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Young Children with Behavior Disorders in Low-Income Families: The Role of Clinic Observations in the Assessment of Parenting

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Abstract

Children from low-income families are at elevated risk of meeting diagnostic criteria for behavior disorders. Although mastery-based Behavioral Parent Training (BPT) programs have a robust evidence-base for reducing disruptive behaviors of young children, socioeconomically disadvantaged families are more likely to drop out of treatment and, in turn, are less likely to benefit. Therefore, efficient assessment and treatment may be needed. Less research, however, has addressed the value of time-consuming behavioral observations relative to caregiver-report of problem behaviors in the assessment of this at-risk and underserved group. In the current study, 43 low-income parents and their clinic-referred child were observed during a standard mastery-based BPT interaction task (Child's Game) at baseline. Findings revealed that parents were observed to displayed an extremely high proportion of maladaptive behaviors targeted for reduction by subsequent treatment (Instructions plus Questions) relative to behaviors that the treatment was designed to increase (Attends plus Rewards). In contrast, parents reported they utilized relatively high and low rates of positive and negative parenting, respectively. Behaviorally-observed parenting was not correlated with caregiver-reported parenting. The findings suggest that baseline observations of behaviors targeted in mastery-based BPT interventions are an important part of assessment in parenting programs for low-income families with young disruptive children.

Keywords

in-clinic observations; parenting; low-income; child disruptive behavior

Epidemiological research suggests high prevalence rates of child disruptive behaviors, consistent with diagnoses of oppositional defiant disorder and conduct disorder, both of which co-occur with attention deficit/hyperactivity disorder, which often emerge during the preschool years and remain relatively stable across development (e.g., Lavigne et al., 2001; Merikangas & He, 2014; Nock, Kazdin, Hiripi, & Kessler, 2007). Characteristic features of early-onset disruptive behaviors, including frequent and persistent pattern of irritability, defiant behavior, and/or inattention, often result in strained and coercive relationships between children and their parents, teachers, siblings, and peers (e.g., APA, 2013; Carbonneau, Boivin, Brendgen, Nagin, & Tremblay, 2016; McMahon & Forehand, 2003). Further, disruptive behaviors are correlated with a wide range of additional mental health problems in later life, such as anxiety disorders, depressive disorders, and substance use disorders (e.g., Boylan, Vaillancourt, Boyle, & Szatmari, 2007; Nock et al., 2007). Such data highlight the need for early intervention with early-onset youth, as well as the value of informative assessment techniques.

Behavioral Parent Training (BPT), which includes a broad collection of programs with common theory and practice elements, is the most efficacious treatment for young children diagnosed with a disruptive behavior disorder (DBD; see Chorpita et al., 2011; Eyberg, et al., 2008; Michelson, Davenport, Dretzke, Barlow, & Day, 2013). BPT, including a collection of five programs influenced by the work of the late Constance Hanf at University of Oregon Medical Center, relies on adult caregivers as agents of change, with the aim of addressing and enhancing the aforementioned parent-child relationship dynamics and, in turn, child behavior (Kaehler, Jacobs, & Jones, 2016; McMahon & Forehand, 2003; Reitman & McMahon, 2012). Of the five Hanf-Model programs, “Helping the Noncompliant Child” (HNC; McMahon & Forehand, 2003) and “Parent-Child Interaction Therapy” (PCIT; Eyberg & Boggs, 1998) are the two most closely aligned with Hanf’s original work, including an individual family-focused and clinic-based two-stage model of treatment, which includes observational coding of caregiver mastery of new skills to determine treatment progression and termination. These two interventions are noteworthy as they have recently been implemented effectively in community settings (e.g., PCIT; Danko, Garbacz, & Budd, 2016) and with children diagnosed with comorbid disorders (i.e., ADHD; HNC; Abikoff et al., 2015).

Many BPT interventions (e.g., HNC; McMahon & Forehand, 2003) initially focus on increasing positive parenting (e.g., parental Attends and Rewards), thereby enhancing the parent-child relationship. Further, parental behaviors that typically interfere with child-focused play and caregiver’s ability to increase positive attention (e.g., Instructions and Questions), are also targeted in the initial phases of treatment. Disciplinary skills, such as Time-Out, are generally taught in later phases of these BPT interventions. There are two important aspects of these interventions that have led to them being identified as evidence-based: the caregiver must meet criteria for moving from one parenting skill to another (mastery-based); and practice of skills occurs with the child (see Kaminski & Claussen, 2017).

As noted above, caregiver progress within each phase and across phases depends on caregivers meeting mastery criteria. For example, HNC uses a child-directed interaction

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(“Child’s Game”) to teach and assess Phase I skills (McMahon & Forehand, 2003). During a five-minute observation, parents are required to demonstrate .4 (or fewer) “Instructions” plus “Questions” per minute (no more than two for a five minute observation) and an average of 4 (or more) “Rewards” plus “Attends” per minute (20 or more for a five minute observation) in order to move to Phase II of the intervention (McMahon & Forehand, 2003). When parenting programs are mastery-based, it is important during baseline and throughout treatment to ascertain the level of parenting behaviors targeted for change. How to assess parenting behaviors is a critical question.

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Little research has focused on the measurement of parenting practices in general and available research suggests that there are considerable shortcomings in existing parenting measures (e.g., Hurley, Huscroft-D’Angelo, Trout, Griffith, & Epstein, 2014). Two potential procedures for assessing parenting are behavioral observations and self-report. In one of the few studies to examine caregiver parenting of young clinic-referred disruptive children, Hawes and Dadds (2006) found at baseline that self-reported involved parenting and behaviorally observed positive parenting (i.e., praise) did correlate; however, self-reported and behaviorally observed negative parenting were not correlated.

Although behavioral observations are considered to be the gold standard as they are more objective than parental self-report, they are time-consuming to conduct (Hawes & Dadds, 2006). As low-income parents are more likely to drop out of treatment (Jones et al., 2016), it is important to conduct assessments as efficiently as possible with these families.

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Low-income families present a special challenge for therapists who engage in BPT. Although BPT has a strong evidence base for modifying parenting practices and altering child behaviors (e.g., Eyberg et al., 2008; Forehand, Jones, & Parent, 2013; Piquero, Farrington, Welsh, Tremblay, & Jennings, 2009), socioeconomically disadvantaged families are less likely to engage in treatment and more likely to drop-out (see Jones et al., 2016; Leijten, Raaijmakers, de Castro, & Matthys, 2013 for reviews). Additionally, evidence-based treatments are often less effective when delivered in demographically-diverse community settings (Kazak et al., 2010; Weisz, Ugueto, Cheron, & Herren, 2013). As approximately half of all children under the age of 18 in the U.S. live in low-income families (Jiang, Ekano, & Skinner, 2016; Southern Education Foundation, 2015) and children from these families are more likely than children from economically-advantaged families to have DBDs (Bornstein & Bradley, 2003; McLoyd, 1998), it is critical to closely examine the parenting behaviors of low income families that are typically targeted in BPT.

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Accordingly, the current study examined the following three aims in a sample of low-income treatment-seeking families of young children with DBD: 1) Examine to what extent low-income families display deficits in parenting practices in the initial phase of intervention targeted by Hanf-Model programs (i.e., low rates of Attends plus Rewards; high rates of Instructions plus Questions); 2) Examine selected family (income), parent (depressive symptoms, education), and child (age and gender) variables at baseline are related to behaviorally observed parenting; 3) Examine if caregiver-report of parenting is associated with the behavioral observations. The third aim is particularly important as the efficient assessment of low-income families is important. However, if self-reported parenting is not

related to behaviorally observed parenting, then the former will be necessary in mastery-based BPT.

With regard to the first aim, examining Phase I deficiencies and/or excesses at baseline is critical in low-income families in particular, given research which suggests that when low-income parents learn and appropriately use the skills targeted in Phase I of Hanf-based programs, children increase their level of cooperation (Kochanska, Kim, Boldt, & Nordling, 2013). Based on the family stress theory (e.g., Conger & Donnellan, 2007), which posits high levels of compromises in parenting skills among low income parents, we hypothesized parents would display relative low levels of Attends plus Rewards (i.e., skills intended to increase positive attention to behaviors parents want to see or see more) and relatively high levels of Instructions plus Questions (i.e., behaviors that disrupt and/or distract caregivers from child-focused play and opportunities to child-elicited behaviors they want to see or see more). Given long-standing research which suggests that families with children with disruptive behaviors, but that are not selected on income level, evidence Instructions plus Questions at rates as much as four times higher than Attends plus Rewards (e.g., see Peed et al., 1977), we expected low income families to display a ratio that is even more pronounced.

As a second aim of this study, we examined family, parent, and child variables and how these relate to caregiver parenting behaviors. Importantly, both theory and empirical data highlight the overrepresentation of low-income families in statistics on children's disruptive behaviors; however, such between SES group comparisons tell us much less about relative risk and resilience *within* our most at-risk and underserved families (e.g., Anton, Jones, & Youngstrom, 2015; Cuellar, Jones, & Sterrett, 2015; Gonzalez, Jones, Kincaid, & Cuellar, 2012). Thus, understanding whether child, parent, and/or family variables are associated with variability in parenting at baseline *within* this low-income sample could help us to identify those in need of early intervention. We selected variables that have been found in the literature to correlate with parenting: family income (e.g., Hoff, Laursen, & Tardif, 2002), parental depressive symptoms (e.g., Lovejoy, Graczyk, O'Hare, & Neuman, 2000), parent education (e.g., Davis-Kean, 2005), child age (Parent et al., 2014), and child gender (e.g., Smetana, 1989). However, as these variables have not typically been examined *within* low-income families, we view this aim as exploratory and do not offer specific hypotheses.

Finally, surprisingly little scholarly attention has examined the association between observed parenting and parent-reported parenting. As was noted above, observational coding of behavioral criteria allows clinicians to objectively assess a caregiver's mastery of skills and the impact of that mastery on child behavior. Given that observational assessments are time-consuming and expensive and that the field has called for feasible and cost-efficient interventions (e.g., Kazdin & Blase, 2011), it is important to ask whether parent self-report is related to behavioral observations and, if so, can be used instead of observations. When treating low-income families, such considerations appear particularly relevant; providing efficient interventions is of critical importance for these families. Although some data suggest that observational and caregiver report of parenting may indeed be correlated (Hawes & Dadds, 2006; Parent et al., 2014), caregiver-reported measures, particularly those of low-income parents, are vulnerable to other aspects of family functioning, including caregiver depression, which tends to co-occur with both low-income status and child

behavior problems (see Gonzalez & Jones, 2016 for a review) and can distort parent report (see De Los Reyes et al., 2015). As a consequence, caregiver report of parenting may tell us less about the specific parenting behaviors hypothesized to exacerbate and/or maintain disruptive behavior in early-onset children. Accordingly, for the third aim we utilized the correlations conducted in Aim 2 to determine the variables (e.g., depressive symptoms) that needed to be controlled and then examined the relationship between parent self-report and behavioral observations of parenting. Based on the literature not using income as a criterion for eligibility (i.e., Hawes & Dadds, 2006; Parent et al., 2014), we hypothesized small but statistically significant associations.

Method

Overview

This study represents secondary analyses of a line of research examining technology-enhanced BPT services. The Institutional Review Board approved all study procedures. Consent was obtained for parental participation and participation of the target children as well. The current analyses focus on baseline assessments.

Participants

Participants were 43 clinic-referred children (ages 3.0 - 8.0 years) and their adult caregivers (42 mothers; 1 father). On average, children were 5.02 years of age ($SD = 1.58$) and approximately half (48.8%) were boys. With regards to ethnicity, 14% of participating children were Latino and the racial breakdown was as follows: 50% Caucasian, 32% African American, and 14% more than one race (4% of the sample chose not to report ethnicity). On average, caregivers were 32.5 years old ($SD = 6.75$), 33% were married (67% single), and 47% reported being employed full-time (20% were unemployed; 33% were part-time employed).

Families were included in the parent research if they met criteria for “low income” (i.e., adjusted gross income did not exceed the maximum of 250% of the federal poverty limit, which takes into account both income and number of residents in the home), they had a child in the 3- to 8-year-old age range (age range for which HNC was developed and tested), and the child exhibited disruptive behaviors in the clinical range as evidenced by meeting or exceeding clinical cutoffs on the caregiver-report of the Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999) Problem or Intensity Subscales

Exclusion criteria were (a) child developmental or physical disability that was severe enough that their symptomatology (e.g., unable to follow or respond to an instruction, overstimulated by parental attends and rewards, physical handicap precluded use of time-out procedure) precluded benefitting from the program; (b) caregiver current diagnosis of substance abuse/dependence, mood, or psychotic disorder; and/or (c) family involvement with Department of Social Services related to abuse/neglect.

Recruitment

Low-income caregivers with a 3- to 8-year-old child were recruited from North Carolina in a small metropolitan area in the South Atlantic region of the U.S.. Families were recruited via (a) advertisements targeting areas of an overrepresentation of low-income parents and (b) word-of-mouth. Recruitment was conducted through community agencies (e.g., schools, YMCAs, churches) and service agencies (e.g., doctor's offices, social services).

Procedure

Interested families contacted a project staff member who conducted a brief phone screen for key eligibility criteria. If caregivers were eligible and interested, caregiver-child dyads were scheduled for a more extensive Screen/Baseline Assessment to confirm eligibility criteria, obtain consent, and complete questionnaire measures.

A series of behavioral observations of parent-child interaction occurred at the beginning of the following session (i.e., the first treatment session), including "Child's Game" (i.e., child-directed play), the focus of the current analyses (McMahon & Forehand, 2003). Prior to the "Child's Game" observation, caregivers are instructed to allow the child to select the toys and to follow the child's play for approximately 5 minutes.

Measures

Demographic Information.

Caregivers completed a demographic measure that included questions about themselves (e.g., age, education), their child (e.g., child age, gender), and their families (e.g., household income).

Caregiver Depressive Symptoms.

Caregiver depressive symptoms were assessed with the Beck Depression Inventory, Second Edition (BDI-II; Beck, Steer, & Brown, 1996). The BDI-II consists of 21 items that assess cognitive-affective and somatic depressive symptoms during the past two weeks in adults and adolescents. Each item contains four statements reflecting varying degrees of symptom severity with corresponding scores ranging from 0 to 3. The total score is the sum of all responses, which can range from 0 to 63, with 0 to 13, 14-19, 20-28, and 29-63 representing minimal, mild, moderate, and severe depression, respectively. The BDI-II has been validated with several populations including healthy adults (Dozois, Dobson, & Ahnberg, 1998), primary care patients (Arnau et al., 2001), and people with Major Depressive Disorder (Steer et al., 1998; Steer et al., 1999). The Cronbach's alpha coefficient for the current sample was .88.

Parenting Questionnaire.

Positive and negative parenting was assessed with the parent-completed Alabama Parenting Questionnaire (APQ; Shelton, Frick, & Wootton, 1996). The original version had 42 items measuring parenting characteristics that have previously been associated with disruptive behavior disorders of children. Numerous studies have since examined the APQ (e.g., Clerkin, Marks, Policaro, & Halperin, 2007; Essau, Sasagawa, Frick, 2006). Of primary

importance, Clerkin et al. (2007) examined the psychometric properties of the APQ in a preschool population. A three-factor solution emerged with the following factors: positive parenting, negative/inconsistent parenting, and punitive parenting. In the current study, we used the twelve-item Positive Parenting subscale (alpha coefficient = .82) and the seven-item Negative Parenting subscale (alpha coefficient = .56). In addition to using the Positive Parenting subscale, we selected the four positive parenting items from the APQ that most directly mapped onto behaviors that were coded during behavioral observations; these items were also included in the analyses. They included: “You let your child know when he/she is doing a good job with something”; “You compliment your child when he/she has done something well”; “You praise your child for behaving well”; and “You hug or kiss your child when he/she has done something well.” Each item was measured on a 1 to 6 scale. The alpha coefficient for these four selected items was .86 in the present study.

Behaviorally Observed Parenting.

Four behaviors were coded in Child’s Game: (1) Attends (positive attention in which the parent provides an ongoing verbal description of what the child is doing; e.g.: “you are stacking the blocks”), (2) Rewards (positive attention that is provided following the child’s appropriate behavior; e.g.: “Good job!,” “Thank you for picking up your toys!”), (3) Questions (an interrogation to which the only appropriate response is verbal), and (4) Instructions (command issued by the parent towards the child).

Five trained undergraduate coders assessed parenting behaviors from videotapes of parent-child interactions (i.e., the Child’s Game). The coders received approximately 50 hours of training. Prior to beginning coding, coders reached agreement on Attends (A) plus Rewards (R) and Instructions (I) plus Questions (Q) at 80% or higher with pre-coded tapes by experts at 80% or higher.

Over half (54.5%) of the videos were double coded for fidelity. When two coders failed to reach 80% agreement, they met in person and jointly coded the observation, resolving outstanding discrepancies. This occurred in 27.3% of the observations (agreement prior to resolving discrepancies was 69% for A+R and 88% for I+Q). When there was a discrepancy that had to be resolved, the resolved score was used in analyses, essentially representing 100% agreement. Otherwise, one observer was arbitrarily designated as the primary observer and her score was used in analyses.

Data Analysis

The first aim of the study was to examine the extent to which low-income families referred for BPT displayed deficits in positive parenting practices; this was examined by calculating the mean number of A + R and I + Q per minute as well as the ratio of A + R to I + Q. The data were compared to the requirements reported by McMahon and Forehand (2003) for successful completion of Phase I in *Helping the Noncompliant Child*: 4 or more A + R per minute and .4 or fewer I + Q per minute. This resulted in a target ratio of A + R occurring at a rate 10 times higher than I + Q.

The second aim of this study was to examine whether behavioral observations conducted in the clinic with low-income families related to family, parent, and child variables; this

question was examined by conducting correlations between each of the three behavioral observations (A + R, I + Q, and the ratio of R + A to I + Q) and family (income), parent (education, depression), and child (age, gender) variables. If multiple significant correlations emerged for any behavioral observation code, a multiple regression analysis was conducted to identify how much variance was accounted for by each variable.

The third aim of the current study was to explore if behavioral observations of parenting were associated with self-report of parenting in low-income families; this was examined by studying the association between the behavioral observations and both positive parenting and negative parenting from the APQ (Shelton et al., 1996). In addition, the four APQ positive parenting items that mapped most directly onto positive behaviors observed in the clinic (Attends and Rewards) were correlated with Attends plus Rewards. This latter analysis allowed for a more nuanced examination of how parental self-report was associated with behavioral observations. Correlational analyses were conducted unless demographic variables from the prior analyses indicated these needed to be controlled. In that case, multiple regression analyses were conducted.

Due to the multiple statistical comparisons conducted in the present study, Bonferroni corrections were made; specifically, we adjusted probability values to account for the increased risk of conducting a type I error (see Sedgwick, 2012). Given that we calculated 15 correlations in Aim 2 and 9 correlations in Aim 3, the *p*-values were set at .0033 and .0055, respectively.

Results

Preliminary Analyses

As the length of the videotaped parent-child interaction varied across participants, initial correlations were conducted to examine if the length of the interaction correlated with the rate per minute of A + R or I + Q or with the ratio of A + R to I + Q. All correlations were non-significant, suggesting that it was acceptable to examine observations of different lengths together in analyses using a rate per minute for each measure.

Primary Analyses

Aim One.—The mean rate per minute for A + R was .07 (*SD* = .58), and the mean rate per minute for I + Q was 4.0 (*SD* = 1.91). The ratio of A + R to I + Q indicated that I + Q occurred at a rate 56 times greater than A + R.

Aim Two.—Table 1 presents the correlation between each of the family, parent, and child variables with the behaviorally observed A + R, I + Q, and the ratio of A + R to I + Q (all of which were calculated as rate per minute). After applying the Bonferroni correction, none of the correlations were significant. As there were no significant relationships found, it was not necessary to conduct multiple regression analyses. Therefore, in Aim 3, we examined the association of observed and parent-reported parenting by correlational analyses without controlling for family, parent, and child variables.

Aim Three.—Table 2 presents the correlations between each of the three behaviorally observed measures (A + R, I + Q, the ratio of A + R to I + Q) with each of three parent-reported APQ measures (positive parenting, the four selected positive parenting items from the APQ, and parent-reported negative parenting). None of the parent-reported measures was significantly correlated with the behaviorally coded parenting measures either before or after applying the Bonferroni correction. Of note, the means for the APQ Positive Parenting and Negative Parenting scores presented in Table 2 were at the 66th percentile and 29th percentile, respectively, of each scale.

Discussion

This study examined the role of behavioral observations in the baseline assessment of low-income families with a clinic-referred young child with disruptive behavior problems. Parents emitted substantially higher rates of Instructions plus Questions than Attends plus Rewards, and neither self-reported parenting nor family, parent, or child variables was associated with behaviorally observed parenting. Furthermore, caregiver self-report of positive parenting was high while that of negative parenting was low. Taken together, these findings indicate the important role that behavioral observations play in the baseline assessment of young children and their families who are seeking treatment for disruptive and defiant child behaviors by way of a mastery-based parenting program. Specifically, they suggest that parent self-report may not provide an adequate assessment of parenting.

Instruction plus Questions occurred at a rate 56 times greater than Attends plus Rewards. This ratio is *substantially* higher than that displayed by parents of disruptive children when families are not selected based on low income (e.g., Peed et al., 1977). Such data tentatively suggest that, when working with low-income families, more effort *may* be required on the part of the client as well as the clinician to meet the criteria of Child's Game for Instructions plus Questions (.4 or fewer per minute) and Rewards plus Attends (4 or more per minute). Specifically, more sessions, longer sessions, and more practice of skills may be necessary. However, it is important to acknowledge that, as this study did not include a comparison group of non-economically-disadvantaged families, we use previously-collected data to derive rates of observed parenting behaviors in a clinic-referred sample *not* selected based on family income. As such, more research, which includes a non-disadvantaged reference group, is needed to substantiate conclusions.

Our second finding was that the behavioral observation was not related to the family, parent, and child variables. These findings are surprising as variables such as parental depressive symptoms and child age have been related to parenting skills in prior research (Lovejoy et al., 2000; Parent et al., 2014). The non-significant associations between these variables and behaviorally-observed data could be attributed to the relatively small sample size of the current study or the homogenous nature of the sample (i.e., all low-income). Replication with larger low-income samples is warranted.

For our third Aim, based on the small literature with samples not selected based on income, we had hypothesized a small, but significant, association between parent self-report and observational parenting. Given that we did not find any significant correlations, our

hypothesis was not supported. Our findings are in partial agreement with those of Hawes and Dadds (2006); although they found a relation between self-reported involved parenting and behaviorally-observed positive parenting, they did not find that negative parenting assessed through self-report and behavioral observation were related. The Hawes and Dadds (2006) study and the current study had a number of similarities (e.g., young clinic-referred children, use of the APQ as the measure for self-reported parenting), while also differing in several important ways (family income level, home versus clinic observations, behaviorally observed praise versus Attends/Rewards, how the three-factor structure of the APQ was derived). Any of these differences may account for the different findings across studies for positive parenting. In contrast to our conclusions, the Hawes and Dadds (2006) findings suggest that self-reported parenting *may*, in fact, be an alternative to the more time-consuming behavioral observations under certain conditions (e.g., observational data collection in the home). However, of importance for our purpose, their findings may not apply to a low-income sample.

Our findings with a low-income sample are particularly germane to applied work. The non-significant association between the observational and self-report data suggest that a comprehensive clinical assessment *with* an observational component likely is necessary to ascertain how deficient a parent from a low-income family is in the skills targeted in behavioral interventions. Although questionnaire assessments are time- and cost-efficient, our findings suggest that relying solely on self-report of parenting does not provide sufficient assessment information prior to mastery-based intervention. In this context, it is important to note that our current analyses did not examine which form of assessment—that is, behavioral versus self-report—yielded *better* (e.g., greater predictive validity) information. However, as behavioral criteria are used for moving from one skill and phase to the next, our findings do emphasize the importance of behavioral observations at baseline.

One interesting note is that in contrast to the behaviorally observed data, caregivers on average reported relatively high average scores on positive parenting (i.e., scores at the 66th percentile) and relatively low average scores on negative parenting (i.e., scores at the 29th percentile) at baseline. This finding, in combination with an absence of correlations between observed and self-reported parenting measures, suggests that clinical assessments should not rely exclusively on parent self-report of parenting skills. Instead, these results provide justification for the continued use of the more time-consuming clinic-based observations, particularly in the Hanf-based programs that use mastery criteria of parenting skills for advancing through the program. Finally, the absence of significant correlations between behaviorally observed parenting and parent, child, and family variables *suggest* that the behavioral observations may yield on uncontaminated picture of parenting.

In addition, these findings have implications for low income families. As was noted above, behavioral observations play a critical role in both HNC (McMahon & Forehand, 2003), as well as Parent Child Interaction Therapy (PCIT; Eyberg & Boggs, 1998), the two more traditional clinic-based, family-focused, Hanf-Model programs. Our data suggest that parents in low-income families use very high rates of Instructions plus Questions relative to Attends plus Rewards, suggesting that substantial work may be needed to reach criteria for Child's Game with these families. Any conclusions about low-income families must be

viewed as preliminary; research that includes appropriate comparison groups is needed. These groups could consist of higher-income clinic-referred families or, as in some research (McCabe, Yeh, Lau, Argote, & Liang, 2010), a low-income non-clinic group. This is an important consideration as these at-risk families are already more likely to drop out of treatment (Jones et al., 2016; Leijten et al., 2013) relative to other families; therefore, a mastery-based program which requires multiple sessions to master each subsequent skill could indeed be less feasible for lower income families navigating multiple jobs, including shift work, with less flexible work schedules and/or more limited mental health coverage. As such, clinical success could be fostered by clinician use of baseline data to tailor, guide, and optimize treatment delivery (e.g., allow for sufficient time [sessions] to reach behavioral criteria for each skill).

As with all research, limitations of this study must be considered. First, given that parents with severe depressive symptomatology were excluded, it is possible that this study did not have enough variability in depression to detect a link with parenting behavior. A second limitation already discussed is the lack of comparison group. The appropriate group will depend on the question being addressed. In the current study, we utilized the Peed et al. (1977) study as a benchmark for the rates of behaviorally-observed parenting when there was not an income criterion for study eligibility. Unfortunately, this benchmark study was published a number of years ago; the current findings have to be considered within the context of the age of this study. Third, replication with larger low-income samples is needed to substantiate findings and potentially allow for more nuanced statistical analyses. Fourth, we recognize the low internal consistency of the self-reported negative parenting scale; therefore, results related to this variable should be interpreted with caution. Fifth, it is important to acknowledge that the APQ and the behavioral observation were not designed to map on to one another. As a result, they could have been measuring different aspects of parenting. Finally, it may be beneficial to conduct behavioral observations in more natural settings, such as the family's home.

Study strengths are also notable. First, although BPT is an evidence-based intervention (Kaminski & Claussen, 2017), few studies have examined the relationship of caregiver self-reported and behaviorally-observed parenting skills for young children referred to a clinic for disruptive behavior (see Hawes & Dadds, 2006, for an exception). The current study adds to this small literature. Second, we examined an at-risk, but underserved, sample (low-income families), including a substantial percentage of families of ethnic and racial minority status.

Related to the second point in the preceding paragraph, it is also notable that the definition of "low income" in this sample was perhaps broader than in prior research as the federal poverty limit (FPL), which takes into account number of people in the home and income, was used. As discussed elsewhere (see Jones et al., 2016 for a review), operationalizing "low income" is in and of itself a critical part of the research process and using FPL in particular affords the opportunity to use a criterion that is updated annually, takes into account number of people in the home, and, in turn, includes a more diverse cross-section of low income families than some other criteria. For example, the current sample includes some low-income families with higher levels of education than may be expected for a low-income

sample. Importantly, such trends are actually consistent with national trends in the United States more broadly, due to a range of factors such as the recent recessions and the resultant hollowing of the middle-class. Accordingly, our focus on the current sample can begin to provide data on informative assessment strategies for a representative cross-section of low-income families in the U.S..

In conclusion, our findings underscore the importance of brief in-clinic observations when conducting parenting interventions with low-income families with child disruptive behaviors. The data from these observations are critical for ascertaining the initial level of parenting skills that are targeted in the treatment of problematic child behavior. In the case of low-income families, the proportion of positive to competing parent behaviors (Attends plus Rewards to Instructions plus Questions) may be very low, suggesting the need for not only substantial work to reach behavioral criteria but also the need for therapist sensitivity and support of the parent during the treatment process.

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Implications for Clinicians

- Mastery-based behavioral parent training (BPT) is a treatment with substantial evidence for young children's disruptive behavior.
- Self-report of parenting does not relate to behaviorally-observed parenting and appears to present a more positive picture of parenting than observation.
- When mastery-based BPT is implemented, a brief in-clinic behavioral observation is important to conduct when assessing parenting skills in low-income families.
- In these families, the proportion of observed positive parent behavior to competing parent behaviors may be very low, suggesting the potential need for substantial work to reach behavioral criteria as well as the need for therapist sensitivity and support of the parent during the treatment process.

Table 1

Means and Correlations of Family, Parent and Child Variables with Behaviorally Observed Attends Plus Rewards (A+R), Instructions Plus Questions (I+Q), and Ratio of A+R to I+Q¹

	Mean (SD)	Correlations		
		A+R ²	I+Q ³	Ratio of A+R to I+Q
Family				
Income	\$2370.68 (891.78)	.12	.43	-.25
Parent				
Education ⁴	4.49 (1.37)	.18	.06	.15
Depressive Symptoms ⁵	6.58 (7.25)	-.05	.14	-.07
Child				
Age (years)	5.02 (1.58)	.00	-.46	.20
Gender (% female)	51.2	-.17	.15	-.17

¹ Bonferroni corrections set *p*-value at .0033 for significance.

² A+R = Attends plus Rewards

³ I+Q = Instructions plus Questions

⁴ 1 = less than high school; 2 = high school or GED; 3 = some college; 4 = college degree; 5 = advanced degree

⁵ Beck Depression Inventory, 2nd Edition

Table 2

Correlations of Parent Reported Parenting and Behaviorally Observed Parenting

	Means (<i>SD</i>)	A+R ¹	I+Q ²	Ratio of A+R to I+Q
APQ ³ Positive Parenting	51.82 (5.78)	-.02	.15	-.10
APQ ³ Selected Positive Parenting Items	16.88 (3.72)	.01	.18	-.18
APQ ³ Negative Parenting	17.93 (2.25)	-.29	-.06	-.23

*
p < .05;**
p < .01¹
A+R = Attends plus Rewards²
I+Q = Instructions plus Questions³
APQ = Alabama Parenting Questionnaire