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## Adolescent maltreatment and its impact on young adult antisocial behavior<sup>☆</sup>

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### Abstract

**Statement of problem:** *Childhood* maltreatment is known to be a risk factor for a range of later problems, but much less is known about *adolescent* maltreatment. The present study aims to investigate the impact of adolescent maltreatment on antisocial behavior, while controlling for prior levels of problem behavior as well as sociodemographic characteristics.

**Methods:** Data are from the Rochester Youth Development Study, a cohort study of the development of problem behaviors in a sample of 1,000 urban youth followed from age 13 into adulthood. Subjects include 68% African American, 17% Hispanic, and 15% White youth. This analysis includes a maximum of 884 subjects, of whom 9.3% had substantiated maltreatment reports in adolescence. Among the maltreated adolescents, 14 experienced sex abuse, 36 experienced physical abuse, and 32 were neglected or emotionally abused. Outcomes explored in late adolescence (ages 16–18) and young adulthood (ages 20–22) include arrest, self-reported general and violent offending, and illicit drug use. Control variables include prior levels of these outcomes as well as sociodemographic characteristics like poverty, parent education, and caregiver changes.

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**Results:** Logistic regression analysis determined that experiencing any substantiated maltreatment during adolescence increases the odds of arrest, general and violent offending, and illicit drug use in young adulthood, even controlling for sociodemographic characteristics and prior levels of problem behavior. Different types of adolescent maltreatment, including neglect, appear to produce similar adverse behavioral consequences.

**Conclusions:** Adolescent maltreatment necessitates increased attention in view of its enduring and potentially wide-ranging impact on the life span.

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## Introduction

Many disciplines, including social work, developmental and clinical psychology, criminology, sociology, medicine, and psychiatry recognize adolescence as a critical developmental stage within the life course. A recent review of research on adolescent development acknowledges the expansion of research on adolescence in the last decade (Steinberg & Morris, 2001). Several adolescent experiences, for example, family conflict and disruption (Dornbusch et al., 1985; Harold, Fincham, Osborne, & Conger, 1997; Thornberry, Smith, Rivera, Huizinga, & Stouthamer-Loeber, 1999), criminal victimization (Lauritsen, Sampson, & Laub, 1991), or gang involvement (Thornberry, Krohn, Lizotte, Smith, & Tobin, 2003) have been linked to negative consequences, including increased risk of criminal involvement, substance use, and problems in life-course transitions. However, research on an important and related topic—adolescent abuse and neglect and their consequences—has not garnered much attention in the research literature. A search of major journals from several different disciplines over the past decade reveals very little research that deals specifically with this topic.

Recent studies have begun to illuminate the relationship between adolescent maltreatment and negative behavioral and psychological development in adolescence (e.g., see Ireland, Smith, & Thornberry, 2002; Thornberry, Ireland, & Smith, 2001). Taken together, these studies suggest that any substantiated maltreatment experience during adolescence increases the risk of general delinquency, violence, drug use, alcohol-related problems, internalizing problems, externalizing problems, and depressive symptoms, as well as arrest during adolescence compared to those never maltreated.

The present analysis moves beyond previous research on the consequences of adolescent maltreatment in two respects. First, prospective, longitudinal studies have not investigated the consequences of adolescent maltreatment on adult outcomes. Second, prior studies have not examined the relationship between adolescent maltreatment and either contemporaneous or longitudinal outcomes while controlling for *previous* involvement in offending. In this study, we respond to these gaps in the literature by focusing specifically on adolescent maltreatment and its consequences in early adulthood while controlling for earlier involvement in offending.

## The nature and consequences of adolescent maltreatment

There are several reasons for the lack of a developed literature on adolescent maltreatment. First, the law typically defines maltreated children as those up to age 18 who are subjected to acts or failures to act

which may or actually do result in harm. For example, the [Federal Child Abuse Prevention and Treatment Act \(CAPTA\) of 1974](#), revised in 2003 (42 USC § 5106g, 2003), defines a child for the purposes of a determination of child abuse or neglect as a person under the age of 18 ([CAPTA, 2003](#)). As a result, much of the research into the consequences of maltreatment has not discriminated between childhood and adolescent maltreatment. Second, ambiguity in defining particular parental acts as maltreatment may be more pronounced for adolescents. In particular, the threshold for harm may vary over the course of development because the types of acts considered abusive or neglectful change over the life course ([Cicchetti, 1989](#); [Gil, 1996](#)). Third, some argue that a general bias against identification of adolescent maltreatment exists due to a perception that adolescents are better protected against maltreatment, are less harmed by it, or may have precipitated the negative treatment. There is also a bias toward concern with identification of early childhood maltreatment because of the belief that young children are most vulnerable and that early maltreatment has the most serious consequences ([Council on Scientific Affairs, 1993](#); [Doueck, Ishisaka, Sweany, & Gilchrist, 1987](#); [Finkelhor, 1995](#); [Libbey & Bybee, 1979](#); [Powers & Eckenrode, 1988](#)). Since the advent of national surveys, however, it is evident that adolescent maltreatment is not a rare or inconsequential phenomenon.

The National Child Abuse and Neglect Data System, which compiles state child protective service (CPS) data, indicates that about one quarter of all cases of substantiated maltreatment each year since 1997 affect youth between the ages of 12 and 17 ([US Department of Health and Human Services \[USDHHS\], 2003](#)). However, only about one-third of reports to CPS are substantiated, and clinicians (e.g., [Gil, 1996](#)) and researchers (e.g., [Powers & Eckenrode, 1988](#)) suggest that reports of maltreated adolescents are less likely to be substantiated than cases involving younger children. Therefore, a national estimate that places adolescent maltreatment at about 25% of all substantiated maltreatment is likely to be conservative.

A second source of information on adolescent maltreatment comes from three congressionally mandated National Incidence Studies (NIS, [Sedlak & Broadhurst, 1996](#)). These studies are based on nationally representative samples of professionals in 42 counties. In the first study, about 47% of all victims of maltreatment were between the ages of 12 and 17 ([USDHHS, 1982](#)). The most recent study (NIS-3) also found that children between ages 12 and 17 were at greater risk of harm than children under the age of 6.

Straus and colleagues conducted two studies—in 1975 and in 1985—using national probability samples ([Straus & Gelles, 1990](#); [Straus, Gelles, & Steinmetz, 1980](#)). In both studies, parents answered questions about corporal punishment and assault in relation to one child. Overall, about one-third of adolescent children were hit by a parent during the previous year ([Straus & Gelles, 1990](#)), and about 70 out of 1,000 adolescents were victims of a serious assault perpetrated by a parent as measured by the Conflict Tactics Scales ([Straus & Gelles, 1990](#)). Finally, a few large statewide studies also estimate the extent of adolescent maltreatment. About 42% of substantiated Minnesota maltreatment cases involved adolescents between the ages of 12 and 17 ([Blum & Runyan, 1980](#)). In New York State, about 35% of all substantiated cases of maltreatment occurred between ages 12 and 17 ([Powers & Eckenrode, 1988](#)).

In conclusion, large-scale studies indicate that adolescent maltreatment cases amount to somewhere between 25% and 45% of all maltreatment cases. Although adolescent maltreatment is, therefore, a significant social problem, little is known about its specific developmental consequences.

Research supports the general conclusion that experiencing substantiated maltreatment at some point between birth and age 18 increases the likelihood of antisocial behavior in adolescence, including violence and delinquency ([Ireland & Widom, 1994](#); [Kakar, 1996](#); [Lemmon, 1999](#); [Smith & Thornberry,](#)

1995; Widom, 1991; Zingraff, Leiter, Myers, & Johnson, 1993). Studies using retrospective self-report measures of maltreatment or caseworker notes also suggest that maltreatment covaries with offending in adolescence (Brezina, 1998; Fergusson & Lynskey, 1997; McCord, 1983; Piquero & Sealock, 2000). Finally, substantiated maltreatment in childhood appears to increase the risk of early adulthood offending (Widom, 1989; Widom & Maxfield, 1996). A smaller, less focused body of research considers the behavioral consequences of adolescent maltreatment rather than maltreatment in general. Most of this research has been cross-sectional (e.g., Benda & Corwyn, 2002; Crittenden, Claussen, & Sugarman, 1994; Farber & Joseph, 1985; Kaplan et al., 1998; Williamson, Borduin, & Howe, 1991) and generally suffers from characteristic problems identified in this literature including sampling and control group limitations and inconsistency in operationalization of maltreatment and outcomes (Widom, 1989). Cross-sectional studies do indicate consistently that adolescent maltreatment is linked with antisocial behavior, but we focus here on studies with prospective designs.

Prospective studies of adolescent maltreatment, like the cross-sectional studies, contain much variation in sampling, in the measurement of adolescent maltreatment, and in the measurement of outcomes (Brezina, 1998; Eckenrode et al., 2001; Ireland et al., 2002; Jonson-Reid & Barth, 2000; Thornberry et al., 2001). However, each prospective study implicates adolescent maltreatment as a covariate of criminal or deviant outcomes in adolescence.

For example, Jonson-Reid and Barth (2000) utilized agency data to construct a longitudinal database on reported cases of child and adolescent maltreatment and foster care placement to determine whether foster care placement increased the risk of subsequent juvenile incarceration. Investigated reports of sexual or physical abuse or neglect by CPS formed the basis of the maltreatment measure. Overall, children who had a report of maltreatment first investigated after age 14 (adolescence-limited maltreatment) were significantly more likely to be incarcerated than those who had a first report of maltreatment prior to age 14 (childhood maltreatment).

Eckenrode et al. (2001) followed a sample of mothers and children 15 years after the birth of the child to see whether the timing of substantiated maltreatment (no maltreatment, childhood-limited, adolescence-limited, persistent maltreatment) affected the early onset of negative behaviors. They found that those with no substantiated maltreatment and those with childhood-limited maltreatment were statistically identical when looking at the early onset of problem behaviors. However, those with adolescence-limited and persistent maltreatment had significantly earlier onset of negative behaviors compared to those never maltreated.

Finally, two studies using data from the Rochester study focused on the adolescent consequences of experiencing substantiated maltreatment. Ireland et al. (2002) tested the impact of maltreatment that occurred during different developmental stages on delinquency and drug use. They found that both adolescence-limited and persistent maltreatment increased the risk of a variety of delinquent outcomes (official and self-reported) in early and late adolescence compared to those never maltreated. In contrast, experiencing childhood-only maltreatment did not significantly increase the risk of delinquency during adolescence. Thornberry et al. (2001) extended this analysis to examine several additional behavioral and psychological outcomes in adolescence. In general, adolescent maltreatment (adolescent-limited or persistent maltreatment) led to a variety of negative consequences in early and late adolescence such as delinquency, drug use, teen pregnancy, internalizing problems, and multiple problem outcomes. Experiencing childhood-limited maltreatment, though, did not significantly increase the risk of negative outcomes in late adolescence when compared to those never maltreated. Finally, analysis of maltreatment subtypes indicated that those who experienced adolescent physical abuse and neglect (but not sexual

abuse) were likely to display more generalized and serious consequences in late adolescence when compared to those never maltreated.

### *Summary and research questions*

Overall, in the published research there is great variation in the measurement of adolescent maltreatment, sampling strategies, use of controls, statistical methodology, and operationalization of outcomes. Maltreatment measures range from self-reports of some subtypes of abuse (e.g., Benda & Corwyn, 2002; Brezina, 1998) to CPS substantiation of any maltreatment incident (e.g., Eckenrode et al., 2001; Ireland et al., 2002). Few studies examined neglect and emotional maltreatment. There is also broad diversity in the negative outcomes considered. Outcomes include self-reported measures of delinquency and incarceration, DSM-III-R diagnosis of conduct disorder, early onset of diverse problem behaviors, and multiple problem behaviors.

Such variation in the research makes it difficult to draw firm conclusions about the negative consequences of adolescent maltreatment. Nevertheless, these studies consistently indicate that experiencing adolescent maltreatment is developmentally disruptive in the short term. However, at least three unexplored questions remain.

First, which came first, the maltreatment or the disruptive behavior? Cross-sectional studies cannot answer this question. Longitudinal studies potentially establish temporal order between adolescent maltreatment and subsequent behavior, but the maltreatment may be the culmination of ongoing problematic behavior on the part of the adolescent. One way to begin to address this complex issue is to control statistically for earlier involvement in delinquency. Results from such a strategy would indicate whether experiences of adolescent maltreatment affect delinquent behavior. In other words, irrespective of previous involvement in delinquency, does experiencing adolescent maltreatment result in subsequent increases in offending? Second, the current research on the consequences of adolescent maltreatment estimates either contemporaneous or short-term effects. What remains unknown is whether the negative behavioral consequences of such experiences persist into early adulthood. Does involvement in offending among those who experience adolescent maltreatment dissipate over time? Third, does the type of maltreatment experience matter, or are the consequences similar regardless of the type of adolescent maltreatment? Furthermore, are the negative behavioral consequences of one type of adolescent maltreatment short-term, while another type of adolescent maltreatment might have relatively long-term effects?

In this study, we begin the process of addressing these three issues using prospective data from the Rochester Youth Development Study (RYDS), a longitudinal study with high retention that has followed a representative panel of 1,000 urban youth since age 13. The longitudinal design of the Rochester study enables the ordering of adolescent maltreatment and of later outcomes. Specifically, we address the following research questions:

1. What is the distribution of adolescent maltreatment in an urban community sample?
2. After taking into account previous delinquent behavior and sociodemographic characteristics, what is the short-term impact of adolescent maltreatment on offending, violence, drug use, and arrest? Does this impact extend into early adulthood?
3. Do the short-term effects and the long-term effects of adolescent maltreatment vary by the type of maltreatment experienced?

## Methods

The RYDS is designed to examine the causes and consequences of drug use and delinquent behavior in a high-risk urban sample. Selection of participants and measurement of key constructs have been described in detail by Smith and Thornberry (1995), Thornberry et al. (2001), and Ireland et al. (2002) and are only briefly summarized here. The RYDS is a multiwave panel study in which youths and their primary caretakers (in 95% of the cases, the mother or stepmother) were initially interviewed every 6 months and then at three annual interviews. At the first interview, subjects were on average about 13.5 years old; at the 12th interview, their average age was 22. Data were collected in two phases: during the first phase subjects were, on average, aged 13.5–17.5 years old. During the second phase, subjects were, on average, 20–22 years old. Procedures to protect human subjects were approved by the University at Albany's IRB, and included written informed parental consent for parents and students, as well as student assent, which was read to participants. As students turned age 18, their written informed consent was obtained directly. Data were also collected from the schools, police, and social services. This analysis makes use of interview data from parents and children, arrest data from police records, and data on maltreatment from Child Protective Services records.

### *Sample*

In order to obtain a sufficient number of youth at high risk for serious delinquency and drug use, the overall sample was stratified, with males being overrepresented because they are more likely than females to engage in serious delinquency. Also, students were selected in proportion to the resident arrest rate of the census tract in which they lived at the time the study began. A final panel of 1,000 students and their families was selected for the study. Although the sample overrepresents at-risk youth, the full continuum of urban adolescents is included (Farnworth, Thornberry, Krohn, & Lizotte, 1994). Because the probability of selection of each subject is known, this sampling strategy provides a means for weighting the sample to represent the initial population of 7th and 8th graders in the Rochester Public Schools and all nondescriptive findings are weighted here. Overall, 85% of the original sample was interviewed at the 12th interview, and there is no evidence of differential attrition (Krohn & Thornberry, 1999; Thornberry et al., 2003).

### *Measurement*

*Maltreatment.* The measure of maltreatment is based on data obtained from the Child Protective Services (CPS) records of the Monroe County Department of Social Services, the county of residence for all subjects at the start of the RYDS project. Maltreatment, by definition, involves harm or risk of harm to children occurring within the context of the family, that is, "by a person responsible for the child's welfare" (Public Law 93-237, section 2). For all 1,000 subjects in the Rochester study, any incident of substantiated maltreatment was recorded and coded from birth through 1992, when subjects were completing high school.

Details on each maltreatment incident were coded from CPS case records according to the classification system developed by Cicchetti (Cicchetti & Barnett, 1991) for which there is ample evidence of reliability and validity (Bolger, Patterson, & Kupersmidt, 1998; Cicchetti & Barnett, 1991; Manly, Cicchetti, & Barnett, 1994). For this analysis, two maltreatment measures are utilized: age at maltreatment and type

of maltreatment. Age at time of maltreatment comes from the incident date in the case record. Coders define descriptions of incidents as including one or more of five types of maltreatment, including physical and sexual abuse, emotional maltreatment, physical neglect and moral/legal/educational maltreatment; exemplars are used to describe these categories. A more detailed description of the coding procedures can be found in Barnett, Manly, and Cicchetti (1993) and, as applied to these data, in Smith and Thornberry (1995). Inter-rater reliability among coders was estimated at about .8.

To be considered maltreated during adolescence, the subject had to have one or more substantiated cases of maltreatment in the CPS files after his or her 12th birthday. A total of 82 adolescents had a substantiated case of maltreatment between the ages of 12 and 17, representing 9.3% of the total sample (10% of the weighted sample).

Subjects with childhood-limited maltreatment (116 unweighted, 107 weighted cases) are excluded from the analysis in view of our previous analyses demonstrating that by late adolescence the problem behavior of those maltreated only in childhood was statistically identical to the behavior of those never maltreated (Ireland et al., 2002; Thornberry et al., 2001). The maximum sample available for analysis is, therefore, 884.

A majority of the adolescent maltreated subjects in the Rochester sample experienced at least two different types of substantiated maltreatment, which is consistent with other maltreatment research (Crittenden et al., 1994; McGee, Wolfe, & Wilson, 1997). Because of the overlap of types of maltreatment, we created subtypes of maltreatment by following the classification scheme developed by Cicchetti and Rogosch (1997). If subjects experienced any adolescent sexual abuse, they are placed into the sexual abuse category. If they experienced any adolescent physical abuse but no sexual abuse, they are categorized as physically abused. Experiences of physical neglect and moral/legal/educational maltreatment were categorized as neglect. Neglect and emotional maltreatment showed substantial overlap in occurrence, as well as in precursors and consequences, and were classified together (McGee & Wolfe, 1991; Rosenzweig & Kaplan, 1996). Only 8% of subjects experienced just emotional maltreatment. The distribution of maltreatment variables, as well as other variables in the analysis, is shown in Table 1, and discussed below. Table 1 presents unweighted data only.

*Antisocial behavior.* Because the focus here is on antisocial behavior, which covers a range of behaviors, four measures are used. Three self-report measures are employed: general offending, violent offending, and drug use. Arrest—an official measure—is also used as an indicator of adolescent antisocial behavior, although it also reflects criminal justice activities. Two time frames are considered: late adolescence and early adulthood. The strength of using multiple measures of antisocial outcomes across time is that one is able to look for consistent patterns that suggest a higher level of confidence in the overall findings.

At each interview, a set of self-reported offending and drug use questions asked whether or not the respondent committed a particular offense in the interval between the previous and current interviews and, if so, the frequency of those behaviors. Prevalence measures for these three outcomes—general offending, violent offending, and drug use—were constructed for two different intervals: late adolescence and early adulthood. Late adolescence measures cover a 2-year time frame from approximately ages 16–18 and are based on data from four interviews conducted at 6-month intervals. If the subject reports the behavior falling into the category of interest at any or all points during this time period, they are treated as engaging in the behavior. Early adulthood outcome measures are derived from three annual interviews and cover approximately ages 20–22.

Table 1  
Distribution of variables (unweighted)

	%	(N)
Adolescent maltreatment		
Any adolescent maltreatment	9.3	(884)
Adolescent sex abuse	1.6	(884)
Adolescent physical abuse	4.1	(884)
Adolescent neglect/emotional abuse	3.6	(884)
Late adolescent outcomes		
General offending	58.7	(777)
Violent offending	39.0	(777)
Drug use	30.4	(777)
Arrest	30.0	(829)
Early adult outcomes		
General offending	63.9	(737)
Violent offending	26.9	(737)
Drug use	49.5	(737)
Arrest	32.7	(807)
Control variables		
Early adolescent outcomes		
General offending	71.8	(824)
Violent offending	53.6	(824)
Drug use	23.3	(824)
Arrest	23.6	(824)
Parent did not complete high school	47.8	(878)
Community poverty	27.0	(884)
Chronic family poverty	29.2	(732)
Caregiver changes	25.3	(748)
Gender		
Female	27.1	(884)
Male	72.9	(884)
Race/ethnicity		
African American	67.6	(884)
Hispanic	18.0	(884)
White	14.4	(884)

The general offending index includes multiple self-report questions asking whether subjects committed offenses ranging in seriousness from minor offenses like public rowdiness and petty theft to serious offenses like robbery, assault with a deadly weapon, and drug sales since the last interview. Self-report offending measures used in the Rochester study are based on the National Youth Survey and have well-established validity (Thornberry et al., 2003). In late adolescence, about 59% of subjects were involved in general offending, and, in early adulthood, this figure rose to 64%. The violence index contains a subset of the general offending measure, including six questions about violent interactions with others, including gang fights, robbery, and assault. In late adolescence, 39% of the sample had engaged in violent

offending, and this dropped to 27% in early adulthood. The drug use index contains questions about the use of 10 illicit drugs ranging from marijuana to cocaine/crack and heroin. Illicit drug use carries health risks and risks for other problem behaviors and is a standard variable in national drug use surveys (Johnston, O'Malley, & Bachman, 2003; Substance Abuse and Mental Health Services Administration, 2002). Drug use was reported by 30% of the sample in late adolescence and by 50% in early adulthood. Almost all (95% in early adulthood) of those who used illicit drugs other than marijuana also used marijuana. Of those who reported any illicit drug use, 10–13% were polydrug users.

Outcome measures also include an official measure of offending based on the number of times each subject had an arrest or an official contact with the police as a juvenile or an arrest as an adult. Official contacts include cases in which a juvenile was “warned and released” by the police and the event was officially recorded. Contact and arrest data were collected from the files of the Rochester Police Department, and New York State registries were searched for statewide arrests. For ease of presentation, we refer to all official offending measures as arrests.

Since dates of arrest are known, it is possible to parallel the self-report periods described above by constructing a prevalence measure of any arrest during both time periods. Overall, about 30% of the sample had an arrest recorded during late adolescence, and about 33% had an arrest recorded during early adulthood. Descriptive statistics indicate that between one quarter and two thirds of the sample was arrested or involved in some offending, violence, or drug use.

*Control variables.* In the multivariate analyses to follow, we include prior antisocial behavior to control for its continuing impact and to control for the possibility that the maltreatment might be a consequence of delinquency. Control variables in this category parallel the outcome variables described above but are measured at earlier periods. When late adolescent outcomes are predicted, the same measure taken from an earlier time period is employed. For example, when predicting the outcome of late adolescent arrest, we control for arrests during early adolescence, about ages 13.5–15.5. When predicting late adolescent violence, we control for early adolescent violence. Similarly, in the prediction of early adult outcomes, we control for an earlier measure of that variable. For example, in predicting early adult arrests, we control for arrests in late adolescence.

There are several ways to control for prior antisocial behavior. We have elected to present relationships controlling for the prior occurrence of similar behavior, because, by controlling for similar prior behavior, the resulting estimates provide a more interpretable test of the change in the specific behavior controlling for its prior level. Also, there is considerable overlap between our indicators of antisocial behavior, both cross sectionally and longitudinally: for example, of those who had been involved during early adolescence in drug use or had been arrested, more than 85% also engaged in general offending. We also considered a control variable that included prior general delinquency or drug use. We repeated all analyses using this general control and it does not change the substantive consistency of the results, as we note more specifically below. We also note prior findings that adolescent maltreatment is related to several types of early adolescent problem behavior (see Thornberry et al., 2001).

Six additional variables are included as control variables in the multivariate analyses since they are related to both maltreatment and offending, and their effects have typically been controlled in previous studies (e.g., Smith & Thornberry, 1995; Widom, 1991; Zingraff et al., 1993). We dichotomize continuous variables at the top quartile, which indicates those at highest risk.

A dichotomous variable divides the sample into those parents who finished high school (52%) and those who did not (48%). Family poverty is derived from questions about principal wage earner unemployment

or reliance on public assistance from the first eight waves of data collected. Those in the top quartile of the cumulative distribution were identified as experiencing chronic poverty. This includes those unemployed or receiving public assistance in six or more waves (29%). Caregiver change is a dichotomous variable derived from a count of transitions in parental figures over the adolescent interview waves. The top quartile of the distribution, those experiencing three or more transitions, was identified as experiencing a potentially problematic level of caregiver changes (25%). For gender, males are coded as the omitted category and 27% of the sample is female. Race/ethnicity includes two dummy variables, with non-Hispanic White as the omitted category. In this sample, 14% are White, 68% are African American, and 18% are Hispanic young adults. Finally, community poverty indicates the percentage of people in the census tract of residence who had incomes below the poverty level. The average percentage of people living below the poverty level is about 27% across the census tracts.

The multivariate analyses presented below employ logistic regression. Each estimated equation controls for other variables that may influence both the independent and the dependent variables, including educational attainment of the parent, chronic family poverty, caregiver changes, gender, community poverty, and dummy variables for race/ethnicity. All estimated equations also control for prior levels of the outcome behavior as indicated above. The excluded category for the maltreatment variable is “no substantiated maltreatment.” The multivariate tables report odds ratios (OR) and confidence intervals. Odds ratios indicate the likelihood of observing the outcome in the presence of a dichotomous predictor such as adolescent maltreatment in comparison to the likelihood of the outcome for the excluded group (non-maltreated). We employ a one-tailed test of significance for each of the logistic coefficients in the estimated models because of the specific directional nature of our primary research hypothesis: adolescent maltreatment will increase the risk of antisocial behavior in late adolescence and early adulthood. We use 90% confidence intervals because the portion of the confidence interval between the lower bound and the odds ratio is equivalent to a one-tailed test at  $p < .05$ . If the confidence interval does not include 1, the variable is significant. If the odds ratio is greater than 1, this indicates a significant likelihood of increase in the outcome, and if less than 1, it indicates a significant decrease. Although we are only interested in the lower boundary of the confidence interval, we present both the lower and the upper boundary for each estimated odds ratio.

## Results

The first key analytic question is the distribution of adolescent maltreatment in an urban community sample. In the RYDS sample, 198 subjects (20% of the entire sample) experienced substantiated maltreatment at some point between birth and age 18. Furthermore, the rate of substantiated adolescent maltreatment for this sample of urban adolescents is just below 10%. In all, 82 adolescents had a substantiated case of maltreatment that occurred between the ages of 12 and 17, which accounts for about 40% of all substantiated cases of maltreatment. About one third (35%) of the adolescent maltreatment cases also had a substantiated maltreatment incident prior to 12, while about 65% had an official record of maltreatment for the first time in adolescence. In these analyses, groups that experienced maltreatment only in adolescence are combined with those who experienced maltreatment in childhood as well as adolescence in order to maximize sample numbers. Prior analysis suggests little difference in outcomes between these groups and we wanted to maximize sample size (Ireland et al., 2002). Among the maltreated adolescents, 14 (1.6%) experienced sexual abuse, 36 (4.1%) experienced physical abuse, and 32

(3.6%) were neglected or emotionally abused (see Table 1). In all but two cases, the victim of sex abuse was female. More balanced gender distributions are observed for other types. The majority of subjects experienced multiple subtypes of maltreatment, however. For example, of 14 subjects sexually abused during adolescence, 4 experienced only sexual abuse. Of those not sexually abused, 42 subjects maltreated in adolescence were physically abused, but only 12 of these adolescents experienced only physical abuse. Only 19 of the 43 neglected in adolescence experienced neglect only.

Chi-square tests were used to compare the prevalence of control variables in maltreated and non-maltreated groups. The control variables are associated as expected with adolescent maltreatment. For example, chronic family poverty results in a higher prevalence of adolescent maltreatment compared to families not living in chronic poverty (14.6% vs. 7.8%,  $p < .05$ ), and similar patterns are observed for parental educational attainment and caregiver changes. Additionally, about 18% of the females experience adolescent maltreatment, while about 6% of the males experience adolescent maltreatment ( $p < .05$ ). Finally, race/ethnicity is significantly related to maltreatment: African American and Hispanic subjects are more likely to be maltreated in adolescence (13.5% and 11.7%, respectively) compared to White subjects (6.0%). Living in high poverty neighborhoods, however, is unrelated to adolescent maltreatment in this sample.

Table 2 examines the short-term behavioral consequences of experiencing any adolescent maltreatment. The first row indicates that, after taking control variables and previous involvement in the behavior into consideration, experiencing any adolescent maltreatment increases the risk of arrest, violent offending,

Table 2  
Adolescent maltreatment and late adolescent outcomes

	Arrest		General offending		Violent offending		Drug use	
	Odds ratio	CI	Odds ratio	CI	Odds ratio	CI	Odds ratio	CI
Any adolescent maltreatment	2.29**	(1.32, 3.97)	1.63	(.99, 2.68)	2.11**	(1.26, 3.54)	1.76*	(1.05, 2.95)
Early adolescent offending <sup>a</sup>	3.87**	(2.61, 5.74)	4.21**	(3.09, 5.76)	6.04**	(4.29, 8.50)	8.29**	(5.79, 11.87)
Parent did not complete HS	1.64*	(1.13, 2.40)	.95	(.69, 1.29)	.80	(.57, 1.13)	.76	(.54, 1.09)
Community poverty	1.00	(.99, 1.02)	1.03**	(1.02, 1.04)	1.03**	(1.02, 1.04)	.99	(.98, 1.01)
Chronic family poverty	.99	(.66, 1.49)	1.08	(.76, 1.52)	1.14	(.78, 1.66)	1.37	(.93, 2.01)
Caregiver changes	1.98**	(1.35, 2.91)	1.50*	(1.07, 2.11)	1.08	(.75, 1.56)	1.37	(.95, 1.98)
Female	.25**	(.17, .37)	.45**	(.33, .62)	.42*	(.30, .61)	.67*	(.47, .95)
African American	3.74**	(1.99, 7.03)	1.19	(.78, 1.82)	1.18	(.72, 1.94)	1.30	(.80, 2.12)
Hispanic	3.96**	(1.93, 8.13)	1.14	(.67, 1.95)	1.41	(.76, 2.58)	1.04	(.57, 1.91)
–2 log likelihood	571.14		802.41		817.50		670.52	
Model chi-square	115.95		120.99		148.13		123.75	
N	666		666		666		666	

<sup>a</sup> The lagged behavioral measure for each equation varies depending upon the dependent variable. For example, when predicting late adolescent arrest, the lagged early adolescent measure is “early adolescent arrest.” The model chi-square for each equation is statistically significant.

\*  $p < .05$  (one-tailed).

\*\*  $p < .01$  (one-tailed).

and drug use in late adolescence. The odds of arrest among those maltreated in adolescence are over two times the odds of arrest for those never maltreated (OR = 2.29, CI = 1.32, 3.97), and the same is true for violent offending (OR = 2.11, CI = 1.26, 3.54). Finally, the odds of drug use in late adolescence are more than one and a half times greater (OR = 1.76, CI = 1.05, 2.95). However, there is no relationship between adolescent maltreatment and general offending in late adolescence after taking into account control variables and prior general offending.

Most control variables are related, as expected, to at least one of the dependent variables. Children of parents who did not complete high school are more likely to be arrested. Community poverty is related to general and violent offending, although family poverty is unrelated to any of the outcomes. Caregiver changes impact arrest and general offending. Young women are less likely than their male counterparts to be arrested, to engage in general and violent offending, and to use drugs. Finally, risk of arrest is higher for African American and Hispanic youth, although their risk of self-reported offending is not significantly greater. All lagged dependent variables are significantly related to the outcomes, as expected.

Repeating all analyses using a general control variable that includes prior delinquency or drug use does not change the substantive consistency of the results, with the exception that adolescent maltreatment moves to insignificance when predicting general offending in early adulthood, and physical abuse moves to significance when predicting arrest in early adulthood.

Table 3 extends the analysis into early adulthood to determine if the short-term effects identified in late adolescence persist into a respondent's early 20s. The first row of Table 3 shows that experiencing any

Table 3  
Adolescent maltreatment and early adult outcomes

	Arrest		General offending		Violent offending		Drug use	
	Odds ratio	CI	Odds ratio	CI	Odds ratio	CI	Odds ratio	CI
Any adolescent maltreatment	2.24**	(1.31, 3.85)	1.75*	(1.04, 2.93)	2.03*	(1.23, 3.35)	2.14*	(1.22, 3.73)
Late adolescent offending <sup>a</sup>	5.70**	(3.92, 8.29)	3.22**	(2.38, 4.35)	3.35**	(2.39, 4.70)	13.15**	(8.91, 19.42)
Parent did not complete HS	2.01**	(1.38, 2.93)	.55**	(.40, .75)	.79	(.56, 1.12)	1.19	(.84, 1.68)
Community poverty	1.01	(.99, 1.02)	1.00	(.99, 1.01)	.99*	(.97, 1.00)	1.02*	(1.00, 1.03)
Chronic family poverty	1.15	(.77, 1.73)	1.13	(.79, 1.62)	1.41	(.96, 2.06)	.85	(.58, 1.25)
Caregiver changes	1.15	(.78, 1.71)	1.26	(.88, 1.80)	.83	(.57, 1.22)	1.66*	(1.14, 2.43)
Female	.28**	(.19, .42)	.54**	(.39, .74)	.92	(.65, 1.32)	.42**	(.30, .60)
African American	1.16	(.69, 1.95)	.39**	(.24, .63)	1.13	(.69, 1.85)	.75	(.46, 1.21)
Hispanic	.81	(.43, 1.54)	.47*	(.26, .83)	1.26	(.70, 2.28)	.81	(.45, 1.45)
-2 log likelihood	593.701		753.67		671.37		672.97	
Model chi-square	142.54		106.04		49.70		201.28	
N	659		637		637		637	

<sup>a</sup> The lagged behavioral measure for each equation varies depending upon the dependent variable. For example, when predicting early adult arrest, the lagged late adolescent measure is "late adolescent arrest." The model chi-square for each equation is statistically significant.

\*  $p < .05$  (one-tailed).

\*\*  $p < .01$  (one-tailed).

adolescent maltreatment increases the odds of arrest, general offending, violent crime, and drug use in early adulthood when compared to those who were never maltreated, after taking into consideration the control variables including prior involvement in similar behaviors. These multivariate results support the conclusion that experiencing any adolescent maltreatment increases the risk of problematic behavioral adaptations into early adulthood. For example, experiencing any adolescent maltreatment increases the odds of drug use in early adulthood by 2.14 (CI = 1.22, 3.73) times compared to those who were never maltreated. However, the strongest impact of adolescent maltreatment in early adulthood is seen for arrest: the odds of arrest are almost two and a quarter times higher (OR = 2.24, CI = 1.31, 3.85) for those who have been maltreated as adolescents compared to those who have never been maltreated. Overall, these results indicate that the consequences of adolescent maltreatment persist into early adulthood (controlling for similar behavior at earlier ages as well as sociodemographic factors)—presumably after the maltreatment has ceased. The magnitude of the risk remains relatively unchanged from late adolescence to early adulthood, so there is no clear indication that the negative effects of adolescent maltreatment substantially decay over time. For example, the odds ratio for risk of arrest is 2.29 (CI = 1.32, 3.97) in late adolescence (Table 2); it is 2.24 (CI = 1.31, 3.85) in early adulthood (Table 3). There is an increase in risk for drug use and general offending in early adulthood. Finally, the controls included in the estimated equations presented in Table 3 in general behave in a manner similar to the results presented in Table 2.

The final analytic question is whether the short-term and longer-term effects of adolescent maltreatment vary by the type of maltreatment experienced. Table 4 reports the results obtained from considering specific types of maltreatment instead of a global measure of any adolescent maltreatment. The top panel of Table 4 considers the relationship between adolescent neglect, adolescent physical abuse, and adolescent sex abuse and late adolescent outcomes, while the bottom panel examines the relationship between these types of maltreatment and early adult outcomes. Recall that the specific types of maltreatment considered do not represent pure types of maltreatment but may include multiple maltreatment types. The most consistent pattern is that adolescent neglect significantly increases the odds of three outcomes in late adolescence—arrest, general offending, and violent crime, although not the odds of drug use. Physical abuse increases the odds of violent crime (OR = 2.54, CI = 1.17, 5.48) and drug use (OR = 3.66, CI = 1.78, 7.52) compared to those never maltreated, but physical abuse does not significantly increase the odds of either arrest or general offending. Results indicate that those who experience adolescent sexual abuse do not have increased odds for any outcome in late adolescence compared to those never maltreated.

The second panel of Table 4 examines outcomes in early adulthood. Although neglect had fairly robust effects in late adolescence, its negative effects have somewhat dissipated in early adulthood. Neglect increases the risk of arrest and drug use in early adulthood but not general or violent offending. The impact of physical abuse among maltreated adolescents has also dissipated somewhat—physical abuse is only related to violent offending in early adulthood. Finally, although experiencing sexual abuse among maltreated adolescents was unrelated to our measures of antisocial behavior in late adolescence, by early adulthood sexual abuse is linked to general offending (OR = 5.04, CI = 1.50, 16.91) and drug use (OR = 5.74, CI = 1.68, 19.63).

Overall, five of the coefficients for specific types of maltreatment are significant in the top half of Table 4, and five coefficients are significant in the equations in the bottom half of Table 4 although the pattern of effects for different subtypes changes somewhat over time. We present these findings with caution, however, because we used a one-tailed test of significance and the number of cases of each type of maltreatment is relatively small. Coefficients for drug use appear especially unstable as indicated by the rather large estimated confidence intervals.

Table 4  
Types of adolescent maltreatment and outcomes in late adolescence and early adulthood<sup>a</sup>

	Arrest		General offending		Violent offending		Drug use	
	Odds ratio	CI	Odds ratio	CI	Odds ratio	CI	Odds ratio	CI
<b>A. Late adolescent outcomes</b>								
Adolescent neglect	4.37**	(1.96, 9.75)	3.23*	(1.39, 7.52)	3.59**	(1.61, 8.01)	.96	(.41, 2.25)
Adolescent physical abuse	1.41	(.61, 3.30)	1.12	(.55, 2.31)	2.54*	(1.17, 5.48)	3.66**	(1.78, 7.52)
Adolescent sex abuse	1.67	(.56, 4.97)	1.13	(.43, 2.99)	.59	(.19, 1.79)	.97	(.35, 2.66)
–2 log likelihood	568.00		799.27		720.42		665.05	
Model chi-square	119.09		124.13		97.08		129.21	
<i>N</i>	666		666		666		666	
<b>B. Early adult outcomes</b>								
Adolescent neglect	2.36*	(1.03, 5.42)	1.32	(.60, 2.88)	1.76	(.82, 3.78)	2.55***	(1.10, 5.90)
Adolescent physical abuse	2.15	(1.00, 4.64)	1.36	(.63, 2.93)	2.17*	(1.05, 4.50)	.99	(.41, 2.41)
Adolescent sex abuse	2.23	(.76, 6.61)	5.04*	(1.50, 16.91)	2.30	(.85, 6.24)	5.74**	(1.68, 19.63)
–2 log likelihood	593.68		750.46		671.20		668.65	
Model chi-square	142.57		109.25		49.87		205.59	
<i>N</i>	659		637		637		637	

<sup>a</sup> The control variables presented in Tables 2 and 3 are included in each of the estimated equations presented above, but the coefficients are not reported in the interest of space. Similarly, the lagged measures of earlier behaviors are also included in each equation as before, but are not reported. The model chi-square for each equation is statistically significant.

\*  $p < .05$  (one-tailed).

\*\*  $p < .01$  (one-tailed).

## Discussion

The study addressed three research questions. The first is a descriptive question about the distribution of adolescent maltreatment. These rates of maltreatment for a community sample are high and probably reflect the urban public school sample (Smith & Thornberry, 1995). The distribution of adolescent maltreatment in the sample is quite consistent with previous research that indicates that somewhere between 25% and 45% of all substantiated maltreatment occurs during adolescence (e.g., Sedlak & Broadhurst, 1996). The gender distribution of maltreatment subtypes is similar to that found in the national estimates. However, we find, as others have, that it is hard to categorize maltreatment into separate subtypes because of the overlap in subtypes. The majority of maltreated adolescents experienced physical abuse followed by neglect/emotional maltreatment and then sexual abuse. NIS-3 indicated that neglect is most common, followed by physical abuse, and then sexual abuse. However, because the subtypes of maltreatment are not pure types, it is not unexpected that the distribution of subtypes of maltreatment in the Rochester sample differs somewhat from national estimates.

The second research question relates to short-term and long-term outcomes of adolescent maltreatment. Findings suggest that experiencing substantiated maltreatment in adolescence increases the risk of deviant behavioral adaptations in late adolescence and in early adulthood. Risk is increased, even allowing for other co-occurring risk factors such as poverty and caregiver changes. Most important, substantiated experiences of maltreatment in adolescence increase the risk of offending across a range of antisocial outcomes, even allowing for the impact of the same behavior measured at earlier time periods.

The third research issue is whether there are differential consequences based upon type of maltreatment experienced. Findings suggest that adolescent neglect has fairly negative behavioral consequences in late adolescence, but its effects dissipate somewhat by early adulthood. Nevertheless, neglect is associated consistently with both short-term and long-term negative behavioral outcomes, increasing the risk of arrest, general offending, and violent offending in late adolescence and the risk of arrest and drug use in early adulthood. These data support other findings suggesting that neglect is, at least in the short term, as damaging as other types of maltreatment (Crouch & Milner, 1993; Jonson-Reid & Barth, 2000; Widom, 1996; Widom & Maxfield, 2001). Physical abuse increases the risk of violent offending and drug use in late adolescence and violent offending in early adulthood. The link between experiencing violence and demonstrating violent behavior is consistent with a “cycle of violence” interpretation rooted in social learning concepts (e.g., see Bandura, 1977; Widom, 1992) which posit that such direct exposure to violence creates models and legitimations for violent behavior. Although experiencing substantiated sexual abuse in adolescence does not increase the risk of involvement in problem outcomes during late adolescence, by early adulthood adolescent sexual abuse does appear to increase the risk of general offending and drug use. While this finding is consistent with a recent review that suggests that sexual abuse may have “sleeper effects” that are not immediately apparent (Putnam, 2003, p. 274), it is also possible that this finding is an artifact of the small number of cases and, therefore, the results need to be regarded with caution and await replication from other longitudinal studies. Sexual abuse disproportionately affects females in this sample and in general; thus, these findings highlight the importance of continuing to investigate the prospective impact of sexual abuse for women.

These findings supplement and extend the findings in Thornberry et al. (2001) and Ireland et al. (2002) that indicate that the consequences of adolescent maltreatment are more serious than have been previously considered. We find that the negative consequences of adolescent maltreatment persist into early adulthood even after controlling for the impact of prior behavior. Furthermore, in the context of our

previous research, this persistence is particularly intriguing. Thornberry et al. (2001) and Ireland et al. (2002) found that childhood-limited maltreatment was unrelated to several negative behavioral adaptations in late adolescence. Both studies concluded that the effects of childhood-limited maltreatment, at least in terms of the problem outcomes considered, tended to dissipate as the period of time between the maltreatment and the particular outcome increased. On one level, we were looking for and expecting the same result here when estimating the longitudinal relationship between adolescent maltreatment and early adult offending and drug use. Instead, though, we find that the negative consequences of adolescent maltreatment did not dissipate over time. In fact, all are significant and two outcomes (general offending and drug use) actually increased in early adulthood—quite the opposite of what we found with childhood-limited maltreatment (Ireland et al., 2002). The reason for this differential pattern of results is not clear and requires further exploration, but it seems to indicate that the timing of maltreatment in the life course does in fact matter. Children may be more developmentally resilient than adolescents, or perhaps interventions for child victims of maltreatment are more readily available and successful than are interventions for adolescent victims of maltreatment. However, adolescent maltreatment and delinquency may tend to trap adolescents into a cycle of deviant activities from which they cannot be easily extracted (Elliott, 1994).

Nevertheless, this study contains some limitations. Because of the relatively small number of cases of maltreated adolescents, we are unable to investigate gender-specific effects of adolescent maltreatment. Another limitation of the study pertains to the reliance on substantiated cases to measure the presence or absence of maltreatment. Studies have indicated that self-reported maltreatment and cases of substantiated incidents of maltreatment sometimes do not coincide (e.g., Widom & Shepard, 1996). Furthermore, it is quite likely that some subjects in the “never maltreated” category actually experienced adolescent maltreatment, given the argument that adolescent maltreatment tends to be underreported, underinvestigated, and undersubstantiated. However, such a possibility does not detract from the findings—in fact, it actually acts to reduce the likelihood of finding significant adolescent maltreatment effects, thereby making these estimates fairly conservative. Although it would be helpful to know which, if any, services families in the study received that may have moderated the outcomes observed, data on these important issues were not available in the records reviewed for this study. Finally, we acknowledge the difficulties involved in categorizing maltreatment cases into subtypes. It is difficult to be sure that findings relating to subtypes are not influenced by the complexity of coding multiple maltreatment types. Investigators are beginning to suggest that experiencing multiple types of maltreatment may carry its own consequences (e.g., Higgins & McCabe, 2001).

Three intervention implications flow from our findings. First, enhanced professional training and education about the nature and impact of adolescent maltreatment are indicated. Second, prevention and treatment services for adolescent victims and their families need development and extension. Third, systems that assess and intervene with maltreated adolescents should be further scrutinized and evaluated.

The importance of adolescent maltreatment has been underestimated by professionals. Maltreatment at older ages—and particularly neglect—is less likely to be reported by teachers (Reyome & Gaeddert, 1998), nurses (O’Toole, O’Toole, Webster, & Lucal, 1994), law enforcement officers (Olsen & Holmes, 1986), and social workers (Ashton, 1999). The lack of consensus about what constitutes maltreatment is particularly salient for older victims, with psychological maltreatment and neglect being the most ambiguous categories. As we have seen, neglect potentially carries significant consequences. The consequent lack of protection for adolescents suggests the need for professional education and training of mandated reporters and CPS workers to emphasize current data on the actual risk profile and consequences for maltreated adolescents.

Our data strongly suggest the need for enhanced efforts to prevent maltreatment in adolescence and to intervene where it has occurred. Because the majority of adolescents are in school up to age 16, schools are an appropriate site for primary prevention programs directed at adolescent maltreatment (Hutchinson & Langlykke, 1997). Goals of adolescent-targeted programs include informing students as well as professionals about recognizing high-risk situations, identifying abuse, educating about available community resources, and developing resource teams (Derezotes & Barth, 1993; Wordes & Nunez, 2002). Maltreatment prevention is also achieved by timely crisis intervention to address conflict resolution, open lines of communication, and clarify roles and responsibilities of parents and youth, especially where maltreatment is not ongoing and has not disrupted a wider range of developmental competencies (Gil, 1996). Ideally, a range of empirically validated services should be available to the adolescent and the family. These include cognitive behavioral therapies (CBT) (Kazdin & Weisz, 1998; Verduyn & Calam, 1999) and family-centered ecological approaches such as Multisystemic Therapy (MST, Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998) which have demonstrated positive outcomes for maltreated as well as antisocial adolescents and families. Service system decisions and structures are as important as individual and family intervention in achieving good outcomes for children (Courtney, 2000; Jonson-Reid & Barth, in press). Yet, differences in child welfare practice may lead to widely different outcomes for children and adolescents, and we know little about child welfare outcomes. Although the majority of maltreated children receive short-term, nonintensive services, a small proportion are placed into foster care. Earlier studies suggested that child welfare services response to maltreatment did not have a positive effect (Runyan & Gould, 1985; Widom, 1991). However, a recent study suggested that, although children who were maltreated at older ages were at greater risk of criminal justice system involvement, receipt of child welfare services may have reduced the chance of incarceration, at least for some subgroups of maltreated children (Jonson-Reid & Barth, 2000). In addition, greater collaboration between youth-serving and victim-serving organizations would provide an improved safety net for teens (Wordes & Nunez, 2002). Mental health services in particular are rarely well integrated with child welfare or juvenile justice services.

In summary, this prospective study illuminates at least four findings about the sequelae of maltreatment during the adolescent life stage that are new to the literature. First, adolescent maltreatment has consequences for a broad range of antisocial outcomes that extend to adult contact with the criminal justice system as well as to drug use. Adolescent victims are at elevated risk for drug abuse, offending, and arrest into adulthood, even controlling for other sources of risk. Second, neglect, which has been viewed as less significant in impact historically, appears to produce a comparable range of consequences to other forms of maltreatment. Third, the impact of adolescent sex abuse may grow rather than fade over time, an issue that requires more exploration because of the sample limitations here. Finally, this study is unique in indicating that the impact of substantiated adolescent maltreatment is associated with worsening antisocial behavior, even among those adolescents who were demonstrating earlier behavioral problems.

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## Résumé

**Etat du problème:** On sait que la maltraitance infantile est un facteur de risque pour toute une série de problèmes ultérieurs, mais on en sait moins sur la maltraitance de l'adolescent. Cette étude vise à rechercher l'impact de la maltraitance de l'adolescent sur une conduite antisociale, tout en se référant à des niveaux antérieurs de comportement à problème ainsi qu'aux caractéristiques sociodémographiques.

**Méthodes:** Les données proviennent de l'Etude de Rochester sur le Développement Juvénile, étude globale de comportements à problème sur un échantillon de 1000 jeunes citoyens suivis depuis l'âge de 13 ans jusqu'à l'âge adulte. Les sujets comprennent 68% de jeunes Afro-américains, 17% d'Hispaniques, et 15% de Blancs. L'analyse inclue un maximum de 884 sujets, dont 9,3% avaient des antécédents circonstanciés de maltraitance à l'adolescence. Parmi les adolescents maltraités, 14 avaient été victimes

d'agresion sexuelle, 36 de maltrato físico, et 32 de négligence grave ou de sévices moraux. L'évolution étudiée chez les grands adolescents (16–18 ans) et les jeunes adultes (19,5–22,5 ans) montre l'incarcération, une agressivité générale violente auto-proclamée, et l'usage de drogues illicites. Les variables de référence incluent les niveaux antérieurs de ces comportements ainsi que les caractéristiques socio-démographiques comme la pauvreté, l'éducation parentale et les changements de famille d'accueil.

**Résultats:** Une analyse logistique rétrospective a montré que le fait d'avoir été victime d'une maltraitance caractérisée au cours de l'adolescence accroît les chances d'emprisonnement, d'agressivité violente générale et d'usage de drogue illicite chez le jeune adulte, même en tenant compte des caractéristiques socio-démographiques et des niveaux antérieurs de comportement à problèmes. Différents types de maltraitance de l'adolescent, y compris la négligence grave, semblent produire des conséquences comportementales défavorables similaires.

**Conclusions:** La maltraitance de l'adolescent nécessite une attention accrue en raison de son impact durable et multiple sur le déroulement de la vie.

## Resumen

**Planteamiento del problema:** Se considera que el maltrato infantil es un factor de riesgo para un amplio rango de problemas posteriores, pero se conoce poco sobre las consecuencias del maltrato a adolescentes. El presente estudio tiene como objetivo investigar el impacto del maltrato adolescente en la conducta antisocial, mientras se controlan los niveles previos de problemas de conducta así como las características sociodemográficas.

**Método:** Se recogen los datos del Estudio de Desarrollo de Jóvenes de Rochester, un estudio de cohorte del desarrollo de problemas de conducta en una muestra de 1,000 jóvenes urbanos a la que se sigue desde los 13 años hasta la adolescencia. La muestra está compuesta de un 63% de afroamericanos, 17% de Hispanos y 15% de Blancos. El análisis incluyó un máximo de 884 sujetos de los cuales un 9.3% tuvo en la adolescencia notificaciones de maltrato confirmadas. Entre los adolescentes maltratados, 14 experimentaron abuso sexual, 36 maltrato físico y 32 fueron víctimas de negligencia o maltrato emocional. Las consecuencias exploradas en la adolescencia tardía (16 a 18 años) o la juventud temprana (19.5 a 22.5 años) incluyen arrestos, autoinformes de agresiones generales o violentas y uso ilícito de drogas. Las variables de control fueron los niveles previos de dichas consecuencias así como las características sociodemográficas como la pobreza, educación parental y cambios de cuidadores.

**Resultados:** Los análisis de regresión logística determinaron que el hecho de haber experimentado cualquier maltrato confirmado durante la adolescencia aumenta las posibilidades de sufrir arrestos, realizar agresiones generales o violentas y la utilización de drogas ilícitas en la juventud temprana, incluso las características sociodemográficas y los niveles previos de problemas de conducta. Los diferentes tipos de maltrato, incluyendo la negligencia, parecen producir similares consecuencias adversas.

**Conclusiones:** El maltrato adolescente una mayor atención en vista de su duradero potencialmente amplio impacto en el ciclo vital.