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Mental health outcomes among child welfare investigated children: In-home versus out-of-home care

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ABSTRACT

Background: Child welfare has increasingly focused on alternatives to out-of-home (OOH) placement. In-home services, such as parent training, have increased and more maltreated children remain in-home. Yet, little is known about the effect on mental health of maintaining vulnerable children in-home vs placement in stable OOH care.
Objective: To evaluate and compare difference in mental health among children investigated by child welfare and who remained in-home vs. those who were placed in stable OOH care.
Design/methods: We examined a cohort of children (aged 1.5–18 years) from a nationally representative sample of children investigated by child welfare using the National Survey of Child and Adolescent Well-Being II (NSCAW II). We compared changes in mental health functioning over 18 months for children who remained in-home with parent training versus those placed in stable OOH care.
Results: Among the 749 children in our sample, baseline characteristics of children who remained in-home with parent training and those placed in stable OOH care were similar. Among school-aged children placed in stable OOH care, mental health problems decreased from 26% to 13% ($p = .003$). This differed significantly from school-aged children who remained in home, for whom mental health problems increased (50% decrease stable OOH care vs. 23% increase in home; $p = .007$). Among pre-school aged children, mental health problems increased in both settings, particularly stable out-of-home care ($p = .008$).
Conclusions: For school aged children with a history of maltreatment, mental health outcomes improve following stable OOH placement, yet worsen when remaining in-home with parents. Pediatricians should be watchful for mental health problems among children who remain home after maltreatment and should advocate for high-quality stable OOH care when it is necessary. Child welfare may need to monitor the outcomes of children remaining at home more closely and provide more intensive preventive and treatment services to families.

1. Introduction

Child maltreatment impairs children's self-concept, cognition, and self-regulation (Clausen, Landsverk, Ganger, Chadwick, & Litrownik, 1998; Horwitz et al., 2013; Jee et al., 2010; Schatz, Smith, Borkowski, Whitman, & Keogh, 2008) resulting in poor long-term mental health outcomes (Edwards, Holden, Felitti, & Anda, 2003; Manly, Cicchetti, & Barnett, 1994; Mersky, Topitzes, & Reynolds, 2013; Schilling, Aseltine, & Gore, 2007). When maltreatment is suspected, child welfare systems investigate, provide services to families that need in-home assistance, and arrange out-of-home (OOH) placements when necessary for child safety. From 2000 to 2010, child welfare systems underwent a decade of change. In response to a prior surge in OOH placements and accumulating knowledge about the traumatic developmental impact of family disruption and placement instability, child welfare enhanced its focus on permanency and stability. One outcome was a reduction in the length of time children spent in OOH care (Conn et al., 2013). This occurred despite evidence demonstrating positive outcomes among children placed in OOH care that is *stable* (Fein, Maluccio, & Kluger, 1990; Gibbons, Gallagher, Bell, & Gordon, 1995; Horwitz, Balestracci, & Simms, 2001). Simultaneously, many state child welfare systems began to expand in-home services, such as parent training, intended to prevent OOH placement (Waldfogel, 1998).

Between 2000 and 2010, the number of cases reported to child welfare for maltreatment increased 17%; however, the number of children in OOH placements decreased 24% (Conn et al., 2013). It is possible that children who would have previously been placed in OOH care, remained at home when they had a parent willing and able to engage in

Abbreviations: ACE, adverse childhood experience; C.I, confidence interval; NSCAW, National Study of Child and Adolescent Welfare; OOH, out-of home.

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specialized services. Yet, little is known about the effects of this changing pattern of management of children reported to child welfare. In addition, little is known about whether socio-demographic characteristics, risk factors, or mental health outcomes differ between children who remain in-home with parent training and those placed in OOH care.

We hypothesized that children who remained home with parents who receive training have similar risk factors and trauma histories to those placed in OOH care that was stable (subsequently referred to as *stable OOH care*), yet have poorer mental health outcomes. We reviewed national data to evaluate: 1) demographic and socio-environmental characteristics of children who remained in-home with parent training and those placed in stable OOH care, 2) the mental health outcomes of children who remained in-home and those who experience stable OOH care, and 3) differences in mental health outcomes between children based on placement type: in-home vs. stable OOH care.

2. Methods

The University of Rochester Institutional Review Board approved this study.

2.1. Study design

We conducted secondary data analysis of a national dataset to derive information about mental health problems among children who remained in-home and those placed in stable OOH care after maltreatment investigation.

2.2. Data sources

The National Survey of Child and Adolescent Well-Being-II (NSCAW-II) is a national probability longitudinal study of 5873 US children and youth referred to child protective services. Wave 1 (baseline) data were collected from 3/08 to 9/09 (utilizing a two-stage stratified sample design) and Wave 2 data were collected 18 months later (10/09 to 1/11) from the same children. First, the U.S. was divided into sampling strata represented by geographic regions with large concentrations of child welfare cases. Then, primary sampling units (PSU) were formed within each of the strata and children were randomly selected from within these PSU's (Dowd et al., 2011)

Infants, children in out-of-home placement, and children with unsubstantiated cases were oversampled to ensure adequate representation. To account for unequal sampling probabilities, the sample was weighted, first, to account for unequal probability of selection in the first and second stage domains, followed by adjustments to compensate for missing months or nonresponse.

Our sample was drawn from the children in NSCAW II who were aged 18 months to 18 years (corresponding to ages of mental health screening) and either remained in-home with biological parents or were placed in OOH care by the time of the baseline assessment (3 to 6 months after the initial investigation) and remained in this placement with the same caregiver through the 18-month follow-up. We evaluated mental health problems at baseline and 18 months later. We differentiated children in stable OOH care (defined below) from children who changed placements during the study period to maximize similarity in circumstances between the in-home and OOH groups and ensure both baseline and follow up reports of mental health were completed by the same caregiver.

2.3. Measures

Child mental health was measured using the Child Behavior Checklist (CBCL; Achenbach, 1991). Item responses from this parent report of child behavior are summed and converted to a total problem T-score, standardized according to age (mean = 50, SD = 10). We used clinically significant scores (≥64) to dichotomize mental health problems. High test–retest reliability estimates (≥.85) were found on the CBCL total problems score for children aged 18 months to 18 years using the NSCAW I dataset (Achenbach, 1991).

We evaluated four groups of independent variables, measured at baseline: 1) Demographic characteristics: age (18 months to 18 years); race/Hispanicity (black, white, Hispanic, other); 2) Risk factors: NSCAW II collected data on 35 risk factors, such as prior child welfare involvement and caregiver impairments, by selecting items from caseworker risk assessment tools used in five states. Presence of these risk factors impact placement decisions, and many are related to poor physical and mental health outcomes (e.g., Fusco & Cahalane, 2013; Morgan, Brugha, Fryers, & Stewart-Brown, 2012; Thompson et al., 2014). As has been previously done, we cumulatively scored the factors and standardized by age group to develop an overall "risk score," with a mean of zero and standard deviation of one (Barth, Gibbons, & Guo, 2006; Dorsey, Mustillo, Farmer, & Elbogen, 2008). 3) Adverse childhood experiences: In a landmark study of adult health (Felitti et al., 1998) retrospective reports on 10 adverse childhood experiences (ACEs) were collected, including: Physical, sexual, emotional, or verbal abuse, neglect, caregiver mental health or substance abuse problem, caregiver interpersonal violence, criminal behavior in the home, and parental separation/divorce. Our study omitted verbal abuse and the family disruption variable (parental separation/divorce) because there was no reliable means for measuring of this in NSCAW II. The original ACEs study found a dose-dependent relationship between the number of ACEs and outcomes. Middle-aged adults with 4 or more ACEs were at the greatest risk of negative outcomes (Felitti et al., 1998). Because we assessed only 8 of the 10 original ACES in children and not adults, we considered 3 or more ACEs to be high and dichotomized children based on the presence (3 or more) or absence (2 or less) of high ACEs. 4) Child mental health treatment: Mental health services received through a private professional or community mental health center, or in-home counseling/crisis services.

Our primary independent variable examined placement characteristics. We initially categorized three groups of children who remained in the same placement setting with the same primary caregiver from baseline to follow-up: 1) In-home without training (remained in-home with biological parent who did not receive parent training); 2) In-home with training (remained in-home with biological parent who received formal parent training after the investigation date); and 3) stable out-of-home (OOH) care (remained with the same caregiver in either foster care, formal kinship care, or institution, group home).

2.4. Analysis

We used bivariate analyses to examine differences in risk between the two placement groups of children who remained in-home (with parent training and without parent training). We used descriptive statistics to report the prevalence and patterns of mental health problems, demographic and socio-environmental factors for the in-home with parent training versus stable OOH care groups. We used bivariate analysis to compare *between group* differences in mental health outcomes during a single wave. To compare differences between the two waves within each group, we used conditional logistic regression, where we conditioned on the individual and had a single independent variable for the wave. To compare mental health problems over time between placement groups we used the same conditional logistic regression framework, with the addition of an interaction term between child placement and wave. All analyses accounted for the study design, using the wave 2 weights, and calculating standard errors using Taylor-linearized variance estimations from the primary sampling units and strata. All tests were done using the t or F distributions.