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The intersection of extreme poverty and familial mental health in the United States

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Abstract

Approximately 22% of children in the United States live in poverty, with high rates of caregiver depression and child disruptive behavior disorders (DBD). The current study aims to explore the relationships between living in extreme poverty and both child and parent mental health. Data are comprised of findings from the first effectiveness study of the 4Rs and 2Ss intervention, in addition to preliminary data from an implementation study currently underway ($n = 484$). Families with an annual income of less than \$9,999 reported significantly greater child DBD scores and prevalence of clinically significant levels of caregiver depressive symptoms compared to income levels over \$10,000. Findings support the recommendation for parental mental health to be attended to within the context of child mental health services.

Keywords

4Rs and 2Ss for strengthening families; caregiver depression; disruptive behavior disorders; extreme poverty

Introduction

Children constitute one-quarter of the total U.S. population, yet are disproportionately represented amongst the poor, as approximately 22%, or 16 million children 18 years of age or younger, live in families that have incomes below the federal poverty line (National

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Note

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Poverty Center, 2016a). Within this group, 1.5 million families live in extreme or deep poverty, a category alternately defined as living on \$2.00 or less per day, per family member (Ekono, Jiang, & Smith, 2016; Quiggin & Mahadevan, 2010; Sachs, 2007), at 50% below the federal poverty level (Beeber et al., 2014), or in a neighborhood where 40% or more of residents live below the federal poverty level (Ludwig et al., 2012).

Poverty yields a set of socioeconomic stressors that threatens familial health and well-being. Scarce resources and supports, community violence, vandalism and crime, substance use and the accessibility of drugs, unstable housing, unemployment, and food insecurity (Slopen, Fitzmaurice, Williams, & Gilman, 2010) contribute to high rates of caregiver stress and depression in poverty-impacted communities (Delaney-Brumsey, Mays, & Cochran, 2014). Additionally, poverty undermines the parent/child relationship and erodes the quality of parenting, which, along with environmental stressors, elevates the risk of child behavioral problems (Burke, Loeber, & Birmaher, 2002; Delany-Brumsey et al., 2014; Sundquist et al., 2015). Indeed, estimates suggest that children of low socioeconomic status (SES) have a two- to fourfold prevalence rate of Disruptive Behavior Disorders (DBD) compared to children of higher SES (Gresl, Fox, & Fleischmann, 2014), which translates into approximately 30% of children in low-income communities evidencing serious behavioral problems (Qi & Kaiser, 2003).

While it is widely theorized that there is an inverse relationship between socioeconomic status and mental health (Hudson, 2005), and that specifically one's socioeconomic status is the causal agent and which some explain is due to exposure to a greater number of stressors (Palomar-Lever & Victorio-Estrada, 2012), little examination has been undertaken to understand the risks of deep poverty to familial mental health within the United States, and the association between parental and child mental health amongst whom Sachs (2007) calls the poorest poor. Primarily studied in the international literature, extreme poverty is described as qualitatively distinct from other low socioeconomic levels, as persons living in extreme poverty experience a profound deprivation in terms of tangible or material goods, and as such, acutely and consistently struggles with meeting their basic needs (Makdissi & Wodon, 2006; McLaughlin et al., 2012). Makdissi and Wodon (2006) and Yamin (2016) add that extreme poverty is a human rights violation, as it renders people powerless over their lives, unable to care for themselves at even a basic level, and denies them the ability to adequately care for themselves.

Accordingly, the purpose of the current study is to explore the association between living in extreme poverty and child and parent mental health. Based upon the extant literature, it is surmised that children and parents living in extreme poverty will manifest a greater severity of mental health problems in comparison to individuals of higher income status. Further, given the bidirectionality of child and parent mental health (Acri et al., 2015; Acri & Hoagwood, 2015), it is surmised that there will be a positive relationship between caregiver depression and child behavior problems.

The rationale for undertaking this study is to gain knowledge about families who face the greatest challenges meeting their basic needs, and thus, presumably, encounter the greatest stressors and threats to their emotional health. Gaining knowledge about the extreme poor,

and if they are at particular risk for severe mental health problems, can in turn guide the mental health field in order to best support and respond to their emotional health needs.

Methods

Study overview

This study aimed to analyze the relationship between parental depressive symptoms, child DBDs, and extreme poverty amongst two samples of families who participated in the 4Rs and 2Ss for Strengthening Families, an empirically supported, Multiple Family Group (MFG) model designed to address disruptive behavior problems amongst children. Briefly, the 4Rs and 2Ss is a curriculum-based, time-limited (16 weeks) multiple family group model that involves two or more generations within families (e.g., caregivers and children, grandparents, siblings) that focuses on Rules, Roles and Responsibilities, Respectful Communication, Relationships, Stress, and Social Support. This intervention model integrates common elements of evidence-informed treatments for conduct problems into a coordinated set of practices in order to strengthen families and improve child and family well-being (Chacko et al., 2015; Gopalan et al., 2014).

This article reports baseline findings from the first randomized effectiveness study of the MFG intervention that was conducted between 2006–2010 (Study 1), in addition to preliminary data from a large-scale multilevel National Institute of Mental Health (NIMH)-funded implementation study that is currently underway within a population of 134 New York State Office of Mental Health-licensed clinics located within the five boroughs of New York City (Study 2).

Inclusion/exclusion criteria

Inclusion criteria for caregivers into this study consisted of adults 18 years or older who spoke English or Spanish and were the primary caregiver of a child between seven and 11 years of age who met criteria for Oppositional Defiant Disorder (ODD). Caregivers were excluded if they manifested a significant cognitive impairment that would interfere with understanding the informed consent process, or who had emergency psychiatric needs requiring services beyond those provided within an outpatient setting. Caregivers were also excluded if children resided in foster care or their legal guardian could not provide formal consent.

Procedure

The recruitment procedures were similar across both studies. In Study 1, which took place from October 2006, to October 2010, 13 outpatient mental health clinics participated in the study. Study 2 involves 19 outpatient mental health clinics; both studies recruited caregivers at clinics that were licensed by New York State Office of Mental Health and provided an array of out-patient mental health services located within the five boroughs of New York City.

In both studies, clinic staff identified children who were presenting for a behavioral problem and informed their adult caregivers about the study. Interested caregivers were then referred

to research staff, who described the study in greater detail and secured informed consent. Caregivers of children who were between 7 and 11 years of age then completed a demographic questionnaire and the DBDs Rating Scale (Pelham, Gnagy, Greenslade, & Milich, 1992) to determine if their child met criteria for a diagnosis of ODD as specified in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000). If their child met criteria, they were then asked to complete five additional measures, including the Center for Epidemiologic Studies Depression Scale, described below. Participants were then enrolled in the remainder of the study, which entailed being contacted at three additional time-points to reassess child and parent mental health. Caregivers were compensated with a \$10 gift card for completing the questionnaires. New York University's Institutional Review Board provided approval for both studies.

Participants

As shown in Figure 1, in Study 1, 416 caregivers were approached to participate in the concluded study (Study 1); of them, 96 were deemed ineligible, primarily because their child did not meet criteria for ODD, were outside of the eligible age ranges, or because the caregiver declined to participate. The final sample consisted of 320 caregivers who met the eligibility criteria and their children met criteria for a diagnosis of ODD. In Study 2, 226 caregivers were approached to participate; of them, 104 were excluded, for reasons similar to excluded participants in the concluded study. One hundred sixty-four caregivers ($n = 164$) were enrolled, and in total to include Study 1 participants, data from 484 primary caregivers was analyzed for this article.

Measurement

Demographic characteristics were collected via a sociodemographic questionnaire used in prior studies that assessed familial factors (e.g., child and caregiver age, gender, race/ethnicity). Income was measured by the following question: *What is your total family income?* Possible responses were: less than \$9,999 (1), \$10,000 to \$19,999 (2), \$20,000 to \$29,999 (3), \$30,000 to \$39,000 (4), \$40,000 to \$49,999 (5), and over \$50,000 (6).

As part of the eligibility screening assessment, child ODD was measured by the Disruptive Behavior Disorders Rating Scale Oppositional Defiant Subscale (DBD OD; Pelham et al., 1992). The DBD OD includes 8 items evaluated using a 4-point Likert scale with the following rating categories: not at all (1), just a little (2), pretty much (3), and very much (4). Total scores range from 8 to 32 and a total of 4 or more items endorsed as “pretty much” or “very much” meets criteria for an ODD and inclusion in the study. Both studies had good internal consistency with a Cronbach's α at baseline of 0.70 and 0.90, respectively.

Child ODD was measured using the Iowa Connors Rating Scale–Oppositional/Defiant Subscale (IOWA CRS OD). The IOWA CRS OD sub-scale (Waschbusch & Willoughby, 2008) is completed by parents and is a widely used brief measure of oppositional defiant behavior in children. The IOWA CRS OD includes items evaluated using a 4-point Likert scale with the following rating categories: not at all (1), just a little (2), pretty much (3), and very much (4). Total scores range from 10 to 30, with higher scores indicating greater

severity of symptoms. The completed and current study both had good internal consistency with a Cronbach's α at baseline of 0.86 and 0.81, respectively.

Caregiver depression was measured using the Center for Epidemiologic Studies Depression Scale 7-item Short Form (CESD-SF; Radloff, 1977). The CESD-SF is a free and publically available screening tool consisting of 7 items that assess the frequency of depressive symptoms occurring in the past week (0 = rarely/none of the time, 1 = some or a little of the time, 2 = occasionally or a moderate amount of time, 3 = most or all of the time). CESD-SF scores are summed and range from 0–21, with a score of 8 and above considered to measure clinically significant depressive symptoms (Levine, 2013). Both studies had good internal consistency with a Cronbach's α at baseline of 0.80 and 0.80, respectively.

Data analysis

Baseline data from both studies were analyzed using SPSS 24. Univariate and bivariate explorations of both demographic and clinical characteristics were completed to describe and better understand the sample. Differences in baseline levels of child disruptive behavior symptoms were examined by whether caregivers manifested clinically significant levels of depressive symptoms, utilizing an independent samples *t*-test. Secondly, the association of income level with youth DBD symptoms was examined using an independent samples *t*-test. Lastly, a binary logistic regression was pre-formed to examine the relationship between income and clinically significant levels of caregiver depressive symptoms to determine the odds of having clinically significant levels of depressive symptoms based upon two levels of income (\$9,999 and below annually versus \$10,000 and above annually).

Results

Table 1 presents the demographic characteristics of the sample. The majority of children were male (53%) and identified as Black/African-American (31%) and Hispanic/Latino (54%). On average, caregivers were 34.8 years of age ($SD = 13.69$) and children were 8.2 years of age ($SD = 4.68$). Most often, caregivers identified as the child's mother (69%), unmarried (43%), and reported an income of less than \$9,999 a year (36%).

Caregivers on average reported a score of 19.02 ($SD = 7.89$) for child ODD on the DBD OD screening assessment and 26.60 ($SD = 6.70$) for oppositional defiant behaviors on the IOWA CRS OD. As for depressive symptoms, caregivers on average reported a score of 7.40 ($SD = 4.71$) on the CESD. Results further indicated that almost half of participants reported clinically significant levels of depressive symptoms ($n = 169$, 45%; CESD ≥ 8). Children of caregivers with clinically significant levels of depressive symptoms reported significantly higher levels of oppositional defiant DBDs ($M = 23.41$, $SD = 4.59$) on the DBD OD assessment as compared to children of caregivers with non-clinically significant levels of depression ($M = 21.31$, $SD = 4.82$; $t(373) = -4.30$, $p < 0.001$). Similarly, children of caregivers with clinically significant levels of depressive symptoms reported significantly higher levels of oppositional defiant behaviors ($M = 27.83$, $SD = 6.49$) on the IOWA CRS OD assessment as compared to children of caregivers with non-clinically significant levels of depression ($M = 25.60$, $SD = 6.74$; $t(363) = -3.27$, $p < 0.001$).

Child DBD scores were significantly greater among families with an annual income of less than \$9,999 ($M = 21.61$, $SD = 6.01$) as compared to all other income levels ranging from \$10,000 to over \$50,000 annually ($M = 18.67$; $SD = 8.08$) ($t(422) = 3.94$, $p < 0.001$). Further, as participants move from making \$9,999 or less annually to \$10,000 or more annually, on average there was an associated 0.60-unit decrease in the odds of having clinically significant levels of depressive symptoms ($SE = 0.22$, $CI: 0.358\text{--}0.846$). In other words, participants who had an annual income of \$9,999 or less annually were, on average, 40% more likely to have clinically significant levels of depressive symptoms.

Discussion

In the United States, extreme or deep poverty is a category of impoverishment that has not received much attention due in large part to the overshadowing perception of the United States as a wealthy country. Consequently, it is thought that individuals who are among the poorest poor experience a level of hardship not previously observed in prior U.S.-based studies (Shaefer & Edin, 2012). This study aims to contribute to an emergent literature through the examination of extreme poverty, child and parental health amongst a sample of families based in the United States. Several findings warrant comment.

First, analyses of the entire sample found that children and families exhibited concerning levels of depressive symptoms and behavior problems. Specifically, caregivers evidenced clinically significant levels of depressive symptoms as measured by the CESD, respectively, and their children met criteria for a diagnosis of ODD. These mental health problems can be both serious and disabling. In addition to the personal burden associated with depression, such as economic and social difficulties, morbidity, and premature mortality (Ballenger et al., 2001; Fawcett, 1993;), caregiver depression is associated with coercive parenting, harsh discipline, and lower parental warmth—all of which increase the risk of child behavior problems (Chronis, Chacko, Fabiano, Wymbs, & Pelham, 2004; Feng, Shaw, Skuban, & Lane, 2007; Lovejoy, Graczyk, O'Hare, & Neuman, 2000). Considering the interrelationship between parent and child mental health (Acri et al., 2015; Acri & Hoagwood, 2015) and the costs associated with untreated caregiver depression upon the family, this finding underscores that many caregivers who seek mental health services for their children will likely struggle with severe depressive symptoms, especially if they live in poverty.

A second finding of note was that a third of the sample lived in extreme poverty, meaning they reported an annual income of less than \$9,999 ($n = 155$, 36%). This finding suggests that a sizable number of participants experienced tremendous economic hardship, likely coupled with numerous stressors associated with living substantially below the poverty line.

Third, as hypothesized, this study shows the high rates of parental depressive symptoms and child DBDs statistically intersected amongst those in deep poverty, defined as an annual income \$9,999 or less, annually. This finding supports the theory of social causation (Hudson, 2005), which posits that there is an inverse relationship between poverty level and mental health, as both parents and children who were within the lowest income levels were at the highest risk for adverse mental health outcomes.

Implications for practice

Several implications can be drawn from these results. For one, children experienced very high levels of behavior problems, suggesting the need for community-level prevention and early intervention programs, which have the potential to prevent the onset and/or exacerbation of serious externalizing behaviors. Behavioral parent training (BPT) programs, such as the 4Rs and 2Ss for Family Strengthening, share the goal of decreasing the child's problematic behaviors and building positive behaviors through enhancing caregivers' parenting skills. While BPTs have been shown empirically to be one of the most effective treatments for DBDs (Chacko et al., 2015), families living in high poverty areas face impediments that result in poor engagement in BPT programs. Thus, it would be beneficial for BPTs additional engagement strategies among poverty-impacted populations.

Second, on average parents experienced clinically significant levels of depressive symptoms, suggesting that parental mental health should be attended to within the context of child services. At a minimum, practitioners would be prudent to assess the family's health and well-being, and link families to services to address parental mental health. Optimally, services for both children and families would be located on site; however, currently, the mental health field is structured in a way in which adult mental health system is largely separate from child-serving agencies (Acri et al., 2012). Indeed, an ongoing problem in children's mental health services is service silos, administratively separate agencies serving the population of children with mental health needs and their families (Acri et al., 2012). Although integrated service models are becoming more popular, and in particular, integrating primary and behavioral health care, these models are largely absent in the mental health field for adults and children. Future research should focus on the development and implementation of programs that attend to child and caregiver health, for the entire family's benefit.

Third, this study suggests that the mental health field needs to reconceptualize service provision for populations living in low-income communities to address environmental stressors and provide basic resources needed by families living in extreme poverty. For example, McLaughlin et al. (2012), among others, have explored the role of food insecurity and mental health; their study, which analyzed data from the National Comorbidity Survey Replication Adolescent Supplement, and surveyed over 6,000 adolescents between 13 and 17 years of age, found an inverse relationship between food insecurity and socioeconomic status, which in turn was associated with mental health problems including depression, anxiety, and externalizing behaviors (McLaughlin et al., 2012). We need, as a field, to assess for and provide a more comprehensive system of care, including nutritional services, housing, and resources that are lacking in communities characterized by impoverishment.

Although this study contributes much needed knowledge to the field, it is primarily exploratory, and has inherent limitations that should be considered when interpreting its findings. First, there has been an ongoing debate about how poverty is defined and measured in which critics argue that better metrics include calculating neighborhood decay (Pitner & Astor, 2008), and receipt of non-cash benefits (Sherman, Trisi, & Parrott, 2013; Smeeding, Rainwater, & Burtles, 2001). Consequently, there are multiple ways to measure poverty and even more variation for what constitutes extreme poverty (National Center for Children in

Poverty, 2016b; Short, 2016). Taken together, a standardized and unified measure of poverty is vital in order to move the field forward and to capture qualitative differences in mental health by poverty level.

Second, poverty level was measured through a single item and based upon self-report. Going forward, additional factors, including family size, neighborhood factors, and receipt of other benefits could serve to more accurately capture impoverishment and risk.

Third, it is possible that the population of families in extreme poverty differs qualitatively from our sample, which consisted of families who sought services at a mental health clinic. Indeed, there are very few systems in place that have logical access points to families who are not engaged in the service systems, and thus this study did not capture those children and families not engaged in the service system.

Limitations notwithstanding, this study is an encouraging first step towards understanding the risks of extreme poverty to families and offers multiple ways in which the mental health field can begin to address the needs of the poorest poor in the United States.

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Figure 1.
Enrollment for concluded and active MFG RCT.

Table 1

Demographic characteristics of participants.

Characteristic	<i>n</i>	%
Child age (M ± SD)	484	8.17 ± 4.68
Caregiver age (M ± SD)	400	34.77 ± 13.69
Child gender		
Male	255	53
Female	167	34
Primary caregiver		
Mother	332	69
Father	12	2
Grandparents	24	5
Mother and father	70	14
Caregiver marital status		
Married	261	54
Single	207	43
Child race		
White/Caucasian	80	17
Black/African American	151	31
Native American	13	3
Asian/Pacific Islander	5	1
Child ethnicity		
Hispanic/Latino	260	54
Non-Hispanic/Latino	78	16
Family income		
Less than \$9,999	155	36
\$10,000 to \$19,999	104	24
\$20,000 to \$29,999	65	15
\$30,000 to \$39,999	36	9
\$40,000 to \$49,000	15	4
Over \$50,000	51	12

Note: *n* = 484.