnic Norwegian participants, and did not allow us to investigate the influence of ethnicity or culture. Sampling strategies that ensure a better representation of the general population, including the immigrant population and high-risk groups, would be valuable in future epidemiological research on adversities in childhood. Preferably, further studies should also include both parents.

Retrospective reports of adverse childhood experiences are likely to involve measurement errors, but are nevertheless regarded to have a worthwhile place

in research [24]. Forgetfulness, denial, misunderstanding, and embarrassment may result in false negative reports [1,25]. On the other hand, studies indicate that few individuals report a false history of abuse [26]. Maternal childhood abuse was assessed in late pregnancy with four questions. The two questions assessing emotional abuse were descriptive and behaviour-specific. Physical and sexual abuse was assessed by single, broad labelling questions. Such labelling has been demonstrated to result in lower positive responses, compared with descriptive questions, and may have contributed to false negative reports [27].

Reliance on the mother as single informant may have affected the response accuracy. Parents have been found to report more externalizing behaviour in their children than teachers and other professionals [28]. However, parental report of externalizing behaviour has been shown to be predictive of later problem behaviour [28]. Behaviour at 3 years of age may not be a stable construct, and further research on trajectories is needed to identify children with persistent problems more accurately [13]. Maternal mental health may influence the perception of child behaviour, and the result could be influenced by shared method variance, and hence an over-estimation of the associations is possible [29].

As in other large population studies, abbreviated scales were used. Items from the CBCL were selected by consensus among specialists in clinical and developmental psychology with an aim towards maintaining content validity. However, the scale abbreviation may represent the original construct less accurately. The strengths of this study included its large sample size and prospective design with assessment of many potentially important variables several times making it possible to assess mediation.

The large sample size may have led to the detection of statistically significant effects that are not necessarily clinically relevant per se. Nevertheless, this study indicated a trend towards more behavioural difficulties in children of mothers exposed to childhood abuse, and the longitudinal design of the study supports a parent-to-child directionality. The low risk profile of the sample and the identification of this association in a Scandinavian welfare state add support to the robustness of the observation. Intergenerational transmission of adversity is a major challenge to public health and effort to break this cycle may profit from a focus on all three aspects discussed in this article; Childhood abuse, maternal mental health and child behaviour. Furthermore, our study demonstrated that a family perspective is essential in the evaluation of long-term negative public health consequences related to childhood abuse, and should be integrated

in future research as well as in future prevention strategies.

Acknowledgements

We are grateful to all the participating families in Norway who take part in this on-going cohort study.

Conflicts of interest

None declared.

Funding

The Norwegian Mother and Child Cohort Study is supported by the Norwegian Ministry of Health and the Ministry of Education and Research, NIH/NIEHS (contract no NO-ES-75558), NIH/NINDS (grant no. 1 UO1 NS 047537-01), and the Norwegian Research Council/FUGE (grant no. 151918/S10). The current study did not receive any specific funding, but was conducted as part of the authors' employment at the Norwegian Centre for Violence and Traumatic Stress Studies.

References

- [1] Gilbert R, Widom CS, Browne K, et al. Burden and consequences of child maltreatment in high-income countries. *Lancet* 2009;373:68–81.
- [2] Butchart A, Harvey AP, Mian M, et al. *Preventing child maltreatment: a guide to taking action and generating evidence*. Geneva: World Health Organization and International Society for Prevention of Child Abuse and Neglect, 2006.
- [3] Dong M, Anda RF, Felitti VJ, et al. The interrelatedness of multiple forms of childhood abuse, neglect, and household dysfunction. *Child Abuse Negl* 2004;28:771–84.
- [4] Kessler RC, McLaughlin KA, Green JG, et al. Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys. *Br J Psychiatry* 2010;197:378–85.
- [5] Finkelhor D. *Childhood victimization, violence, crime and abuse in the lives of young people*. New York, NY: Oxford University Press, 2008.
- [6] Weich S, Patterson J, Shaw R, et al. Family relationships in childhood and common psychiatric disorders in later life: systematic review of prospective studies. *Br J Psychiatry* 2009;194:392–8.
- [7] Bayer JK, Ukoumunne OC, Lucas N, et al. Risk factors for childhood mental health symptoms: national longitudinal study of Australian children. *Pediatrics* 2011;128:e865–79.
- [8] Civic D and Holt VL. Maternal depressive symptoms and child behavior problems in a nationally representative normal birthweight sample. *Matern Child Health J* 2000; 4:215–21.
- [9] Goodman SH, Rouse MH, Connell AM, et al. Maternal depression and child psychopathology: a meta-analytic review. *Clinical child and family psychology review* 2011;14:1–27.
- [10] Dubowitz H, Black MM, Kerr MA, et al. Type and timing of mothers' victimization: effects on mothers and children. *Pediatrics* 2001;107:728–35.
- [11] Collishaw S, Dunn J, O'Connor TG, et al. Maternal childhood abuse and offspring adjustment over time. *Dev Psychopathol* 2007;19:367–83.
- [12] Roberts R, O'Connor T, Dunn J, et al. The effects of child sexual abuse in later family life; mental health, parenting and adjustment of offspring. *Child Abuse Negl* 2004;28:525–45.

- [13] Mathiesen KS, Sanson A, Stoolmiller M, et al. The nature and predictors of undercontrolled and internalizing problem trajectories across early childhood. *J Abnorm Child Psychol* 2009;37:209–22.
- [14] Bailey HN, DeOliveira CA, Wolfe VV, et al. The impact of childhood maltreatment history on parenting: a comparison of maltreatment types and assessment methods. *Child Abuse Negl* 2012;36:236–46.
- [15] Berlin LJ, Appleyard K and Dodge KA. Intergenerational continuity in child maltreatment: mediating mechanisms and implications for prevention. *Child Dev* 2011; 82:162–76.
- [16] Magnus P, Irgens LM, Haug K, et al. Cohort profile: the Norwegian Mother and Child Cohort Study (MoBa). *Int J Epidemiol* 2006;35:1146–50.
- [17] Achenbach TM and Rescorla LA. *Manuale for the ASEBA preschool forms and profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth and Families, 2000.
- [18] Swahnberg IM and Wijma B. The NorVold Abuse Questionnaire (NorAQ): validation of new measures of emotional, physical, and sexual abuse, and abuse in the health care system among women. *Eur J Public Health* 2003; 13:361–6.
- [19] Tambs K and Moum T. How well can a few questionnaire items indicate anxiety and depression? *Acta Psychiatr Scand* 1993;87:364–7.
- [20] Baron RM and Kenny DA. The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *J Pers Soc Psychol* 1986;51:1173–82.
- [21] Teicher MH, Samson JA, Polcari A, et al. Sticks, stones, and hurtful words: relative effects of various forms of childhood maltreatment. *Am J Psychiatry* 2006;163:993–1000.
- [22] Norman RE, Byambaa M, De R, et al. The long-term health consequences of child physical abuse, emotional abuse, and neglect: a systematic review and meta-analysis. *PLoS medicine* 2012;9:e1001349.
- [23] Nilsen RM, Vollset SE, Gjessing HK, et al. Self-selection and bias in a large prospective pregnancy cohort in Norway. *Paediatr Perinat Epidemiol* 2009;23:597–608.
- [24] Hardt J and Rutter M. Validity of adult retrospective reports of adverse childhood experiences: review of the evidence. *J Child Psychol Psychiatry* 2004;45:260–73.
- [25] Melchert TP and Parker RL. Different forms of childhood abuse and memory. *Child Abuse Negl* 1997;21:125–35.
- [26] McKinney CM, Harris TR and Caetano R. Reliability of self-reported childhood physical abuse by adults and factors predictive of inconsistent reporting. *Violence Vict* 2009; 24:653–68.
- [27] Thombs BD, Bernstein DP, Ziegelstein RC, et al. An evaluation of screening questions for childhood abuse in 2 community samples: implications for clinical practice. *Archives of internal medicine* 2006;166:2020–6.
- [28] Leblanc N, Boivin M, Dionne G, et al. The development of hyperactive-impulsive behaviors during the preschool years: the predictive validity of parental assessments. *J Abnorm Child Psychol* 2008;36:977–87.
- [29] Najman JM, Williams GM, Nikles J, et al. Mothers' mental illness and child behavior problems: cause-effect association or observation bias? *J Am Acad Child Adolesc Psychiatry* 2000;39:592–602.