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**Family Social and Economic Factors and  
Exposure to Adverse Childhood Experiences**

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**Abstract**

Research suggests that family social and economic factors are associated with differential exposure to adverse childhood experiences. Yet our understanding of the role that social and economic stratification plays in shaping exposure to adverse childhood experiences is limited. This study documents the prevalence of exposure to adverse childhood experience in a nationally representative sample of youth, examines whether family social and economic factors shape variation in amount of exposure, and investigates how family social and economic factors shape variation in type of exposure. Results indicate that prevalence among youth is remarkably high and that amount of exposure varies by family social and economic factors. Additionally, the odds of exposure to adverse childhood experience were distinctly different for youth from families in the lowest income group (highest poverty) compared to youth from families that received welfare, highlighting important qualitative differences in the nature and influence of family social and economic factors.

**Keywords:** Youth, Stress, Family, Poverty, Well-Being

## Introduction

Exposure to adverse childhood experience, such as child maltreatment and parent psychopathology, has serious, long-lasting consequences for the social and economic well-being of individuals, families, and society (Fang, Brown, Florence and Mercy 2012). Research has demonstrated that exposure to early adversity has a deleterious impact on learning, behavior, and physical and mental health in childhood (Evans and English 2002; Evans and Kim 2007, 2010; McEwen 2003; Green and Darity 2010; Gunnar, Fisher, et al. 2006; McEwen and Gianaros 2010; Seeman, Epel, Gruenewald, Karlamanga, and McEwen 2010), and is associated with adult psychiatric illness (Rutter et al. 1976; Brown and Harris 1978; Kessler, Davis, and Kendler 1997; Chapman et al. 2004; McLaughlin et al. 2010; Dunn et al. 2011), poorer long-term physical health (Stein et al. 2010), lower educational attainment (Perez and Widom 1994; Boden, Horwood and Fergusson 2007), and economic productivity (Widom 1998; Fang, Brown, Florence et al. 2012). In light of this evidence, exposure to adverse childhood experience is arguably one of the most important determinants of variation in human health and well-being (Boyce, Essex, Woodward et al. 2002). Additionally, given the strong association between exposure to adverse childhood experiences and mental illness (e.g., depression), early adverse experience is considered one of the leading causes of disability worldwide (Brent and Silverstein 2013). Yet our understanding the social and economic factors that influence prevalence and patterning of exposure to adverse childhood experience in the U.S. population is limited.

Disadvantaged family social and economic status, and especially poverty, is considered a risk factor for exposure to select types of adverse childhood experiences, namely child maltreatment, but this association varies with the type of maltreatment (May-Chahal and Cawson 2005; Hussey, Chang and Kotch 2006; Sidebotham, Heron and Golding 2002; Berger 2005). In particular, the association between lower family income and child maltreatment has been widely demonstrated in the research literature (IOM and NRC 2014). Yet close examination of the relationship between the Great Recession and rates of child abuse-related injury found no association with local unemployment rates (Berger et al. 2011). Additionally, data on child abuse-related hospital admission and mortgage delinquency, foreclosures, and unemployment rates revealed a correlation between increase in admission rates and mortgage delinquency as well as foreclosure, but not with unemployment rates (Wood et al. 2012). These results suggest that children within families in the midst of economic shock are at increased risk of exposure to adverse childhood experiences, and calls for closer examination of social and economic factors.

In fact, a comparison of the proportion of estimated exposure to adverse childhood experience to the proportion of children estimated to live in poverty suggests that exposure to childhood experience occurs across all socioeconomic (SES) groups. Based on adult retrospective report, the prevalence of exposure to adverse experience in childhood is estimated at more than 50% (Kessler, Davis and Kendler 1997; Felitti, Vincent, Anda et al. 1998; Bynum, Griffin and Ridings 2010; Green, McLaughlin, Berglund et al. 2010) which outweighs the poverty rate for children estimated at any point from the 1960s to early 2000 (poverty rate approximately 11% and 18%, respectively) (Citro and Michael 1995; U.S. Census Bureau 2011). Given continuities in social and economic status over the life course (Power and Hertzman 1997; Mirowsky and Ross 2001; Dannefer 2003) this speculation suggests that a substantial proportion of exposure to adverse childhood experience occurs among children that do not live in impoverished family circumstances. As such, although exposure to adverse experience in childhood might occur less frequently in higher SES groups, those with social and economic advantage are not spared from exposure to adverse experience. This, coupled with the fact that

family social and economic indicators is shown to vary with exposure to select adverse childhood experiences, suggests that social and economic context is important in shaping exposure to early adverse experience.

## **Purpose**

The goal of this study is three-fold. The first goal is to document the prevalence of exposure to adverse childhood experience by family social and economic factors in a nationally representative sample of youth in the U.S. population. The second goal is to investigate whether childhood SES shapes variation in amount of exposure to adverse childhood experiences. The third goal is to examine whether childhood SES shapes variation in type of exposure to adverse childhood experiences. Past studies have demonstrated an inverse relationship between family income level and virtually every form of child abuse and neglect (Sedlak and Broadhurst 1996). However we do not know if a similar inverse relationship exists between family income level and other types of childhood experiences that are considered adverse, such as interpersonal loss (parent death, divorce, absence), parent psychopathology (mental illness, substance use, suicide attempt), and parent problem behavior (family violence, criminal activity). Additionally, we do not have detailed information on what social and economic factors are associated with variation in amount of exposure to adverse childhood experience.

I address these gaps in knowledge through the following improvements in data, methods, and measurement. First, I use a nationally representative probability sample to estimate exposure to adverse childhood experience. Second, to improve the chances of bias in recall, I narrow the time frame of retrospective self-report by including youth ages 13-18. Third, this project will provide new detail on the relationship between family social and economic factors and exposure to childhood adversity by including standard indicators of childhood SES (e.g., parent educational attainment and work status) as well as poverty level and receipt of welfare as a means to distinguish exposure to adversity by income and economic hardship. Finally, measurement of the eleven types of exposure to childhood adversity in this project includes an indicator of child neglect that follows the uniform definitions for child maltreatment surveillance issued by the Centers for Disease Control (Leeb, Paulozzi et al. 2008). This will provide results comparable to those available from administrative data and is the first using CDC criteria with a nationally representative sample of youth.

## **Methods and Data**

Data come from the National Comorbidity Survey Replication Adolescent Supplement (NCS-A), a national survey of DSM-IV mental disorders among English-speaking adolescents ages 13-17 years (n=10,148). The NCS-A was designed to provide national data on the prevalence, correlates, and patterns of service use for mental disorders among adolescents living in households in the contiguous United States. The survey was fielded between February 2001 and January 2004. The overall adolescent response rate was 75.6%, for a total of 10,148 complete interviews. 69 survey interview records were omitted from the analysis because of missing information on key variables, resulting in a final analytic sample of n=10,079 respondents. Additional details on the survey design and field procedures, including details of the weighting procedure, is available elsewhere (Kessler, Avenevoli, Costello, et al. 2009).

Descriptive analyses were conducted first. Next, the association among each of the pairs of independent and dependent variables were examined. The relationship between childhood SES circumstances and exposure to childhood adversity by type and amount were examined.

Logistic regression coefficients were exponentiated and are reported as odds ratios (ORs). All models included controls for sex, age at interview, and race-ethnicity (Non-Hispanic White, Non-Hispanic Black, Hispanic/Latino, and Other). First, the basic relationships are presented for the logistic regression of each demographic variable. Three models were estimated for each of the eleven adverse childhood experiences. The first model (M1) estimates an association between the demographic control indicators and one of the eleven adverse childhood experience. The second model (M2) adds each family social and economic predictor variable to estimate the associations with one of the eleven adverse childhood experiences, net of sociodemographic indicators. The third model (M3) includes all sociodemographic control indicators, family social and economic predictors, and one of the eleven adverse childhood experiences to test for the significance of childhood SES circumstances after adjusting for sociodemographic controls. Logistic Regression was used to examine the relationship between childhood SES circumstances and quantity of exposure to childhood adversity.

All analyses were conducted using STATA v.12 (Stata Press 2011). Taylor series linearization was used to estimate the sampling variance of each parameter estimate, and the unique covariances between the parameter estimates. These estimated variances and covariances are then used to develop Wald  $\chi^2$  test statistics required to test hypotheses. All analyses controlled for sex (male, female), race (White, Black, Hispanic, Other), and age 13-18 years). Finally, only data without missing values on the variables of interest were included in this analysis for a complete case sample of n=10,079 records. Cases with missing data were not deleted, but rather a subclass of complete cases was created using the “subpop” command in Stata 12. Subpop preserves the sample-to-sample variability of the full complex design and thus maintains the integrity of any variance estimation procedures.

### **Preliminary Results**

Results suggest that receipt of welfare is the sole disadvantaged childhood SES measure associated with a higher prevalence of exposure to adverse childhood experiences, a greater likelihood of reporting exposure to multiple adverse childhood experiences, and increased odds of exposure to almost every of the eleven adverse childhood experiences studied here. Child neglect was the only experience not associated with welfare receipt in childhood. Family size emerged as important, being the second most consistent childhood SES predictor. This was followed by parent educational level. Parent employment and family poverty level were each associated with a more limited set of the same adverse childhood experiences.

A remarkable finding was the fact that poverty level (<1.5 PL), unlike welfare receipt, was not associated with a greater likelihood of exposure to childhood adversity. Oftentimes reference to impoverishment seems to imply welfare receipt and the difference is chalked up to semantics. But the results presented here showed that groups with the lowest income among the sample did not have the same pattern of association with adverse childhood experience or similar odds of exposure, compared to those for welfare receipt. The association and predictive power resided with whether a respondent reported ever receiving welfare benefits. Given welfare receipt, the types of childhood adversity that had substantial increased odds for the likelihood of exposure included parental mental illness, parental substance use problem, parental suicide attempt, and domestic violence. These particular types of adverse experience warrant more in depth exploration, including how parent psychopathology and problem behavior affects parenting capacity, family functioning and, in turn, the well-being of resident children.

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