Developmental Timing of Housing Mobility: Longitudinal Effects on Externalizing Behaviors among At-Risk Youth

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Objective: This longitudinal study tested whether developmental timing of exposure to housing mobility exacerbates behavior problems in an at-risk sample of youth. **Method:** Participants were 2,442 youth 4 to 16 years old at risk for child maltreatment followed at 3 time points over a 36-month follow-up. Caregivers reported on youth externalizing behaviors at each assessment. Latent growth models examined the effect of housing mobility on behavior problems after accounting for change in cognitive development, family instability, child gender, ethnicity, family income, and caregiver mental health at baseline. **Results:** Findings suggested increased housing mobility predicted greater behavior problems when children were exposed at key developmental periods. Preschoolers exhibited significantly higher rates of behavior problems that remained stable across the 3-year follow-up. Likewise, adolescents exposed to more mobility became relatively more disruptive over time. No effects were found for school-age children. Children who moved frequently during infancy and more recently demonstrated significantly worse behavior over time. **Conclusions:** The developmental timing of housing mobility affects child behavioral outcomes. Youth in developmental transition at the time of mobility are at greatest risk for disturbances to residential contexts. Assessing housing history represents an important component of interventions with at-risk families. J. Am. Acad. Child Adolesc. Psychiatry, 2014;53(2):199–208. **Key Words:** developmental timing, externalizing behavior, housing, residential mobility, longitudinal

A growing body of literature suggests housing mobility negatively relates to child outcomes, particularly externalizing problems.[1-3] The 1988 National Health Interview Survey found that youth 6 to 17 years of age who moved at least 3 times exhibited clinically meaningful behavior problems and used mental health services at twice the rate after statistically controlling for sociodemographic factors.[4,5] A study of teenage African American low-income girls (n = 267) found that youth who reported more lifetime mobility exhibited greater adjustment problems that included minor and minor delinquency and criminal behaviors, sexual activity, dropout, and internalizing problems.[6]

This article is discussed in and editorial by Dr. Joan P. Gerring on page 138.

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The impact of housing mobility on longitudinal outcomes of youth mental health remains unclear; however, studies have indicated potentially enduring correlations with behavior problems. The Woodlawn Project that tracked the 1960 birth cohort of youth attending schools in a predominately African American neighborhood in Chicago found that the number of residential changes before first grade predicted higher mortality rates at 34 years of age.[7] Effects remained significant after other risk factors were included in the model, such as family structure, exposure to corporal punishment, childhood emotional and behavioral functioning, and maternal mental health.

A developmental ecologic theory emphasizes life transitions as particular points of vulnerability to environmental adversities.[8-10] Preschool and adolescence require adaptation of biological and social supports to organize behavioral regulation. Housing mobility during these transitions

represents a particular threat for long-term behavioral maladaptation given the degree of disruption in ties among children, parents, and communities.[11] A developmental ecologic approach also underscores that disruptions occur within the context of ongoing developmental processes. Findings from longitudinal studies have suggested that early learning problems cascade into subsequent behavioral maladaptation,[12,13] and housing mobility consistently relates to learning problems.[5,14,15] Developmental cascade of cognitive development further informs the mechanisms involved in housing mobility effects on behavioral regulation.

PRESENT STUDY

The present study tested whether developmental timing of exposure to housing mobility exacerbates behavior problems beyond co-occurring changes in cognitive development and sociodemographic risks. Longitudinal data from a national probability sample of families involved in the child welfare system were used given the demonstrated risk for housing mobility in this population.[16] Outcomes in the present study included repeated measurements of parent-reported behavior problems over a 3-year follow-up period that allowed a much-needed examination of the longitudinal effects of housing mobility. Parent report of behavior decreased shared-method variance among dependent variables and incorporated nationally standardized instrumentation. Although parent-reported internalizing problem scores were available, measurements were not incorporated into models owing to potential developmental heterogeneity before and after puberty that would confound this study's main question regarding change overtime.

Latent growth models estimated within-individual change in behavior problems associated with housing instability after adjusting for time-variant and time-invariant covariates. Covariates adjusted estimates for previously identified predictors of housing mobility and change in child externalizing behaviors, including co-occurring cognitive development, fluctuations in family stability, child gender and ethnicity, caregiver mental health at baseline, and family income. Moderation by developmental timing of mobility was tested using 2 risk indicators. The first represented the age of child at the time of the baseline interview; effects of mobility on developmental trajectories were compared among preschool, middle school, and teenaged youth. The second approach used caregiver retrospective reports of mobility to test whether early exposure to frequent relocation risked developmental trajectories ($\geq$3 moves during infancy). Moderation models adjusted for time-varying and time-invariant covariate effects on growth.

The study hypothesized that increased housing moves would relate to increases in behavior problems over time after accounting for co-occurring cognitive development and risk factors, preschoolers and adolescents would exhibit significantly sharper increases in problems compared with school-age children, and early mobility would exacerbate the relation between recent moves and behavior problems such that youth exposed to higher rates of mobility in the past 12 months and in infancy would exhibit more negative growth in behavior problems.

METHOD

Participants

Data were drawn from the first cohort of the National Survey of Child and Adolescent Well-Being, a nationally representative sample of families having come into contact with the child welfare system. The study surveyed families under investigation for child abuse and neglect. Data were collected 12, 18, 36, and 59 to 97 months after the initial assessment. This study included parent and child reports at baseline and 18- and 36-month follow-ups. Data from the 12-month interview were not included because children were not interviewed, and the final wave of data was excluded because attrition analyses indicated differential response patterns across the wide time range in follow-up that would bias longitudinal growth estimates.

Of the 5,501 families investigated, the present study focused on families with children 4 to 16 years old living in the home during the initial assessment with comprehensive data (n = 2,442). One child was randomly selected for study participation from families if multiple siblings were the focus of child welfare investigation. Families placed out of home after the initial investigation (n = 1,277) were excluded given the absence of information on caregiver-reported housing mobility, and children 0 to 3 years old (n = 1,996) did not have adequate data on baseline outcomes to be included in the analyses. Families with incomplete data on independent variables (n = 578) were excluded from the analyses; however, missing data analyses suggested no meaningful pattern that would bias estimates in obvious ways.[17]

Children were 8.95 years old (SD 3.26) at the time of the initial interview, with normative variation