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U.S. Caregivers with Mental Health Problems: Parenting Experiences and Children's Functioning

Cindy H. Liu^{a,d,*}, Miwa Yasui^b, Rebecca Giallo^c, Ed Tronick^d, and Larry J. Seidman^a

^aBeth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA

^bSchool of Social Service Administration, University of Chicago, Chicago, IL

^cMurdoch Children's Research Institute, Royal Children's Hospital, Parkville, Victoria 3052, Australia

^dUniversity of Massachusetts, Boston, MA

Abstract

The 2007 National Survey of Children's Health was used to determine the prevalence of poor mental health among U.S. mothers, fathers, and guardians, specific parenting experiences and children's functioning. More guardians (13.7%) reported poor mental health compared to mothers (7.7%) and fathers (5.3%), generalizing to 4.6 million U.S. caregivers with poor mental health. Caregivers with poor mental health were at least 3 times more likely to report children's problematic functioning after accounting for sociodemographic factors and parenting stress and experiences. Research and clinical activities should recognize poor caregiver mental health as a condition that affects parenting and children's functioning.

Within the United States, approximately half of men and women report a lifetime psychiatric disorder, with one-third experiencing one diagnosable disorder in the previous 12 months (Kessler et al., 2005). In a nationally representative sample, almost half of mothers and approximately one-third of fathers reported a lifetime prevalence of psychiatric disorders (Nicholson, Biebel, Williams, & Katz-Leavy, 2002). Children with a parent suffering from mental health problems are at greater risk for social, developmental, and emotional problems relative to children of those without mental health problems (Beardslee, Versage, & Gladstone, 1998). Whereas 10%–20% of children with parents unaffected by mental illness experience some psychiatric symptoms, 25%–50% of children with mentally ill parents experience some level of psychiatric disorder in their lifetimes (Component, 2005; Nicholson, Cooper, Freed, & Isaacs, 2008; Riley, Coiro, Broitman, et al., 2009; Worland, Weeks, & CL, 1987). Although addressing caregiver mental health problems can improve children's outcomes (Weissman, Pilowsky, Wickramaratne, et al., 2006), less than half of parents with mental health problems receive treatment (Libby, Orton, Barth, et al., 2006; Staudt & Cherry, 2009). Furthermore, families with mental health problems lack adequate support and access to services (Cunningham, Oyeboode, & Vostanis, 2000; Mowbray, Lewandowski, Bybee, & Oyserman, 2004; Ostman & Hansson, 2002), and experience

*Corresponding Author: Cindy H. Liu, Beth Israel Deaconess Medical Center, Harvard Medical School, 75 Fenwood Road, Boston, MA 02115., cliu@bidmc.harvard.edu (C.H. Liu).

structural problems, such as poverty, housing instability, and other barriers to children's educational attainment (Reupert & Maybery, 2007), all of which are associated with poor functional outcomes for families.

The caregiver mental health literature has focused primarily on the mother. Reviews of mostly qualitative research on paternal mental health indicate that fathers with poor mental health share similar risks and experiences as mothers (LeFrançois, 2010). Increasingly, family members such as grandparents are primary caregivers, with 2.9 million U.S. children being raised by a grandparent (Pew Research Center, 2010). We know very little about caregiver parenting experiences and their ability to cope, especially among those with poor mental health.

This study documented parenting experiences and children's functioning among U.S. caregivers with mental health problems. To our knowledge, this is the first report on the experiences of different caregivers of children. We utilized the 2007 National Survey of Children's Health (NSCH), a U.S. population-based survey to report the prevalence of poor mental health among U.S. mothers, fathers, and to guardians, and to identify the role of parenting stress, coping, and support. We also examined reported socio-emotional issues in 6-to 17-year old children and younger children, aged 4-months to 5-years.

METHODS

The 2007 NSCH is a nationally representative multi-stage cluster designed random-digit-dial telephone survey on the health of children sponsored by the Maternal and Child Health Bureau (U.S. Department of Health and Human Services) and conducted by the Centers for Disease Control and Prevention program. The survey assessed children from birth to 17 years from households sampled across all 50 states and the District of Columbia. One child in each household was randomly selected for the study. Respondents lived in the household and identified as knowing the most about the health of the child.

The weighted response rate is 51.2% (see previous work for details Blumberg, Foster, Frasier, et al., 2007). Analyses included 22,619 caregivers of children 4-months to 5-years old and 53,944 caregivers of children 6-to 17-years old, all of whom had available data.

Independent Variables

Caregiver mental health status was obtained through the question: "Would you say that in general, your mental and emotional health is poor, fair, good, very good, or excellent?" Responses of "poor" or "fair" were recoded as "poor mental health," and other ratings were recoded as "good mental health."

Covariates

Sociodemographic—Sociodemographic covariates included: child race/ethnicity, child's age, child gender, parent education, employment (none unemployed or least one person in the household employed 50 out of 52 months, a standard definition for year-round employment), family structure, and health insurance. Household income was categorized as a percentage of the federal poverty level (FPL).

Parenting Stress—On a scale of 1 (never/rarely) to 4 (always) caregivers rated three items from the Aggravation in Parenting Scale (Macomber & Moore, 1997): (1) their child was harder to care for than most same aged children, (2) they felt bothered a lot by the things the child did, and (3) they were angry with the child. Previous research established an inter-item reliability of 0.69 for all three items (Macomber & Moore, 1997). The sum of these three items was used. Following previous published work (Schieve, Boulet, Kogan, et al., 2011), the cut-off was calculated based on the original methodology, which assumes a high mean value of individual scale items of 2.75. With the three items in our measure, this cut-off was calculated to be 8.25. Thus, scores below 8.25 (out of a possible total score of 12), were recoded as “low” parenting stress and scores above 8.25 were recoded as “high” parenting stress.

Parenting Experiences—Emotional support was assessed with the yes/no question “Is there someone that you can turn to for day-to-day emotional help with parenthood/raising children?”

Ability to cope was assessed by the question “In general, how well do you feel you are coping with the day-to-day demands of parenthood/raising children?” Responses were recoded into coping well (very well, somewhat well) and coping poorly (not very well, not at all well).

Dependent Variables

For 6-to 17-year-old children, caregiver reported social skills and problem behavior were obtained. The derivation of these items has been previously described (Blumberg, Carle, O'Connor, Moore, & Lippman, 2008). The scoring and creation of binary variables follows NSCH codebook recommendations. Social skills were assessed through the items, “shows respects for teacher and neighbors,” “gets along well with other children,” “tries to understand other people’s feelings” and “tries to resolve conflicts with classmates, family, or friends.” Care-givers rated the frequency (never, rarely, sometimes, usually or always). This binary score was developed for each item so that “never”, “rarely”, and “sometimes” were collapsed into “no” and “usually” or “always” were collapsed into “yes.” For the purposes of examining social skills deficits, we recoded the variable so that a response of “no” for at least two of the four questions was defined as a child having social skills deficits. Problem behaviors were assessed through the items: “argues too much,” “bullies or is cruel or mean to others,” “is disobedient,” and “is stubborn, sullen, or irritable,” on the same frequency scale. A response of “yes” for at least two of the four items defined a child as having problematic behaviors. These two dependent variables were derived as two separate factors and have been showed to be internally valid and reliable in a previously published factor analysis (Blumberg et al., 2008).

Caregiver concerns of developmental issues for 4 month to 5-year-old children were obtained through the yes/no question, “Do you have any concerns about your child’s learning, development, or behavior?”

Statistical Analysis

The data were analyzed using the Complex Samples module of SPSS version 22.0 (SPSS Inc., Chicago, IL) which accounted for the stratified and weighted sample. We generated prevalence estimates stratified by caregiver status and according to the predictors: sociodemographic variables, caregiver report of experiences with parenting, children's problematic behavior, and caregiver concerns of their children's development. *Z*-tests were used to compare proportions across groups. All reported proportions represent weighted averages.

Three logistic regression models were employed for each dependent variable, with blocks of predictors sequentially added to the model to allow incremental examination of the predictors' effects explaining the associations between caregiver mental health and caregiver report of children's behavior, and caregiver concerns of development. Model 1 is unadjusted, Model 2 is adjusted for sociodemographic variables, and Model 3 is additionally adjusted for parenting experiences.

RESULTS

Table 1 displays baseline prevalence of variables and significant differences based on all caregivers and by caregiver status. We report on comparisons by caregiver status on mental health status, then sociodemographic differences by mental health status. We select notable differences on parenting experiences, problematic socio-emotional functioning and developmental concerns based on caregiver status, to report, with a primary focus on caregivers who reported poor mental health. All differences described are statistically significant.

Within the sample, 78.4% were mothers, 19.2% were fathers, and 2.2% were guardians. Proportion-wise, only a small percentage of U.S. primary caregivers reported having poor mental health. More guardians (13.7%) reported poor mental health compared to mothers (7.7%) and fathers (5.3%), and more mothers reported poor mental health compared to fathers. When generalized to the U.S. population, approximately 4,569,819 caregivers in the U.S. would report poor mental health.

More caregivers with poor mental health than with good mental health had children who were Hispanic, Black, and between the ages of 12-to 17-years old, and reported having less education than a high school diploma and no health insurance. More caregivers with poor mental health reported to be in a household in which no adults were employed and were either near or under the federal poverty level, to be in a 2-parent stepfamily or a household with a single mother than in a 2-parent biological or adopted family, relative to caregivers with good mental health.

A greater percentage of caregivers with poor mental health reported parenting stress (23.4% vs. 8.6%), lack of emotional support (31.7% vs. 9.7%), and poor coping (14.0% vs. 1.0%) and problematic socioemotional functioning and concerns regarding developmental issues (19.3 to 27.1% vs. 5.1 to 8.1%).

We note variations by caregiver status. Among caregivers reporting poor mental health, more mothers reported having less education and having a household with no adults employed compared to fathers. More mothers and guardians with poor mental health had a household income less than the federal poverty line than fathers with poor mental health. A greater proportion of fathers with poor mental health had a household income of 400% of the federal poverty level compared to mothers and guardians with poor mental health. Among caregivers with poor mental health, fathers tended more often to be in a 2-parent biological/adopted family than mothers and guardians, and more mothers and fathers with poor mental health were in 2-parent stepfamilies than guardians with poor mental health. These guardians were more likely to be in a single mother household and less likely to be in 2-parent families compared to mothers and fathers.

Mothers, fathers, and guardians with poor mental health differed from each other on reported parenting experiences, with a greater proportion of mothers reporting high parenting stress (24.6%) than fathers (15.1%), a greater proportion of mothers (15.7%) reporting poor coping compared to fathers (6.0%) and guardians (3.3%), and a greater proportion of mothers (33.0%) and fathers (29.7%) reporting no emotional support compared to guardians (13.6%). Among caregivers with poor mental health, more mothers reported social skills deficits in her children (19.8%) compared to guardians (9.1%). More mothers (28.2%) reported problem behaviors than fathers (18.3%). More of these mothers also reported early learning and development concerns (27.7%) than fathers (12.7%).

Table 2 shows the first series of logistic regressions in predicting social skills deficits for 6-to-17-year old children. Model 1 shows that children with caregivers that have poor mental health were 4.5 times more likely to report social skills deficits, compared to children of care-givers with good mental health, with a decrease to a 3-fold increase ($OR = 3.0$, $CI = 2.2-3.9$) after accounting for sociodemographic variables as indicated in Model 2. After accounting for parenting experiences in Model 3, the association between caregivers mental health and social skills deficits was further reduced ($OR = 2.0$, $CI = 1.5-2.7$) with parenting stress ($OR = 4.0$, $CI = 3.2-5.1$), poor coping ($OR = 2.1$, $CI = 1.3-3.3$), and lack of emotional support ($OR = 1.5$, $CI = 1.2-2.0$) partially accounting for this association.

Table 3 displays findings for predicting problematic behavior, with children of caregivers with poor mental health 4.6 times more likely to show problematic behavior as indicated in Model 1, with a decreased likelihood ($OR = 3.4$, $CI = 2.6-4.3$) when accounting for sociodemographic variables in Model 2, and further decreased in Model 3, in which children of caregivers with mental health problems are approximately twice as likely to show problematic behaviors ($OR = 2.1$, $CI = 1.6-2.7$) after adding in parenting stress ($OR = 4.4$, $CI = 3.6-5.3$) and parenting coping ($OR = 4.0$, $CI = 2.7-6.0$).

Table 4 displays the models used to predict caregiver concerns of early developmental and behavioral problems in 4-month to 5-year-old children. Caregivers with poor mental health of these children were 4-times more likely to be concerned about their children's development as indicated in Model 1 ($OR = 4.0$, $CI = 2.7-5.8$), with this association reduced ($OR = 3.4$, $CI = 2.3-5.0$) in Model 2 as sociodemographic predictors were added, and

further reduced (OR = 2.3, CI = 1.5–3.6) as parenting stress (OR = 4.4, CI = 3.6–5.3) and parenting coping (OR = 4.0, CI = 2.7–6.0) were added to Model 3.

DISCUSSION

Our study aimed to increase our knowledge of caregiver mental health, parent experiences, and report of children's socio-emotional functioning across different primary U.S. caregivers using a nationally representative dataset. Approximately 4.5 million U.S. caregivers reported poor mental health, with reported poor mental health associated with parenting stresses, poor coping and support, problematic socioemotional functioning and developmental concerns about the child. A greater proportion of those with lower educational attainment and household income, those who are unemployed, Black and single mothers to have poor mental health (Artazcoz, Benach, Borrell, & Cortès, 2011; WHO Secretariat, 2012; Williams, Yu, Jackson, & Anderson, 1997), and U.S. caregivers with poor mental health from our study were more likely to experience parenting stress, a lack of emotional support, and poor coping (Ackerson, 2003a, 2003b).

As with mothers, fathers with poor mental health may struggle with parenting, relative to fathers without mental health problems (Spector, 2006). That almost one third of fathers lacking emotional support, but lower rates of parenting stress, is consistent with other research showing that fathers may be less likely to seek help than mothers (Isacco, MA, & S., 2015). The fathers in this study were in 2-parent structures at a greater proportion, in contrast to mothers and guardians. Having other adults in the household could be a practical support; additional research would shed light on how fathers' views of stress and support and their mental health impact their parenting.

Of major concern is the finding that guardians have the highest rate of self-reported mental health problems. Guardians largely comprised other family members: mostly grandparents, followed by aunts/uncles or sisters/brothers. Since most were in single mother households, it is possible that many guardians were grandmothers parenting on their own. Thus, many children may be placed under the guardianship of someone with mental health problems, or guardianship might increase burden on caretaking and mental health. There is a need for extending supports for to non-parents involved in the care of the child.

More caregivers with poor mental health than those with good mental health reported problematic functioning and concerns about developmental issues in their children. Nonetheless, it is important to keep in mind that not all caregivers with poor mental health report concerns or developmental issues, as many of these "at risk" children do not exhibit problematic development. Fathers reported lower rates of problematic behaviors in their children; it may be that they are less involved than female caretakers, that they have children that present with fewer problems, or that fathers hold a different threshold determining what is a problem behavior—reasons possibly related to lower help seeking (Isacco et al., 2015).

Sociodemographic factors as risk factors were reflected in our analyses with low educational attainment and low income associated with problematic behaviors and social skills deficits. Family structures, specifically, 2-parent stepfamilies and single parents, were associated with

problematic behaviors and social skills deficits, consistent with previous research showing an association between single and stepfamily status and greater reported problematic behavior (Smith, 2004; Wade, Veldhuizen, & Cairney, 2011).

Why might children of caregivers with poor mental health be twice as likely to exhibit problematic behaviors, social skills deficits, and early learning and development issues even after controlling for sociodemographic factors and parenting stress? First, children's problematic outcomes may be partly attributed to their genetic predispositions for poor mental health. Second, caregivers with poor mental health may have deficits in caretaking and other parenting practices, which consequently lead to children's problematic behavior (Beeghly & Tronick, 2011; Goodman & Gotlib, 2002; Smith, 2004). Third, care-givers with mental health problems may be more likely to perceive their children's behavior as problematic (Cornish et al., 2006; Maughan, Cicchetti, Toth, & Rogosch, 2007); in recognition that their children could be at greater risk for developmental issues because of family mental health problems (Ackerson, 2003a).

While the large majority of caregivers do not report poor mental health, their children may still exhibit problematic outcomes; children with caregivers who have poor mental health do not necessarily exhibit problematic outcomes. Indeed, resilience – positive outcomes in the face of serious threat – shown among these latter groups of children has been argued to be commonplace and not due to extraordinary qualities (Masten, 2001). Children affected by caregiver mental health issues have reported that emotional and practical supports were beneficial to their development, alongside of their awareness and understanding of the mental health impacts on their families (Pölkki, Ervast, & Huupponen, 2005).

Limitations

Study limitations include the reliance on self- and parent-report. Our mental health status measure does not reflect the severity, chronicity, and types of mental health and child functioning issues that affect families. Parents with mental health problems may over-report their children's problem behavior (Breslau, Davis, & Prabucki, 1988; Chi & Hinshaw, 2002; Chilcoat & Breslau, 1997), although there is also research showing no differences in reporting (Richters & Pellegrini, 1989). Caregiver perceptions are informative as they can still highly predict child outcomes (Armstrong, O'Donnell, McCallum, & Dadds, 1998).

Our outcome measures are also simplistic and limited. The binary outcome variables do not thoroughly reflect possible social skills deficits, problem behaviors, or caregiver concerns. The wide developmental period in this survey may not capture developmentally specific parenting experiences and concerns. The survey does not provide details on any circumstances that lead the child to be under the care of the particular caregiver. The directionality of the effects cannot be determined to clarify the complex mechanisms that underlie the sociodemographic, parenting, and mental health risks for children's development. Longitudinal and observational studies are needed to overcome this critical limitation.

CONCLUSIONS

This study highlights the need to address U.S. caregiver mental health, not just for mothers, but also for fathers and guardians. While practitioners may be attuned to conditions that affect parenting such as maternal postpartum depression, we need individual or programmatic efforts to recognize poor caregiver mental health as a condition that affects anyone who plays a parenting role. A first step is to identify patients who serve as a caregiver – regardless of their legal status as a guardian – and to support their capacity to care for the child. This may be a challenge for a couple of reasons. First, there is no systematic method for mental health screening in adults within the U.S. Second, caregivers may be reluctant to share their mental health status, with the fear that their children may be removed from their care. Thus, public health initiatives that de-stigmatizing mental health coupled with interventions on caregiver self-care and psychoeducational programming on child development should be designed to reach beyond mothers, but to fathers and guardians (e.g., grandparents). Policies that provide universally available parenting programs linked with child health services may be key in addressing these issues. Ultimately, to address children's health, our attention and efforts need to be expanded to accommodate different caregiving structures and systems of care to promote the health of families.

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	Parent Status ¹				Guardians (n = 1756)			
	All parents (n = 76,563)	Mothers (n = 60,050)	Fathers (n = 14,757)					
Parent employment ³								
At least one parent employed	90.8 [*]	72.7	90.0	71.0 ^a	95.1	84.7 ^b	85.1	73.2
No parents employed	9.2	27.3 [*]	10.0	29.0 ^a	4.9	15.3 ^b	14.9	26.8
Family structure								
2-parent biological/adopted	73.3 [*]	48.6	70.6	45.1 ^a	91.7	89.7 ^b	32.6	9.1 ^c
2-parent stepfamily	8.1	11.5 [*]	8.2	12.3 ^a	8.0	10.2 ^a	3.5	1.2 ^b
Single mother	18.1	39.4 [*]	20.6	42.1 ^a	–	–	63.9	89.7 ^b
Other	0.6	0.5	0.6	0.6	0.3	0.2	–	–
Health insurance								
No	8.1	13.1 [*]	8.3	12.5	6.6	15.8	11.9	18.3
Yes	91.9 [*]	86.9	91.7	87.5	93.4	84.2	88.1	81.7
Parenting experiences								
Parenting stress ⁴								
Low	91.4 [*]	76.6	90.9	75.4 ^a	93.5	84.9 ^b	89.8	76.8
High	8.6	23.4 [*]	9.1	24.6 ^a	6.5	15.1 ^b	10.2	23.2
Emotional support								
Yes	90.3 [*]	68.3	90.6	67.0 ^a	89.4	70.3 ^a	87.4	86.4 ^b
No	9.7	31.7 [*]	9.4	33.0 ^a	10.6	29.7 ^a	12.6	13.6 ^b
Parental coping ⁵								
Well	99.0 [*]	86.0	99.0	84.3 ^a	98.8	94.0 ^b	99.5	96.7 ^b
Poor	1.0	14.0 [*]	1.0	15.7 ^a	1.2	6.0 ^b	0.5	3.3 ^b
Developmental issues								
Social skill deficits	5.1	19.3 [*]	5.3	19.8 ^a	3.4	19.9	8.4	9.1 ^b
Problem behaviors	7.4	27.1 [*]	8.0	28.2 ^a	4.2	18.3 ^b	14.1	31.1
Early learning and development concerns	8.1	25.9 [*]	8.3	27.7 ^a	7.8	12.7 ^b	5.3	24.7

Notes: The asterisk (*) within the All Parents column indicate differences in proportions (within $p < .05$) of good and poor mental health by variables. The asterisk is placed with the greater proportion. Lower case superscripts that differ across the row of Mothers, Fathers, and Guardians columns indicate differences in proportions (within $p < .05$) of poor mental health across parent status by variables. Cells within poor mental health that do not have a superscript demonstrate no statistical difference with the cells that have a superscript.

¹ Biological, step, foster, adoptive, or guardian.

² Poor mental health refers to responses of “poor” or “fair” and good mental health refers to responses of “good”, “very good”, or “excellent” based on the question “Would you say that in general, your mental and emotional health is poor, fair, good, very good, or excellent?”.

³ Employment refers to being employed 50 out of 52 months.

⁴ Composite score from an adaptation of the Aggravation in Parenting Scale, with low parenting stress scores below 8.25 and high parenting stress included scores above 8.25.

⁵ Coping well based on responses of “very well” or “somewhat well” and coping poorly based on responses of “not very well” or “not at all well”.

Table 2

Logistic Regression Models Predicting Parental Reported of Social Skills Deficits in 6-to-17-Year-Old Children Based on Parent Mental Health and Adjusted for Child and Parent Characteristics and Parenting Experiences.

	Model 1		Model 2		Model 3	
	OR	CI	OR	CI	OR	CI
Parent mental health status ¹						
Good	1.0	–	1.0	–	1.0	–
Poor	4.5***	3.5–5.8	3.0***	2.2–3.9	2.0***	1.5–2.7
Child and parent characteristics						
Parent status ²						
Mother			1.0	–	1.0	–
Father			0.9	0.8–1.3	0.9	0.5–1.6
Guardian			0.8	0.5–1.4		
Child race/ethnicity						
White, non-Hispanic			1.0	–	1.0	–
Hispanic, any race			0.7 [†]	0.5–1.0	0.6	0.4–0.9
Black, non-Hispanic			2.0*	1.5–2.5	2.1**	1.6–2.7
Multi-racial, non-Hispanic			1.0	0.6–1.7	0.9	0.6–1.4
Other, non-Hispanic			1.3	0.8–2.0	1.1	0.7–1.9
Child age						
6–11 years			1.0	–	1.0	–
12–17 years			1.2*	1.0–1.4	1.1	0.9–1.4
Child gender						
Male			1.0	–	1.0	–
Female			0.6***	0.5–0.8	0.6***	0.5–0.8
Parent education						
<High school			1.6**	1.2–2.2	1.5*	1.1–2.2
High school diploma			1.3**	1.1–1.7	1.3*	1.1–1.6
>High school			1.0	–	1.0	–

	Model 1		Model 2		Model 3	
	OR	CI	OR	CI	OR	CI
Household income						
<100% federal poverty level (FPL) (FPL)			2.5***	1.8–3.6	2.4***	1.7–3.5
100%–199% FPL			2.2***	1.7–2.9	2.1***	1.6–2.8
200%–399% FPL			1.6***	1.3–2.1	1.6**	1.2–2.0
400+ % FPL			1.0	–	1.0	–
Parent employment ³						
At least one parent employed			1.0	–	1.0	–
No parents employed			1.0	0.7–1.3	0.9	0.7–1.3
Family structure						
2-parent biological/adopted			1.0	–	1.0	–
2-parent stepfamily			1.8*	1.4–2.4	1.9*	1.4–2.5
Single mother			1.6*	1.2–2.1	1.4*	1.1–1.9
Other			1.8 [†]	1.0–3.5	2.0	1.0–3.9
Health insurance						
No			1.2	0.9–1.7	1.3	0.9–1.9
Yes			1.0	–	1.0	–
Parenting experiences						
Parenting stress ⁴						
Low					1.0	–
High					4.0***	3.2–5.1
Emotional support						
Yes					1.0	–
No					1.5**	1.2–2.0
Parenting coping ⁵						
Well					1.0	–
Poor					2.1**	1.3–3.3

*
p < .05.

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 $p < .01$.
 $p < .001$.
 $p < 0.1$.

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2 Biological, step, foster, adoptive, or guardian.

3 Employment refers to being employed 50 out of 52 months.

4 Composite score from an adaptation of the Aggravation in Parenting Scale, with low parenting stress scores below 8.25 and high parenting stress included scores above 8.25.

5 Coping well based on responses of "very well" or "somewhat well" and coping poorly based on responses of "not very well" or "not at all well."

Table 3

Logistic Regression Models Predicting Parental Reported of Problem Behavior in 6-to 7-Year-Old Children Based on Parent Mental Health and Adjusted for Child and Parent Characteristics And Parenting Experiences.

	Model 1		Model 2		Model 3	
	OR	CI	OR	CI	OR	CI
Parent mental health status ¹						
Good	1.0	–	1.0	–	1.0	–
Poor	4.6 ^{***}	3.7–5.7	3.4 ^{***}	2.6–4.3	2.1 ^{***}	1.6–2.7
Child and parent characteristics						
Parent status ²						
Mother			1.0	–	1.0	–
Father			0.7 ^{***}	0.5–0.8	1.6 [†]	1.0–2.7
Guardian			1.4	0.9–2.3	0.6 ^{**}	0.5–0.9
Child race/ethnicity						
White, non-Hispanic			1.0	–	1.0	–
Hispanic, any race			1.0	0.7–1.3	0.9	0.6–1.2
Black, non-Hispanic			1.0	0.8–1.3	1.0	0.8–1.3
Multi-racial, non-Hispanic			1.4 [*]	1.0–2.0	1.3 [†]	1.0–1.8
Other, non-Hispanic			0.8	0.6–1.2	0.7	0.5–1.0
Child age						
6–11 years			1.0	–	1.0	–
12–17 years			1.1	0.9–1.3	1.0	0.9–1.2
Child gender						
Male			1.0	–	1.0	–
Female			1.1	0.9–1.3	1.2	1.0–1.4
Parent education						
<High school			1.4 [*]	1.0–1.9	1.3	0.9–1.9
High school diploma			1.2	1.0–1.4	1.2	1.0–1.4
>High school			1.0	–	1.0	–
Household income						

	Model 1		Model 2		Model 3	
	OR	CI	OR	CI	OR	CI
<100% federal poverty level (FPL) (FPL)						
100%–199% FPL			2.4***	1.8–3.2	2.4***	1.8–3.2
200%–399% FPL			1.8***	1.4–2.4	1.8***	1.4–2.4
400+ % FPL			1.3*	1.0–1.6	1.2*	1.0–1.5
Parent employment ³			1.0	–	1.0	–
At least one parent employed			1.0	–	1.0	–
No parents employed			0.9	0.7–1.2	0.9	0.7–1.2
Family structure						
2-parent biological/adopted			1.0	–	1.0	–
2-parent stepfamily			1.6*	1.3–2.1	1.6*	1.3–2.1
Single mother			1.3*	1.1–1.6	1.2	0.9–1.5
Other			0.9	0.4–1.6	0.9	0.5–1.7
Health insurance						
No			0.8	0.6–1.1	0.8	0.6–1.2
Yes			1.0	–	1.0	–
Parenting experiences						
Parenting stress ⁴						
Low					1.0	–
High					4.4***	3.6–5.3
Emotional support						
Yes					1.0	–
No					1.1	0.9–1.5
Parenting coping ⁵						
Well					1.0	–
Poor					4.0***	2.7–6.0

*
p < .05.

**
p < .01.

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 $p < .001$.

[†] $p < 0.1$.

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² Biological, step, foster, adoptive, or guardian.

³ Employment refers to being employed 50 out of 52 months.

⁴ Composite score from an adaptation of the Aggravation in Parenting Scale, with low parenting stress scores below 8.25 and high parenting stress included scores above 8.25.

⁵ Coping well based on responses of “very well” or “somewhat well” and coping poorly based on responses of “not very well” or “not at all well.”

Logistic Regression Models Predicting Parental Concerns of Early Developmental and Behavioral Problems in 4-Month to 5-Year-Old Children Based on Parent Mental Health and Adjusted for Child and Parent Characteristics and Parenting Experiences.

Table 4

	Model 1		Model 2		Model 3	
	OR	CI	OR	CI	OR	CI
Parent mental health status [/]						
Good	1.0	–	1.0	–	1.0	–
Poor	4.0***	2.7–5.8	3.4***	2.3–5.0	2.3***	1.5–3.6
Child and parent characteristics						
Parent status ²						
Mother			1.0	–	1.0	–
Father			1.0	0.7–1.4	1.0	0.7–1.5
Guardian			0.6	0.3–1.1	0.6	0.4–1.2
Child race/ethnicity						
White, non-Hispanic			1.0	–	1.0	–
Hispanic, any race			1.5	1.1–2.1	1.4	1.0–2.0
Black, non-Hispanic			1.2	0.8–1.7	1.1	0.8–1.6
Multi-racial, non-Hispanic			1.1	0.8–1.7	1.1	0.7–1.6
Other, non-Hispanic			1.1	0.6–2.1	0.9	0.5–1.6
Child gender						
Male			1.0	–	1.0	–
Female			0.7	0.5–0.9	0.7**	0.5–0.9
Parent education						
<High school			1.1	0.7–1.7	1.2	0.8–1.9
High school diploma			0.8	0.6–1.2	0.9	0.6–1.2
>High school			1.0	–	1.0	–
Household income						
<100% federal poverty level (FPL) (FPL)			1.1	0.8–1.7	1.1	0.8–1.7
100%–199% FPL			1.2	0.8–1.7	1.1	0.8–1.7
200%–399% FPL			1.1	0.8–1.5	1.1	0.8–1.6

	Model 1		Model 2		Model 3	
	OR	CI	OR	CI	OR	CI
400+ % FPL			1.0	–	1.0	–
Parent employment ³						
At least one parent employed			1.0	–	1.0	–
No parents employed			1.5*	1.0–2.2	1.5*	1.0–2.2
Family structure						
2-parent biological/adopted			1.0	–	1.0	–
2-parent stepfamily			1.1	0.5–2.5	1.1	0.5–2.3
Single mother			1.3	0.9–1.9	1.2	0.8–1.8
Other			1.3	0.5–3.6	1.3	0.5–3.4
Health insurance						
No			1.1	0.7–1.9	1.0	0.6–1.6
Yes			1.0	–	1.0	–
Parenting experiences						
Parenting stress ⁴						
Low					1.0	–
High					3.9***	3.0–5.1
Emotional support						
Yes					1.0	–
No					1.6 [†]	0.9–2.7
Parenting coping ⁵						
Well					1.0	–
Poor					4.4**	1.7–11.3

*
 $p < .05$.**
 $p < .01$.***
 $p < .001$.[†]
 $p < 0.1$.

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3 Employment refers to being employed 50 out of 52 months.

4 Composite score from an adaptation of the Aggravation in Parenting Scale, with low parenting stress scores below 8.25 and high parenting stress included scores above 8.25.

5 Coping well based on responses of "very well", "or", "somewhat well" and coping poorly based on responses of "not very well" or "not at all well."