

Childhood Maltreatment and Psychiatric Disorders Among Detained Youths

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Objective: This study examined the prevalence of childhood maltreatment and its relationship with current psychiatric disorders among detained youths. **Methods:** Clinical research interviewers assessed history of childhood maltreatment with the Child Maltreatment Assessment Profile and psychiatric diagnosis with the Diagnostic Interview Schedule for Children, version 2.3, in a stratified, random sample of 1,829 youths detained at the Cook County Juvenile Temporary Detention Center (final sample, N=1,735). History of maltreatment was also ascertained from Cook County Court Child Protection Division records. **Results:** More than three-quarters of females and more than two-thirds of males had a history of physical abuse (moderate or severe). More than 40% of females and 10% of males had a history of sexual abuse. Females and non-Hispanic whites had the highest prevalence rates of childhood maltreatment. Among females, sexual abuse was associated with every type of psychiatric disorder. Females who experienced various types of abuse were 2.6 to 10.7 times as likely as females with no maltreatment to have any disorder. Among males, maltreatment was associated with every disorder except anxiety disorders (range of odds ratios, 1.9–7.9). Among youths who were sexually abused, abuse with force was associated with anxiety and affective disorders among females and attention-deficit hyperactivity or disruptive behavior disorders and substance use disorders among males. **Conclusions:** Childhood maltreatment is common among detained youths and is also highly associated with psychiatric disorders. The mental health, child welfare, and juvenile justice systems must collaborate to ensure that youths receive protection and care when they return to their communities. (*Psychiatric Services* 62:1430–1438, 2011)

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Many youths detained by the juvenile justice system have been victims of childhood maltreatment and have psychiatric disorders. Depending on the sample and measure, 3% to 53% of detained youths have a history of sexual abuse (1–6) and 27% to 75% have a history of physical abuse (1,3,7,8). Recent studies have also found that over two-thirds of detained youths have a psychiatric disorder (9,10).

Studies of community, homeless, and clinical samples have documented an association between maltreatment and psychiatric disorders (11–18). Despite the high prevalence of maltreatment and psychiatric disorders among detained youths, few studies have examined the association between them in this population. Instead, most studies have focused on childhood maltreatment and its association with drug use (5,19–22). We found only three studies of childhood maltreatment and psychiatric disorders among detained youths (4,7,23). All three reported an association between maltreatment and disorders. Yet, these studies focused on only one or two disorders and had methodological limitations.

Dixon and colleagues (23) examined posttraumatic stress disorder (PTSD) and childhood sexual abuse among female juvenile detainees in Australia. However, their sample was small (N=100), and the results are of limited generalizability to youths detained in the United States. They also relied on only one screening question to assess sexual abuse. Using one

question may result in underreporting; a more reliable and robust approach is to ask a series of specific questions about types of sexual abuse (24). Two studies of detainees conducted in the United States (4,7) had large samples ($N > 500$) but also used only one screening question to assess maltreatment. Gover and MacKenzie (7) examined the association between childhood maltreatment and depression and anxiety; however, they combined all types of maltreatment for analyses (7). Gover (4) focused only on the relationship between childhood sexual abuse and depression (4).

To our knowledge, no large-scale study of detained youths has examined the relationship between childhood maltreatment and a range of psychiatric disorders. This omission is critical because findings from studies of community, homeless, and clinical samples (11–18) may not generalize to detained youths, who are disproportionately poor and male and from racial-ethnic minority groups. Furthermore, the detention center is a potential point of triage for child protection services and psychiatric treatment. Data on the association between child maltreatment and psychiatric disorders will help guide effective protective and therapeutic interventions.

This is the third article to report data on childhood maltreatment among participants in the Northwestern Juvenile Project, a longitudinal study of health needs and outcomes of detained youths. The first report documented the low concordance rates between self-reports and official records of physical abuse; only 17% of those who reported physical abuse had a court record of maltreatment (25). The second study examined forced sexual victimization as part of a larger study of PTSD and trauma; however, it did not examine physical abuse (26).

In this article, we present prevalence data on physical and sexual abuse, assessed by self-report and official records. We then present findings on the relationship between types of maltreatment and four types of psychiatric disorders: anxiety, affective, disruptive behavior,

and substance use. We hypothesized that all types of maltreatment would be associated with psychiatric disorders, that youths with a history of severe maltreatment would have the highest prevalence rates of disorders, and that patterns of associations between maltreatment and psychiatric disorders would differ for males and females.

Methods

Sampling procedures

Participants were 1,829 male and female youths, randomly sampled at intake into the Cook County Juvenile Temporary Detention Center (CCJTDC) from November 1995 through June 1998 (27). The sample was stratified by gender, race-ethnicity (African American, non-Hispanic white, and Hispanic), age (ten to 13 years or 14 years and older), and legal status (processed in juvenile or adult criminal court). Within each stratum, we used a random-numbers table to select names from the CCJTDC intake log. Selected demographic strata (for example, females, non-Hispanic whites, and ten- to 13-year-olds) were oversampled to obtain adequate numbers of participants in key subgroups. The final sampling fractions ranged from .018 to .689. Additional information on the sample is available from the authors.

Interviewers described the study to participants and obtained written informed assent (if participants were less than 18 years old) or consent (if they were age 18 or older). The Northwestern University Institutional Review Board, the Centers for Disease Control and Prevention Institutional Review Board, and the U.S. Office of Protection from Research Risks all approved the study and waived parental consent, consistent with federal regulations regarding research with minimal risk. We nevertheless tried to contact parents or guardians to inform them and offer them an opportunity to decline participation. Despite repeated attempts to contact a parent or guardian, none could be found for 44% of the participants. In lieu of parental consent, an independent participant advocate representing the interests of the participants oversaw youths' assent. Fed-

eral regulations allow for a participant advocate if parental consent is not feasible.

Participants were interviewed in a private area, almost always within two days of intake; most interviews lasted between two and three hours. Interviewers were trained for a month. Most had a master's degree in the social sciences and experience interviewing high-risk youths; one-third were fluent in Spanish. Female interviewers always interviewed females. Additional information on the study's methods has been reported elsewhere (27).

The rigors of the detention center's schedule required approximately 5% of the interviews to end prematurely. Because childhood maltreatment was assessed at the end of the interview, these data were missing for 94 participants. The final sample for this analysis ($N = 1,735$) consisted of 1,095 males and 640 females. The sample included 957 African Americans, 287 non-Hispanic whites, 488 Hispanics, and three youths who identified as "other" race-ethnicity. The childhood maltreatment module was more likely to be received by females than by males ($N = 640$, 97%, versus $N = 1,095$, 93%, $p < .05$) and by non-Hispanic whites than by Hispanics ($N = 287$, 97%, versus $N = 488$, 93%, $p < .05$). We accounted for potential bias from demographic differences in missing data by weighting the data. The mean age of the 1,735 participants was 14.8 ± 1.4 years (range of ten to 18 years), and the median age was 15 years.

Measures

Self-report of childhood maltreatment. Interviewers administered the Child Maltreatment Assessment Profile (CMAP), a structured interview based on the Child Maltreatment Interview (24) and the Child Abuse Module for the National Institute of Mental Health's Methods for the Epidemiology of Child and Adolescent Mental Disorders Study (28). The CMAP assesses six types of sexual victimization, use of force, and relationship to the perpetrator. There is no screening question. Instead, participants are asked about each type of abuse by each type of perpetrator.

To assess physical abuse, participants were asked how many times they had ever experienced each of five types of corporal punishment by “an adult or person who was in charge” of them. We classified experiences of being “hurt by an adult that resulted in bruises, broken bones, or severe injury” as severe physical abuse. We classified being “hit very hard,” “hit with an object,” or “beaten or kicked” as moderate physical abuse.

Official records of childhood maltreatment. Project staff searched current and past records from the Cook County Court Child Protection Division for participants’ names. These records consist of abuse and neglect petitions that were filed with the court after investigation by the Illinois Department of Children and Family Services (DCFS). Participants who were found by DCFS to have “credible evidence” of physical or sexual maltreatment were considered to have been abused. Petitions for “Excessive Corporal Punishment” and for “Substantial Risk of Physical Injury” were classified as severe physical abuse.

Rates of severe physical abuse and any sexual abuse are based on self-reported data or data from the court records; moderate physical abuse and specific types of sexual abuse are based on self-reported data only.

To analyze the relationship between a history of maltreatment and having a psychiatric disorder, we created an independent variable with five mutually exclusive categories of maltreatment: none, moderate physical abuse only, severe physical abuse, sexual abuse, and sexual and severe physical abuse. Participants classified in one of the latter three categories may have also experienced moderate physical abuse.

Psychiatric disorders. We used the Diagnostic Interview Schedule for Children (DISC), version 2.3 (29), the most recent version available at the time of data collection. The DISC 2.3, which is based on the *DSM-III-R*, assesses the presence of psychiatric disorders in the past six months. It is highly structured, contains detailed symptom probes, has acceptable reliability and validity, and requires relatively brief training. Data

are based on youths’ self-report because it was not feasible to interview caretakers.

We began collecting data on PTSD 13 months after the larger study began, when the DISC version IV (DISC-IV) module became available for use; data on PTSD were collected for 898 participants. Of these, three did not receive the CMAP; therefore, PTSD was measured for 895 participants in the sample of 1,735 participants (531 males and 364 females).

For our analyses, we examined four types of disorder: any anxiety disorder (generalized anxiety disorder, overanxious disorder, panic disorder, obsessive-compulsive disorder, separation anxiety disorder, or PTSD), any affective disorder (major depressive episode, manic episode, hypomania, or dysthymic disorder), any attention-deficit hyperactivity disorder (ADHD) or disruptive behavior disorder (conduct disorder or oppositional defiant disorder), and any substance use disorder (abuse of or dependence on alcohol, marijuana, or other substances).

Statistical analysis

All analyses were conducted by using the survey routines in Stata SE, version 11.0 (30,31). To generate descriptive statistics and model parameters that reflect CCJTDC’s population, each participant was assigned a sampling weight augmented with a nonresponse adjustment to account for demographic differences in missing data (32). We used logistic regression to compare rates of abuse by demographic characteristics and to compare rates of psychiatric disorders by history of maltreatment. Taylor series linearization was used to estimate model variances. We tested for differences between specific groups (for example, African American youths compared with Hispanic youths) when the overall categorical predictor (in this example, race-ethnicity) was significant at the $p < .05$ level. Only statistically significant findings ($p < .05$) are noted in the text and tables.

Results

Prevalence rates of maltreatment

Tables 1 and 2 present prevalence rates of maltreatment among females (Table 1) and males (Table 2) by

racial-ethnic group and odds ratios (ORs) comparing the groups.

Physical abuse. More than three-quarters of females and more than two-thirds of males had experienced some type of physical abuse (moderate or severe) (the combined rates are not shown in the tables). More than one-third of females and 15% of males had a history of severe physical abuse. Prevalence rates of physical abuse from official records were low; 3% of females and 1% of males had court records of physical abuse (data not shown). Females had significantly higher rates than males for every type of physical abuse and were three times as likely to have been severely physically abused (OR=3.0, 95% CI 2.1–4.3; Table 2). Among females, non-Hispanic whites and Hispanics had higher rates than African Americans of severe physical abuse and of being beaten or kicked. Non-Hispanic white males also had higher rates of several types of abuse than African American or Hispanic males, including severe physical abuse.

Sexual abuse. Forty-one percent of females and 11% of males experienced sexual abuse. Prevalence rates of sexual abuse from official records were low: 1% of females and .1% of males had court records of sexual abuse (data not shown). Compared with males, females had nearly six times the odds of any sexual abuse and were four to seven times more likely to have experienced each type of sexual abuse (ORs in Table 2). Among females, non-Hispanic whites were more likely to have been victims of sexual abuse than African-American or Hispanic females.

Twenty-one percent of females and 4% of males had experienced sexual and severe physical abuse. Females had more than six times the odds of experiencing both sexual and severe physical abuse compared with males.

Childhood maltreatment and psychiatric disorders

Tables 3 and 4 present prevalence rates and odds ratios describing the association between maltreatment and psychiatric disorders for females (Table 3) and males (Table 4). Compared with females who had no childhood maltreatment, females who had

Table 1Prevalence rates of childhood maltreatment among 640 female juvenile detainees, by racial-ethnic group^a

| Type of maltreatment | Total (N=640) ^b % | African American (N=420) % | Non-Hispanic white (N=87) % | Hispanic (N=132) % | p ^c | Non-Hispanic white versus African American ^d | | Non-Hispanic white versus Hispanic ^d | | Hispanic versus African American ^d | |
|--|---------------------------------|-------------------------------|--------------------------------|-----------------------|----------------|---|---------|---|---------|---|---------|
| | | | | | | OR | 95% CI | OR | 95% CI | OR | 95% CI |
| Physical abuse | | | | | | | | | | | |
| Severe ^e | 35 | 28 | 44 | 48 | .001 | 2.0* | 1.2–3.2 | | | 2.4* | 1.6–3.5 |
| Moderate ^f | 76 | 74 | 83 | 77 | ns | | | | | | |
| Hit very hard | 64 | 61 | 74 | 68 | .05 | 1.8* | 1.1–3.1 | | | | |
| Hit with an object ^g | 63 | 60 | 66 | 68 | ns | | | | | | |
| Beaten or kicked | 32 | 26 | 39 | 42 | .001 | 1.8* | 1.1–2.9 | | | 2.1* | 1.4–3.1 |
| Sexual abuse | | | | | | | | | | | |
| Any ^h | 41 | 37 | 57 | 41 | .01 | 2.3* | 1.4–3.6 | 1.9* | 1.1–3.3 | | |
| Specific behavior ^f | | | | | | | | | | | |
| Showed genitals to child | 24 | 20 | 33 | 24 | .05 | 2.0* | 1.2–3.3 | | | | |
| Masturbated in front of child | 24 | 21 | 25 | 23 | ns | | | | | | |
| Touched or kissed child's genitals | 28 | 24 | 38 | 27 | .05 | 1.9* | 1.2–3.1 | | | | |
| Forced to touch or kiss perpetrator's genitals | 14 | 11 | 23 | 13 | .05 | 2.4* | 1.4–4.4 | | | | |
| Any kind of attempted penetration or intercourse | 30 | 27 | 36 | 26 | ns | | | | | | |
| Actual penetration or intercourse | 22 | 19 | 27 | 17 | ns | | | | | | |
| Both severe physical and any sexual abuse ^h | 21 | 16 | 31 | 26 | .001 | 2.4* | 1.4–4.1 | | | 1.9* | 1.2–3.0 |

^a Descriptive and inferential statistics are weighted to reflect the demographic characteristics of the Cook County Juvenile Temporary Detention Center.

^b One female of "other" race-ethnicity was excluded from analyses of racial-ethnic groups.

^c Overall test of racial-ethnic differences

^d Tests for differences between specific groups were conducted only when the overall test for race-ethnicity was significant at the p<.05 level.

^e Includes abuse noted on court records or self-report (hurt by adult resulting in bruises, broken bones, or severe injury). Three additional females who reported other types of severe physical abuse were also included in this category.

^f Includes self-report of abuse only

^g Data for 43 females were missing for this variable because it was added to the instrument after the study began.

^h Includes self-report or court records of abuse

*p<.05

been victims of moderate physical abuse (only) were more than twice as likely to have anxiety and substance use disorders; females who had been victims of severe physical abuse were more likely to have ADHD or disruptive behavior disorders and substance use disorders. Females who had been victims of sexual abuse or victims of both sexual and severe physical abuse were more than twice as likely to have every type of disorder examined.

Compared with males who had no childhood maltreatment, males who had been victims of moderate physical abuse (only), severe physical abuse, or sexual abuse were significantly more likely to have all disorders examined except anxiety disorder.

The prevalence of ADHD or disruptive behavior disorders was higher among males who experienced sexual and severe physical abuse than among those who had no maltreatment. The small number of males who experienced both sexual and severe physical abuse (N=37) may have limited our power to detect differences as statistically significant.

Sexual abuse with force and psychiatric disorders

Among participants who self-reported sexual abuse, 63% of females and 22% of males reported being abused with force. As shown in Table 5, more than 90% of all youths who reported sexual abuse with force had a psychi-

atric disorder. Females who were abused with force had significantly higher rates of anxiety and affective disorders than females who were abused without force. Relatively few males reported sexual abuse with force (N=22); however, males abused with force had significantly higher rates of ADHD or disruptive behavior disorders and substance use disorders than those abused without force.

Discussion

The results indicate that detained youths who experienced childhood maltreatment had higher rates of psychiatric disorders than those who had not been maltreated. Nearly every type of maltreatment and combina-

Table 2Prevalence rates of childhood maltreatment among 1,095 male juvenile detainees, by racial-ethnic group^a

| Type of maltreatment | Total (N=1,095) ^b % | African American (N=537) % | Non-Hispanic white (N=200) % | Hispanic (N=356) % | p< ^c | Non-Hispanic white versus African American ^d | | Non-Hispanic white versus Hispanic ^d | | Hispanic versus African American ^d | | Female versus male ^e | |
|--|-----------------------------------|-------------------------------|---------------------------------|-----------------------|-----------------|---|---------|---|---------|---|---------|---------------------------------|----------|
| | | | | | | OR | 95% CI | OR | 95% CI | OR | 95% CI | OR | 95% CI |
| Physical abuse | | | | | | | | | | | | | |
| Severe ^f | 15 | 14 | 32 | 15 | .001 | 3.0* | 1.9–4.8 | 2.8* | 1.6–4.7 | | | 3.0* | 2.1–4.3 |
| Moderate ^g | 68 | 68 | 72 | 65 | ns | | | | | | | 1.5* | 1.1–2.0 |
| Hit very hard | 55 | 54 | 60 | 57 | ns | | | | | | | 1.5* | 1.1–1.9 |
| Hit with an object ^h | 53 | 53 | 63 | 49 | .05 | | | 1.7* | 1.1–2.7 | | | 1.5* | 1.1–2.0 |
| Beaten or kicked | 17 | 15 | 31 | 23 | .001 | 2.6* | 1.6–4.1 | | | 1.7* | 1.1–2.7 | 2.3* | 1.6–3.2 |
| Sexual abuse | | | | | | | | | | | | | |
| Any ⁱ | 11 | 11 | 8 | 12 | ns | | | | | | | 5.8* | 4.0–8.5 |
| Specific behavior ^g | | | | | | | | | | | | | |
| Showed genitals to child | 7 | 7 | 3 | 7 | ns | | | | | | | 4.2* | 2.6–6.8 |
| Masturbated in front of child | 5 | 6 | 3 | 5 | ns | | | | | | | 5.6* | 3.3–9.5 |
| Touched or kissed child's genitals | 6 | 6 | 5 | 8 | ns | | | | | | | 5.7* | 3.5–9.3 |
| Forced to touch or kiss perpetrator's genitals | 4 | 4 | 3 | 7 | ns | | | | | | | 3.8* | 2.0–7.2 |
| Any kind of attempted penetration or intercourse | 6 | 6 | 4 | 8 | ns | | | | | | | 6.7* | 4.1–10.9 |
| Actual penetration or intercourse | 4 | 4 | 2 | 5 | ns | | | | | | | 6.0* | 3.3–10.9 |
| Both severe physical and any sexual abuse ⁱ | 4 | 4 | 5 | 3 | ns | | | | | | | 6.5* | 3.6–11.8 |

^a Descriptive and inferential statistics are weighted to reflect the demographic characteristics of the Cook County Juvenile Temporary Detention Center.^b Two males of "other" race-ethnicity were excluded from analyses of racial-ethnic groups.^c Overall test of racial-ethnic differences^d Tests for differences between specific groups were conducted only when the overall test for race-ethnicity was significant at the p<.05 level.^e Prevalence rates of maltreatment among females are shown in Table 1.^f Includes abuse noted on court records or self-report (hurt by adult resulting in bruises, broken bones, or severe injury). Three additional males who reported other types of severe physical abuse were also included in this category.^g Includes self-report of abuse only^h Data for 108 males were missing for this variable because it was added to the instrument after the study began.ⁱ Includes self-report or court record of abuse

*p<.05

tion of types was associated with increased odds of having one or more of the psychiatric disorders assessed. Prevalence rates of disorders were especially high among participants who experienced sexual abuse; nearly all youths who were sexually abused with force had a psychiatric disorder. Consistent with other studies of sexually abused children (33–36), our findings show that severity of sexual abuse may increase the odds of having a psychiatric disorder.

These findings are particularly important given the high prevalence rates of maltreatment in our sample and in prior studies of juvenile de-

tainees (2,20). The prevalence of maltreatment among detained youths far exceeds the prevalence of maltreatment among youths in the general population (15,18). For example, a telephone survey of adolescents in the general population found that 13% of females and 3% of males reported a history of sexual abuse, compared with 41% of females and 11% of males in this study of detainees (15,18). The discrepancy is even greater for physical abuse: in the general population survey, 10% of females and 9% of males reported a history of physically abusive punishment, compared with 76% of female

detainees and 68% of male detainees in this study (15,18).

As in a prior study of delinquent youths (21), we found higher rates of maltreatment among non-Hispanic white detainees, especially among females. This finding differs from general population studies, which have found similar or higher rates of maltreatment among youths from racial-ethnic minority groups (37). Our findings may reflect underlying racial-ethnic disparities in the juvenile justice system and the different pathways by which non-Hispanic whites and youths from racial-ethnic minority groups enter the system

Table 3Prevalence rates of psychiatric disorders by history of childhood maltreatment among 640 female juvenile detainees^a

| Psychiatric disorder | No maltreatment (N=116) % | Moderate physical abuse only (N=168) | | | Severe physical abuse (N=93) | | | Sexual abuse (N=134) | | | Sexual and severe physical abuse (N=129) | | |
|--|------------------------------|--------------------------------------|-----------------|---------|------------------------------|-----------------|---------|----------------------|-----------------|----------|--|-----------------|----------|
| | | % | OR ^b | 95% CI | % | OR ^b | 95% CI | % | OR ^b | 95% CI | % | OR ^b | 95% CI |
| Any ^{c,d} | 53 | 74 | 2.6* | 1.3–5.3 | 80 | 3.5* | 1.5–8.3 | 88 | 6.3* | 2.7–15.0 | 92 | 10.7* | 4.1–28.3 |
| Any anxiety ^{d,e} | 21 | 38 | 2.4* | 1.1–5.0 | 37 | 2.2 | .96–5.0 | 51 | 3.9* | 1.8–8.3 | 63 | 6.4* | 2.7–14.9 |
| Any affective ^f | 19 | 21 | 1.1 | .6–2.0 | 19 | 1.0 | .5–2.1 | 35 | 2.3* | 1.2–4.1 | 45 | 3.5* | 1.7–7.4 |
| ADHD or disruptive behavior ^g | 27 | 37 | 1.6 | .96–2.7 | 56 | 3.4* | 1.9–6.1 | 52 | 2.9* | 1.7–4.9 | 68 | 5.8* | 3.1–10.9 |
| Any substance ^h | 29 | 49 | 2.3* | 1.4–3.8 | 48 | 2.2* | 1.2–4.0 | 48 | 2.2* | 1.3–3.7 | 60 | 3.6* | 1.9–6.7 |

^a Descriptive and inferential statistics are weighted to reflect the demographic characteristics of the Cook County Juvenile Temporary Detention Center. Categories of abuse include abuse documented in court records or self-report.

^b Categories of abuse are mutually exclusive. The comparison group for odds ratios is the group with no maltreatment.

^c Includes any anxiety disorder, any affective disorder, attention-deficit hyperactivity disorder (ADHD) or disruptive behavior disorder, any substance use disorder, and psychosis. Specific prevalence rates of any psychosis are not presented because only six females had this diagnosis.

^d Includes the diagnosis of posttraumatic stress disorder (PTSD). Because the PTSD module was not available until mid-study, only 364 females were assessed for PTSD. Therefore, analyses of disorder categories that include PTSD are conducted on the sample of 364 females who were assessed for all the relevant disorders.

^e Includes generalized anxiety, overanxious, panic, obsessive-compulsive, and separation anxiety disorders, and PTSD

^f Includes major depressive episode, manic episode, hypomania, and dysthymic disorder

^g Disruptive behavior disorder includes conduct and oppositional defiant disorders.

^h Includes abuse of or dependence on alcohol, marijuana, and other substances

* $p < .05$

(38,39). For example, non-Hispanic whites, who typically have greater access to services than youths from minority groups (40), may be less likely to be arrested. Thus non-Hispanic

whites who are arrested may have more psychosocial problems, including maltreatment, than youths from minority groups who are arrested.

Prior studies of general population

samples have not found consistent gender differences in the associations between types of maltreatment and types of psychiatric disorder (33,41). As in previous studies of youths who

Table 4Prevalence rates of psychiatric disorders by history of childhood maltreatment among 1,095 male juvenile detainees^a

| Psychiatric disorder | No maltreatment (N=318) % | Moderate physical abuse only (N=521) | | | Severe physical abuse (N=153) | | | Sexual abuse (N=64) | | | Sexual and severe physical abuse (N=37) | | |
|--|------------------------------|--------------------------------------|-----------------|----------|-------------------------------|-----------------|----------|---------------------|-----------------|----------|---|-----------------|----------|
| | | % | OR ^b | 95% CI | % | OR ^b | 95% CI | % | OR ^b | 95% CI | % | OR ^b | 95% CI |
| Any ^{c,d} | 44 | 77 | 4.3* | 1.9–10.0 | 75 | 3.8* | 1.1–13.1 | 65 | 2.4 | .5–11.8 | 82 | 5.7 | .6–51.1 |
| Any anxiety ^{d,e} | 15 | 30 | 2.4 | .8–6.9 | 27 | 2.0 | .6–7.3 | 30 | 2.3 | .5–11.6 | 28 | 2.1 | .3–13.2 |
| Any affective ^f | 8 | 18 | 2.6* | 1.2–5.5 | 32 | 5.4* | 2.2–13.3 | 25 | 3.9* | 1.2–12.1 | 17 | 2.4 | .6–9.7 |
| ADHD or disruptive behavior ^g | 20 | 45 | 3.3* | 2.0–5.7 | 62 | 6.7* | 3.2–14.1 | 61 | 6.4* | 2.6–16.0 | 66 | 7.9* | 2.4–26.6 |
| Any substance ^h | 37 | 53 | 1.9* | 1.2–3.2 | 59 | 2.5* | 1.2–5.0 | 66 | 3.4* | 1.4–8.2 | 54 | 2.0 | .7–6.1 |

^a Descriptive and inferential statistics are weighted to reflect the demographic characteristics of the Cook County Juvenile Temporary Detention Center. The categories of abuse include abuse documented in the official record or self-report. Two males were excluded from the analyses because of missing data.

^b Categories of abuse are mutually exclusive. The comparison group for odds ratios is the group with no maltreatment.

^c Includes any anxiety disorder, any affective disorder, attention-deficit hyperactivity disorder (ADHD) or disruptive behavior disorder, any substance use disorder, and psychosis. Specific prevalence rates of any psychosis are not presented because only 11 males had this diagnosis.

^d Includes the diagnosis of posttraumatic stress disorder (PTSD). Because the PTSD module was not available until mid-study, only 531 males were assessed for PTSD. Therefore, analyses of disorder categories that include PTSD were conducted on the sample of 531 males who were assessed for all the relevant disorders.

^e Includes generalized anxiety, overanxious, panic, obsessive-compulsive, and separation anxiety disorders, and PTSD

^f Includes major depressive episode, manic episode, hypomania, and dysthymic disorder

^g Disruptive behavior disorder includes conduct and oppositional defiant disorders.

^h Includes abuse of or dependence on alcohol, marijuana, and other substances

* $p < .05$

Table 5

Prevalence rates of types of psychiatric disorder among 360 juvenile detainees who were sexually abused with or without force^a

| Psychiatric disorder | Females (N=261) | | | | Males (N=99) | | | |
|--|----------------------------|-------------------------|-----------------|---------|---------------------------|------------------------|-----------------|----------|
| | Without force (N=103) % | With force (N=158) % | OR ^b | 95% CI | Without force (N=77) % | With force (N=22) % | OR ^b | 95% CI |
| Any disorder ^{c,d} | 86 | 93 | 2.2 | .7–6.4 | 65 | 95 | 9.4* | 1.1–77.2 |
| Any anxiety ^{d,e} | 44 | 66 | 2.5* | 1.2–5.3 | 33 | 17 | .4 | .1–2.6 |
| Any affective ^f | 28 | 47 | 2.3* | 1.2–4.4 | 19 | 35 | 2.3 | .4–12.6 |
| ADHD or disruptive behavior ^g | 52 | 65 | 1.7 | 1.0–3.0 | 55 | 92 | 9.5* | 2.6–35.6 |
| Any substance ^h | 51 | 55 | 1.2 | .7–2.1 | 55 | 87 | 5.4* | 1.5–19.1 |

^a Descriptive and inferential statistics are weighted to reflect the demographic characteristics of the Cook County Juvenile Temporary Detention Center. Data are self-report because official records of sexual abuse with force were unavailable.

^b Odds ratios compare rates of disorder among those sexually abused with force versus those sexually abused without force.

^c Includes any anxiety disorder, any affective disorder, attention-deficit hyperactivity disorder (ADHD) or any disruptive behavior disorder, any substance use disorder, and any psychosis. Specific prevalence rates of any psychosis are not presented because only 17 participants had this diagnosis.

^d Includes the diagnosis of posttraumatic stress disorder (PTSD). Because the PTSD module was not available until midstudy, only 895 participants were assessed for PTSD. Therefore, analyses of disorder categories that include PTSD were conducted for the sample of 895 participants who were assessed for all the relevant disorders.

^e Includes generalized anxiety, overanxious, panic, obsessive-compulsive, and separation anxiety disorders, and PTSD

^f Includes major depressive episode, manic episode, hypomania, and dysthymic disorder

^g Disruptive behavior disorder includes conduct and oppositional defiant disorders.

^h Includes abuse of or dependence on alcohol, marijuana, and other substances

* $p < .05$

had been abused (33,41), in our study both male and female detainees who reported sexual abuse had high rates of most disorders. Our findings suggest, however, that sexual abuse with force is associated with ADHD or disruptive behavior disorders and substance use disorders among males and anxiety and affective disorders among females. We also found that among females, severe physical abuse alone was associated with ADHD or disruptive behavior disorders and substance use disorders; in contrast, among males, physical abuse was associated with affective disorders. Our data provide some support for the theory that males and females may have different vulnerability to internalizing and externalizing disorders, at least for certain types of maltreatment (33,41).

This study had some limitations. The findings were drawn from a single site and may not be generalizable to youths in other detention centers, especially those with different demographic characteristics. Data are subject to the limitations of self-report and official records. Participants were sampled between 1995 and 1998;

findings may differ for youths currently in detention. Adolescents may underreport painful experiences, and official records underestimate actual maltreatment (42,43).

Statistical power may have been too low to detect some differences. For example, the small number of males who reported sexual abuse may have limited our ability to detect an association between sexual abuse with force and the presence of a psychiatric disorder. Some participants may have tended to endorse positive responses, artificially inflating the association between abuse and disorders. Findings may have differed slightly if a later version of the DISC, based on *DSM-IV* criteria, were available. Despite these limitations, the study has implications for treatment, public policy, and research on delinquent youths.

Conclusions

Investigate gender differences

Future studies need to investigate whether the relationship between maltreatment and psychiatric disorders is mediated by factors that affect males and females differently. For example, Meyerson and colleagues (33)

studied two dimensions of family environment—conflict and cohesion—among maltreated youths. They found that lack of family cohesion was associated with depression among males who had been maltreated; however, family conflict was a better predictor of depression for females who had been maltreated (33). Identifying mediators that account for gender differences will help to improve gender-specific prevention and treatment models for victims of maltreatment.

Study resiliency in youths at risk

Not all victims of maltreatment develop psychiatric disorders or become delinquent. Future studies need to investigate characteristics that promote resiliency among youths already at risk. Studies should focus on characteristics that can be altered and examine when protective factors have the most impact.

Identify youths at risk

Our findings highlight the importance of assessing the presence and severity of physical and sexual abuse when conducting routine mental

health evaluations in detention settings. Referral and treatment could reduce the youths' risk of revictimization, psychiatric disorders, criminal recidivism, and associated consequences (44,45).

Focus on rehabilitation

Rather than adopting the more punitive stance of the adult justice system, the juvenile justice system should continue to focus on the mission of rehabilitation, particularly for youths with histories of abuse. One innovative strategy, adopted by several states and other jurisdictions in the past decade (for example, New York City, Illinois, and Los Angeles County), is to integrate the juvenile justice and child welfare systems (46,47). Practical and philosophical barriers notwithstanding (46), integration of these systems, as well as close collaboration with mental health services, promotes the decriminalization of many delinquent behaviors, prevents unnecessary institutionalization, and provides avenues for delinquent youths to receive necessary protective services and therapeutic services (48).

In conclusion, this study adds to a body of literature demonstrating that a substantial proportion of youths in detention have been or are being maltreated. Maltreatment has consequences. Depending on the type of maltreatment, between 65% and 95% of youths who had been maltreated had at least one psychiatric disorder. The mental health, child welfare, and juvenile justice systems must collaborate to ensure that these youths receive the protection and care they need when they return to their communities.

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