# Characteristics of Effective Mental Health Consultation in Early Childhood Settings:

## Multilevel Analysis of a National Survey

**Beth L. Green**
*NPC Research*

**Maria Everhart**
**Lyn Gordon**
**Maria Garcia Gettman**
*Research & Training Center for Family Support and Children's Mental Health, Portland State University*

In response to (a) an increasing need to support children with emotional and behavioral challenges in childcare settings and (b) the high rates of expulsion among preschool children, mental health consultation in early childhood settings is becoming an increasingly popular intervention strategy. At the same time, there is little agreement or empirical evidence to help early childhood program managers and other professionals make decisions about the most important characteristics and services that mental health consultants should provide. The current study presents findings from a nationally representative survey of 74 Head Start programs and 655 Head Start directors, staff members, and mental health consultants to use in addressing this gap. Using Hierarchical Linear Modeling (HLM), the authors present results suggesting that the single most important characteristic of mental health consultants is their ability to build positive collaborative relationships with program staff members. The frequency of consultant activities was important, primarily because consultants who provided more frequent services were reported to have more positive relationships with staff members. These results were significant even after controlling for program-level characteristics, such as program size, budget for mental health services, and ratio of consultant hours to number of children.

Mental health consultation is not a new concept. As early as 1964, in his seminal work on consultation in community-based psychiatry, Gerald Caplan described the deployment of mental health professionals to a broad array of human service enterprises to help staff members in those programs better understand and support their clients' mental health needs. Greenspan and his colleagues (1975) described the potential for mental health consultation to make an important contribution to quality childcare, especially for infants and young toddlers, pointing out the capacity of mental health consultation for preventing serious emotional and behavioral problems by intervening at the youngest ages. At the same time, however, Greenspan noted that widespread implementation of mental health consultation in early childhood settings faced two challenges in terms of training and expertise of mental health professionals: lack of training in early childhood development and lack of expertise in understanding organizational structures and processes. These challenges remain, even 30 years later (Wesley & Buysse, 2004).

Since these early writings, and in response to the increasing number of very young children with serious emotional and behavior challenges (Center for Mental Health Services, 2002; McDonnell & Glod, 2003), mental health consultation in early childhood settings has become an increasingly popular intervention strategy (Brennan, Bradley, Allen, Perry, & Tsega, 2005; Buysse & Wesley, 2005; Gillam & Shahar, in press).

As defined by Cohen and Kaufmann (2000), early childhood mental health consultation is a "problem-solving and capacity-building intervention" (p. 4) that involves a collaborative relationship between a consultant with mental health expertise and one or more individuals in a preschool or childcare setting. Based in large part on the work of Donahue, Falk, and Provet (2000), as well as Yoshikawa and Knitzer's (1997) field study of mental health consultation in Head Start, Cohen and Kaufmann (2000) distinguished two primary types of consultation services. First, early childhood mental health consultation frequently occurs at the *child or family (individual) level*, in which the consultant provides direct

services to particular children, including screening, assessment, development of Individualized Family Service Plans (IFSPs), or referrals. Individual-level consultation also includes working with the child's provider to help this individual develop strategies and techniques for supporting the child's positive development and reducing behavior problems. This type of consultation typically has as its goal the amelioration of problem behaviors or other mental health issues for a particular child and/or his or her family. Alternatively, the work of the consultant may be what is referred to as *program-level* consulting, that is, focused on supporting programs through training, coaching, and developing consistent programmatic approaches to serving children with emotional and behavioral challenges (Cohen & Kaufmann, 2000).

This type of consultation conforms to the original definition of consultation developed by MacLennan, Quinn, and Schroeder (1975) for the National Institute of Mental Health, which states that mental health consultation is "the provision of technical assistance by an expert to an individual or agency related to the mental health dimensions of their work" (p. 5). The goal of program-level mental health consultation is to develop the capacity of a program and its staff members to successfully work with children with emotional and behavioral challenges.

A number of communities, including some in the state of Ohio (Langkamp, 2003), areas of northern California (Alkon, Ramler, & MacLennan, 2003; Bleeker & Sherwood, 2003), Colorado (Gould, 2003), Connecticut (McGrady, 2004), Maryland (Perry, Dunne, O'Neil, & Campbell, 2005), and Oregon (Becker, 2005; Lehman, Lambarth, Friesen, MacLeod, & White, 2005), have invested considerable public and private funds to provide mental health consultation in preschool and other childcare settings. Furthermore, the nation's 2,500 Head Start programs are required under the federal Head Start Performance Standards (45 C.F.R. Part 1304.24) to provide "sufficient" mental health consultation to meet children and families' needs. Despite this proliferation of consultation programs in early childhood settings, the empirical evidence for the effectiveness of this intervention strategy is limited to a few published studies. Alkon, Ramler, and MacLennan (2003) reported on the results of one of the first large-scale studies of mental health consultation services in 25 childcare centers. Consultants, who were contracted mental health professionals from four different agencies, provided a variety of services to childcare centers serving low-income, ethnically diverse children. This study found that in general, consultation had a significant effect on teachers' reported self-efficacy in regard to managing children's challenging behavior. They also found that a key moderator of the effectiveness of consultation was the duration of consultation—centers that received consultation for a longer duration

showed a greater increase over time in the overall quality of the childcare center and had lower teacher turnover. This study also provided some insight into the nature of consultant activities. The researchers used a checklist format to ask childcare teachers and directors whether mental health consultants provided a range of different services. They found that almost all consultants engaged in activities that could be considered both program-level (e.g., consulting with the program director, participating in staff meetings) and individual-level (observing children, meeting with families, meeting with children). Only 25% of directors reported that consultants provided training for staff members, a key type of program-level consultation. Unfortunately, Alkon et al. used a dichotomous (yes/no) checklist format, so information about the intensity or frequency of activities could not be ascertained.

In a report to the Ohio Department of Mental Health, Diane Langkamp (2003) presented data suggesting that a statewide mental health consultant intervention did not have a significant impact on levels of burnout or teaching stress among childcare staff. However, the mental health consultation provided in this study varied tremendously both in nature (type of activities) and in intensity across the study counties. For example, 6 of the 39 centers received consultation less than once per month; only 4 centers received consultation services twice a week or more. Furthermore, it appears that the primary type of consultation provided was individual, child-centered consultation that targeted behaviors identified by teachers as problematic; program-level consultation was less common.

Green, Simpson, Everhart, Vale, and Gettman (2004) conducted a qualitative study of mental health consultation in three Head Start programs. Using open-ended, semistructured interviews, these researchers asked staff members the following question: "What changes do you see in children as a result of services provided by your mental health consultant?" Results suggested that teachers were more likely to report that the mental health consultants (MHCs) were effective in reducing children's negative behavior and increasing positive behaviors when (a) the consultant was integrated into the day-to-day functioning of the preschool program, (b) the consultant had a positive, respectful relationship with the preschool teachers, and (c) programs had a vision for mental health services that was shared by program staff members and consultants. Green et al. found that mental health consultants could be effective, even if their contracted time with a preschool program was relatively minimal, if the relationship of the consultant was ongoing (e.g., the same consultant continued to work with the program over time) and if the primary goal of the consultation was to develop staff capacity to effectively deal with challenging behavior and promote positive behavior (i.e., "program-level" consultation).

Most recently, in their review of 31 published and unpublished studies of mental health consultation, Brennan and her colleagues (2005) concluded that the evidence for the effectiveness of mental health consultation was strongest in terms of its influence on program- and teacher-level outcomes (e.g., teacher stress, turnover, perceived competency) and somewhat weaker, although promising, in terms of the evidence for impact on measures of child behavior and on general childcare quality. They suggested that the lack of consistent evidence of effectiveness might be due in part to a lack of consistency in defining mental health consultation and a lack of research regarding identification of the most important characteristics and activities needed for consultation. The variability in services provided by consultants in both the Alkon et al. (2003) and the Langkamp (2003) studies pointed to this issue: Both studies offered few clear definitions, strategies, or goals for the consultation process, and the services provided by consultants appeared to vary greatly, depending on the particular skill set or approach of the consultant (Yoshikawa & Knitzer, 1997). Clearly, we need additional empirical research on early childhood consultation that can better describe what consultants do, how they work with staff members, and what strategies are most important in supporting different types of desired outcomes

The current study begins to address this gap by using data from a nationally representative survey of Head Start programs. The survey was part of a larger study focused on understanding organizational influences on early childhood mental health. Head Start programs represent a particularly appropriate context for the study of mental health consultation because although these programs are mandated to provide mental health consultation, Yoshikawa and Knitzer's 1997 qualitative study suggested that wide variability existed in consultation practices. Furthermore, national data about the types of consultants working with Head Start programs, the frequency or types of services being provided by mental health consultants, or the effectiveness of these services are not currently available. Moreover, because Head Start programs work with children who are at risk for more negative developmental outcomes due to poverty, the rates of mental health problems within these programs is higher than in the general population (Harden, Winslow, & Kendziora, 2000); thus, the need for effective mental health consultation in these programs is quite high.

Our study addressed the following research questions:

1. What are the demographic and other characteristics of mental health consultants who work with Head Start programs, and which characteristics are most strongly associated with the reported effectiveness of consultation?

2. What activities do MHCs provide within Head Start programs, and which activities are most strongly associated with the reported effectiveness of consultation?

3. What is the quality of the relationships between Head Start program staff members and MHCs, and is this associated with the reported effectiveness of consultation?

4. What is the relative importance of MHC characteristics, activities, and quality of relationships to the reported effectiveness of consultation? That is, which aspects of consulting are most important to outcomes?

## METHOD

### Sample

**Selecting Head Start Programs.** We selected Head Start programs using data provided by the Head Start Bureau. A stratified (racial/ethnic composition of target population, geographic location, and size) random sample of programs was selected to be representative of core Head Start programs (see Note) following procedures used for the national Head Start Outcome Study (Puma et al., 2001). One hundred and thirty-one Head Start programs were contacted by telephone and letter and asked to participate in the study; 79 agreed to participate. Declining centers were not statistically different from participating centers in terms of any of the stratification variables. The most common reasons for declining to participate were the program (a) was participating in its federal review process and (b) was already involved in another research project.

A total of 1,273 surveys was sent to a random sample of 12 to 18 teachers, assistant teachers, and family advocates at each program, as well as to the program director, the mental health services coordinator, and the professional providing mental health consultation (if multiple consultants served the program, the survey was sent to the person providing the most hours of consultation). Performance Information Review (PIR) data collected by the federal Head Start Bureau indicated that the number of classrooms per program ranged from 1 to 361, with a median of 21. The sample size per site was selected to represent sufficient program-level informants to meet the needs of the nested analysis approach (Raudenbush, Bryk, Cheong, & Congdon, 2000) and to ensure reasonable representation from classroom staff members at all but the largest programs. A total of 816 (64%) surveys was returned. To be included in the current study, programs had to have a minimum of four staff respondents and responses from the mental health consultant and the program director. Seventy-four programs met

these criteria. These programs ranged in number of children served from 60 to more than 3,600.

**Respondents.** The 74 programs provided responses from 447 direct service staff members, 134 administrative staff members, and 74 consultants, for a total of 655 respondents. These 655 respondents were not significantly different from the overall survey respondents on any demographic characteristics or any of the key study variables, with one exception. Respondents in the study subsample reported working for the Head Start program slightly longer: $M = 5.8$ years for the study sample versus 5.5 years for the total sample, $t(631) = 2.79$, $p < .01$. There were 263 teachers (40% of respondents), 98 (15%) assistant teachers, 86 (13%) family advocates, 74 (11%) program directors, 60 (9%) program coordinators/managers, and 74 (11%) consultants. Head Start staff members and managers were almost entirely female (96%). About one fourth (27%) of respondents were African American, 51% were White/Caucasian, 11% were Hispanic/Latina(o), and 8% were of other ethnic backgrounds. On average, Head Start staff members, not including mental health consultants, reported working for Head Start for 5.57 years. Mental health consultants, however, also reported working for the program an average of about 5 years (5.2 yrs).

## Survey Instrument

We developed the core survey to collect a variety of information about the nature of mental health consultation, organizational characteristics, and staff members' attitudes and opinions about the effectiveness of mental health consultation services. We developed the survey based on information collected in a prior study (Green et al., 2004) of mental health consultation in Head Start settings and pilot-tested it for length and readability with 10 volunteer staff members from a local Head Start program. In addition, program directors completed an addendum that provided descriptive information about the overall program (e.g., total number of children, sites, consultant characteristics, program budget). The primary survey questions used for this study are described in the next sections.

**1. Mental Health Consultant (MHC) Activities.** Head Start staff members and managers reported the frequency with which consultants engaged in a variety of different activities, using a scale from 1 (*rarely or never*) to 5 (*weekly or more*). Using the framework proposed by Cohen and Kaufmann (2000), we created two subscales, one representing *individual-level activities* (e.g., conducting screenings of individual children, assessing children, planning for children with specific needs, direct therapeutic intervention) and one representing *program-level activities* (e.g., providing staff training, supporting staff wellness, working with management team, coaching/mentoring teachers in the classroom). Reliability for both subscales was high ($\alpha = .89$ for individual, $\alpha = .91$ for programmatic), and the two types of consulting were positively correlated ($r = .71$). We aggregated the mean for each scale of MHC activities at the program level and used it as a Level 2 (program-level) predictor of outcomes. In this way, the average level of consultation across a variety of different reporters could be modeled.

**2. MHC Characteristics.** Mental health consultants reported on their level of training, race/ethnicity, workplace (e.g., private practice, community nonprofit, Head Start staff), and the amount of time they had worked with the Head Start program. Head Start program directors reported the number of hours of consultation time (or amount of full time equivalent) for the overall program; we divided this by the total number of children served to create a variable representing the number of hours of consultation per child.

**3. Quality of Relationships Between Staff Members and MHCs.** Based on the results of our previous study (Green et al., 2004), we developed six items to measure the quality of relationship between staff members and mental health consultants. Example items included "The MHC works as a partner with staff to meet children's MH needs" and "The MHC is 'part of the team' trying to help families." Items were rated on a 4-point scale (4 = *strongly agree,* 1 = *strongly disagree*). Reliability analyses showed that these items had good reliability ($\alpha = .84$). As we did for MHC activities, we aggregated staff reports of the quality of individual relationships with the consultants to create an aggregate, or program-level, variable of the quality of staff–consultant relationships.

## Outcome Measures

**1. Effectiveness in Helping Child Outcomes.** Respondents rated the extent to which they believed that the program's mental health consultant was helpful in reducing three internalizing behaviors (depression, withdrawal, moodiness) and four externalizing behaviors (aggression toward adults, aggression toward children, temper tantrums, and destructive behavior), and increasing four positive social behaviors (positive social interactions, smooth transitions, age-appropriate emotional regulation, and nonviolent problem solving). Each behavior was rated on a scale from 4 (*helped a lot*) to 1 (*hasn't helped*). We combined items to create three subscales; all subscales had high reliability ($\alpha$'s > .85).

**2. Staff Wellness.** We asked staff members four questions about the extent to which they felt professionally

supported (e.g., "Our program provides me with the emotional and personal support I need to do my job most effectively," and "Our program's approach to mental health includes a strong focus on staff wellness"). These items were rated on a 4-point scale ranging from 4 (*strongly agree*) to 1 (*strongly disagree*). Reliability for this subscale was also good ($\alpha = .86$).

**3. Program Characteristics.** Program directors completed a brief survey describing overall organizational characteristics (target population demographics, urban/rural setting, number of staff, centers, children, etc.). Directors also reported the percentage of the overall program budget spent on mental health consultation. We obtained additional program information from the Head Start Bureau's PIR, the annual federally mandated reporting database. Information from the PIR included the number of children with Individualized Educational Programs (IEPs), the number of mental health referrals made each year, the number of children receiving Part C services, and the number of staff members replaced during the last year.

## RESULTS

### Description of Mental Health Consultants

Table 1 provides demographic information for the MHCs, as well as the type and frequency of activities reported for consultants at each program. The mental health consultants were primarily White (61%); 4 (6%) were African American, 6 (9%) were Hispanic/Latina(o), and the remainder were of other ethnic backgrounds. The majority (72%) were female. About a third (37%) held a doctoral degree, 57% had a master's degree, and 4 (6%) had a bachelor's degree. They were employed in a variety of settings: 15 (22%) were employed by the Head Start program, 21 (23%) were employed by nonprofit or government organizations, 17 (25%) were in private practice, 4 were school-based, and 12 (17%) indicated some other employment setting. On average, MHCs reported working with the Head Start program an average of 5.5 years, ranging from 6 months to 28 years.

### General Analytic Strategy

Because individual staff responses are "nested" within programs served by specific consultants, we needed to use a statistical method that could take into account these nested (i.e., nonindependent) effects and appropriately model program-level effects. Hierarchical Linear Modeling (HLM; Raudenbush et al., 2000) is one such technique. In the models tested, outcomes (Level 1 variables) reported by 658 Head Start staff members and

**TABLE 1. Characteristics of Mental Health Consultants (MHCs) and Programs**

| Mental health consultant/<br>program characteristics | *n* | % |
|---|---|---|
| Mental health consultant | | |
|   Race/Ethnicity | | |
|     White | 49 | 74 |
|     African American | 4 | 6 |
|     Hispanic/Latina(o) | 6 | 9 |
|     Other/Multiracial | 7 | 11 |
|   % Female | 49 | 72 |
|   Highest education level | | |
|     Bachelor's degree | 4 | 6 |
|     Master's degree | 39 | 57 |
|     PhD | 25 | 37 |
|   Place of employment | | |
|     Head Start program | 15 | 22 |
|     Nonprofit/government agency | 21 | 23 |
|     Private practice | 17 | 25 |
|     School-based | 4 | 6 |
|     Other | 12 | 17 |
| Program | | |
|   Program-level MHC activity frequency[a] | | |
|     1–2 times/year or less | 35 | 47 |
|     Every other month | 37 | 49 |
|     Monthly or more | 3 | 4 |
|   Individual-level MHC activity frequency[a] | | |
|     1–2 times/year or less | 27 | 36 |
|     Every other month | 43 | 58 |
|     Monthly or more | 5 | 7 |
| Length of time MHC has worked<br>with Head Start | 5.5 yrs<br>(range = 6 mos–28 yrs) | |
| Program budget spent on<br>consultation (%) | *M* = 3.4<br>Med. = 1.6<br>Range = .01–14 | |
| Number of children per MHC | 231<br>(range = 19–853) | |
| Hours of consultation per child | 1.7 hrs<br>(range = .03–16) | |

[a]Percentage of programs.

managers were nested within 74 programs with their associated organizational (e.g., size, urban/rural status, etc.) and mental health consultant characteristics (Level 2 variables). Information about staff members' perceptions of the consultant (frequency of activities, quality of relationships) was aggregated at the program level and was included in these models as Level 2 (program-level) variables.

We analyzed a set of HLM models to confirm that nonindependence (nesting) was in fact present. These ("null") models produced intraclass coefficients for each dependent variable (internalizing, externalizing, and positive behaviors, and staff wellness), essentially a measure of the extent to which within-program variance is higher than between-program variance (e.g., the extent to which nesting is present). These intraclass coefficients ranged from .17 to .25 and were all statistically significant, indicating that nonindependence of responses is a concern and that HLM is appropriate.

Next, we identified variables to include as covariates in the model by running each of the program organizational characteristics (number of sites, urban vs. rural, number of children, turnover rate, number of mental health referrals, number of children with IEPs, percentage of budget spent on mental health consulting, and whether programs served primarily Hispanic, White, or African American populations) as Level 2 predictors of the four primary outcomes (effectiveness in reducing externalizing behaviors, effectiveness in reducing internalizing behaviors, effectiveness in supporting prosocial behaviors, and staff wellness). We retained as a Level 2 covariate any variable that was a significant ($p < .05$) predictor of any one outcome. Based on this criterion, number of sites, number of children, number of mental health referrals, and number of children on IEPs were retained as covariates. For each of these variables, significant positive regression coefficients indicated that the more sites, children, mental health referrals, and children on IEPs, the more effective the consultation services were perceived to be. We identified individual-level covariates in a similar fashion, examining the influence of respondent race/ethnicity, whether the respondent was part of management versus direct service, and respondent time in the program. The respondents' race (specifically, whether the respondent was African American or not) and the respondents' position (management vs. staff) were significant predictors and were retained as Level 1 covariates. Management and African American staff members perceived mental health consultation to be more effective than did direct service staff members or staff members who were not African American.

## Outcome Variable Descriptives

In this study, we used four outcome variables: staff reports of how helpful mental health consultation was in terms of (a) reducing internalizing behavior ($M = 2.91$, $SD = .74$); (b) reducing externalizing behavior ($M = 2.94$, $SD = .81$); (c) promoting positive social behavior ($M = 3.12$, $SD = .78$); and (d) feelings of staff wellness ($M = 2.98$, $SD = .74$). All scale scores ranged from 1 to 4. Outcomes were positively correlated with each other ($r$'s ranged from .48 to .78).

## Research Question 1

*Are MHC characteristics associated with perceived effectiveness?* We conducted separate hierarchical models to examine the influence of each of the Level 2 MHC characteristics (White vs. non-White, time with the organization, type of degree—PhD vs. master's degree, organizational affiliation, and hours of consultation provided per child) on the four outcome variables. All models controlled for the covariates described previously.

The *only* measured MHC characteristic that was significantly associated with outcomes was whether the MHC was in private practice (compared to any other setting). Consultants in private practice were rated as being more helpful in terms of each of the three child outcomes (standardized beta coefficients ranged from .12 to .20; all $t$'s > 2.00, $p < .05$); however, MHC employment setting was not a significant predictor of staff wellness, $\beta = .127$, $t(72) = 1.77$, $p = .11$.

## Research Question 2

*What types of MHC activities are associated with perceived effectiveness?* We analyzed separate HLMs to test the relationship between the frequency of the two types of MHC activities (program and individual-level) and each of the four outcome measures. Results generally indicated that the more frequently the MHC engaged in both types of activities, the more helpful the mental health services were perceived to be by program staff members, as shown in Table 2. The frequency of consulting activities appeared to be a generally stronger predictor of perceived helpfulness in reducing externalizing behavior; the standardized coefficients for other outcomes were somewhat smaller in magnitude. These effects in general were not particularly strong (ranging from standardized betas of .25–.17), although all were statistically significant. Higher levels of both types of consulting were also associated with increased reports of staff wellness.

## Research Question 3

*Is the quality of MHC–staff relationships associated with perceived effectiveness?* We analyzed HLMs by using the quality of MHC–staff relationships as a Level 2 predictor of effectiveness. In this way, the aggregate level of relationship as reported by all staff members within the program was modeled on outcomes. As shown in Table 2, this variable was strongly associated with perceived effectiveness in all domains and with reported staff wellness. The more positive the relationships between staff members and consultants within a given program, the more likely those staff members were to report that men-

**TABLE 2.  Results of Individual Predictor HLM Models for MHC Characteristics, Activities, and Quality of Relationships**

| Dependent variable | Independent variable[a] | Individual predictors (standardized *B*) |
|---|---|---|
| Reducing externalizing behavior | Private practice vs. other settings | .174* |
| | Frequency of program consulting | .222** |
| | Frequency of individual consulting | .250** |
| | Quality of staff–MHC relationship | .688*** |
| Reducing internalizing behavior | Private practice vs. other settings | .202** |
| | Frequency of program consulting | .113* |
| | Frequency of individual consulting | .139* |
| | Quality of staff–MHC relationship | .461*** |
| Increasing positive behavior | Private practice vs. other settings | .165* |
| | Frequency of program consulting | .206** |
| | Frequency of individual consulting | .192** |
| | Quality of staff–MHC relationship | .574*** |
| Staff wellness | Private practice vs. other settings | .127 |
| | Frequency of program consulting | .175** |
| | Frequency of individual consulting | .180** |
| | Quality of staff–MHC relationship | .55*** |

*Note.* HLM = Hierarchical Linear Modeling; MHC = mental health consultant. All models controlled for the total number of children in the program, number of centers, number of mental health referrals made, and number of children on IEPs (Level 2) and for respondent race/ethnicity (African American vs. any other ethnicity) and position (management vs. staff; Level 1).
[a]*n* = 74.
*$p < .05$. **$p < .01$. ***$p < .001$.

tal health services were effective and that the program helped them feel supported in their work.

## Research Question 4

*What is the relative importance of MHC characteristics, activities, and relationships to perceived effectiveness?* Next, we tested several more-complex models to better understand the relative importance of MHC characteristics, activities, and relationships to outcomes. We analyzed HLM models that included each of the predictors in Table 2, entered simultaneously into models for each of the outcomes (including covariates). Because of the relatively high correlation between program-level and individual-level consultations, and the lack of different patterns of results for the two types of activities, we combined these two variables into a single index of *frequency of MHC activities*. These results are shown in Table 3. As can be seen, after including these other variables, only the quality of relationships remained a significant unique predictor of outcomes.

Because the frequency of activities was a significant predictor in the first set of HLM models but was reduced to nonsignificance when the quality of relationships was included in the model, this suggested the possibility of a mediational path, such that the influence of the fre-quency of activities on outcomes might have been indirect and due to its association with the quality of MHC–staff relationships (Baron & Kenny, 1986). To test for this mediational effect, we first ran an additional HLM model that used the frequency of MHC activities as a predictor of the quality of staff–MHC relationships. This showed that these two variables were strongly positively associated with each other: $\beta = .302$, $t(71) = 12.24$, $p < .001$. Next, to ensure that the reduction in significance of the effect of MHC frequency of activities was not due to the effect of MHC employment position (private consultant vs. not), we reran these models and excluded this variable. Results were the same: Although frequency of activities was a significant predictor when the quality of relationships was not in the model, when this variable was included, the relationship was reduced to nonsignificance. Thus, it appeared that the effect of the frequency of activities was in fact mediated by the quality of MHC–staff relationships. This mediational path is illustrated in Figure 1.

## DISCUSSION

These results suggest that in planning mental health consultation interventions, program designers and managers

**TABLE 3. Results of Full HLM Models (All Predictors)**

| Dependent variable | Independent variable[a] | Full model (standardized $B$)[b] |
| --- | --- | --- |
| Reducing externalizing behavior | Private practice vs. other settings | .003 |
| | Frequency of consulting | −.045 [this should not be negative] |
| | Quality of staff–MHC relationship | .501*** |
| Reducing internalizing behavior | Private practice vs. other settings | .002 |
| | Frequency of consulting | −.045 [should not be negative] |
| | Quality of staff–MHC relationship | .502*** |
| Increasing positive behavior | Private practice vs. other settings | .004 |
| | Frequency of consulting .017 | |
| | Quality of staff–MHC relationship | .558*** |
| Staff wellness | Private practice vs. other settings | .004 |
| | Frequency of consulting | −.053 [should not be negative] |
| | Quality of staff–MHC relationship | .600*** |

*Note.* HLM = Hierarchical Linear Modeling; MHC = mental health consultant. All models controlled for the total number of children in the program, number of centers, number of mental health referrals made, and number of children on Individualized Education Programs (Level 2) and for respondent race/ethnicity (African American vs. any other ethnicity) and position (management vs. staff; Level 1).
[a]$df$ = 67. [b]All predictors.
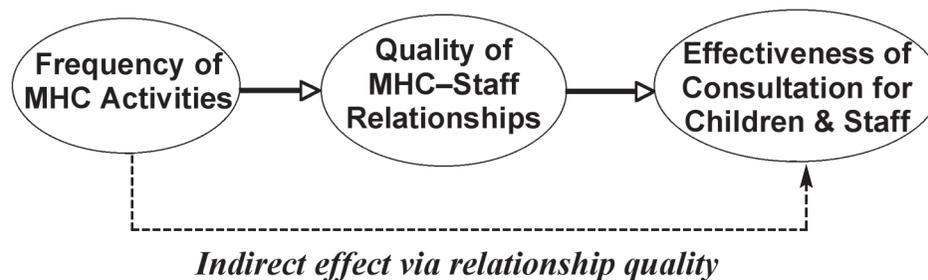*$p < .05$. **$p < .01$. ***$p < .001$.



**FIGURE 1.** Mediational model of the effect of the frequency of consultant activities on perceived child and staff outcomes. *Note.* MHC = mental health consultant.

should pay significant attention to structuring the role of the consultant in a manner that facilitates positive relationships between staff members and consultants. The characteristics of consultants, at least those measured by this study, appeared generally less important to the effectiveness of consultation. Even the hours of consultation per child and the percentage of program budget spent on consultants were not significantly associated with perceived effectiveness. However, we should note that there was relatively little variability among several consultant characteristics, including consultants' race/ethnicity, and that the sample size of consultants for some subgroups (e.g., employment setting) was quite small. Furthermore, we did not include any measure to determine the effect of the mental health consultant's degree (e.g., nursing, early childhood, special education, psychology), which may be an important characteristic to assess. The one characteristic that was associated with more positive outcomes was having a consultant who was in private practice, al-

though the reason for this is not entirely clear. It may be that private consultants are somewhat more skilled in building relationships with staff members quickly and in establishing rapport. Note, however, that this variable did not remain a significant predictor of outcomes when the level of consultant activities and quality of relationships were included in the models.

Furthermore, the type of consultant activities (program vs. individual level) seemed less important than the overall frequency of activities, although these two dimensions were highly correlated. In fact, the high intercorrelation suggests that consultants who provided more of one type of consultation were likely to provide more of the other; these consultants may simply have been more engaged overall in supporting the program—or at least perceived by staff members to be more broadly involved. The results show that frequency is important primarily because it supports the development of more positive relationships—specifically, that the effect of the frequency

of activities on the effectiveness of consultation was mediated by the quality of relationships. Thus, consultants who interacted more frequently with staff members and children had more positive relationships with staff members; in turn, these relationships were strongly associated with how helpful staff members perceived the consultation services to be.

We must point out that the measure of the quality of consultant–staff relationships was based on such items as the extent to which the MHC "works as a partner" with program staff members, "seems like another member of the staff," and "is part of the team" in working with children. This suggests that it is the nature of partnership and collaboration between staff members and MHCs that is critical. MHCs who were reported as being most helpful were not individuals who were perceived as "outside experts" but rather were persons who seemed to work most closely and collaboratively with Head Start staff. Furthermore, staff members who saw the MHC as effective also perceived that the consultant was "available when I need him/her"—and this *perception* seemed important, regardless of the number of hours the consultant was actually available to the program. These findings are consistent with work conducted in school-based settings that has suggested that the presence of a good working relationship between consultant and "consultee" is critical to producing desired outcomes (Caplan, 1964; Erchul, Hughes, Meyers, Hickman, & Braden, 1992). The importance of staff–consultant relationships was highlighted in one early study of mental health consultation in childcare settings (Zelman, Friedman, & Pasquariella, 1986). In this study, the authors attributed the lack of positive outcomes of their mental health consulting intervention to attitudinal differences between mental health professionals and childcare staff members in regards to key child development issues. They suggested that tensions emerged between consultants and childcare staff members because each group did not understand the other group's perspectives; in some cases, this led to staff members' rejecting or ignoring consultants' proffered advice.

The results of the current study also highlight the fact that even within Head Start programs, for which federal program standards require mental health consultation, considerable variability exists in the level and type of consultation provided. A significant number of programs reported fairly infrequent (1–2 times per year or less) consultant activities, and the majority of programs reported both types of consultation activities occurring about every other month, on average. Very few programs reported monthly or more frequent activities. On a per-consultant basis, the average number of children served by a consultant was well over 200, and on a per-child basis, less than 2 hr per year of consultant time was available. Clearly, however, the level of consultation that might be optimal for a given program (or child) may vary.

Programs with more children with special needs, or with staff members who are less experienced or who have more limited training, may need more extensive consultation. Future research that can more closely examine the types and intensity of consultation needed by programs that vary in these important ways should be conducted to better understand how much consultation is necessary for producing the desired outcomes.

Finally, we should note that the frequency of consultant activities and the quality of consultant relationships appear to be important not only to child outcomes but also to staff outcomes. Researchers have found that reducing the stress levels of staff members and increasing their feelings of being supported are important for reducing staff member turnover and possibly even for reducing rates of expulsion from preschool settings (Geller & Lynch, 1999; Gillam & Shahar, in press). Brennan and her colleagues (2005) found consistent evidence that mental health consultation can positively affect these outcomes for staff members, and our results further support this idea. The relationship among consultation, staff members' well-being, and child outcomes is another area in need of greater research attention. For example, it seems plausible that mental health consultation could have more direct impact on staff member stress than it does on child outcomes; stress could, however, be an important mediator of the effect of consultation on child-level outcomes. Such a model would suggest that child-level outcomes of mental health consultation are more likely to be seen in the long term, after staff member relationships with consultants have developed and staff members begin to feel supported in their teaching role by the mental health professional.

## Limitations and Areas for Future Research

Our results relied on staff member responses to a written survey; thus, outcomes are based on perceptions rather than on direct assessments of children or staff members, and we did not objectively measure the type or frequency of consultant activities. Furthermore, results are cross-sectional; thus, causal direction cannot clearly be ascertained. Research that includes more direct assessment of these outcomes, and in which key mediating variables—such as the development of staff–consultant relationships over time—can be tracked is clearly needed to confirm these findings and further inform the development of intervention programs. However, understanding staff members' perceptions of the usefulness of consulting and their own feelings regarding the amount of support from the program provides important guidance for understanding what qualities make up an effective consultation intervention. The fact that childcare staff members believed that consultation was helping children and that staff member attitudes toward consultants related

strongly to self-perceptions of staff wellness may be part of what makes consultation effective. That is, part of the effectiveness of consultation may in fact be due to the psychological influences of staff feelings of well-being. Furthermore, the small sample sizes did not allow us to analyze possible differences among subsets of staff members (e.g., teachers, family advocates, program administrators). It is quite plausible that the most important aspects of consultation for a classroom teacher are quite different from those that are most important to program managers. Future research should explore this question.

These data provide the only national descriptive information about consultation and the nature of consultation in Head Start programs. They offer a representative "snapshot" of mental health consultation within the Head Start context and suggest important areas for future program development and research. In particular, given the wide variability in the field, further work on the nature and intensity of consultation activities is clearly needed. Current Head Start performance standards may not adequately ensure that high-quality, effective consultation is in place across Head Start programs.

## Conclusions

The current study provides empirical data that support a common practice maxim—that relationships are the foundation of effective early childhood intervention services. Early childhood programs that encourage mental health professionals to provide support to better serve children with emotional and behavioral issues should consider this when selecting and contracting with mental health consultants. It may be particularly important to select mental health consultants who have the capacity to develop strong partnerships with classroom (and other) staff members and are willing to participate in a team approach to supporting children. These data also indicate that contracts should be structured so that mental health consultants have as many opportunities as possible to interact with direct service staff members; more traditional models in which consultants are focused solely on observing, assessing, and treating the needs of a particular child may not be as effective. Models in which consultants (a) provide formal and informal training, coaching, and mentoring of teachers and (b) spend time in classrooms visiting children and staff members would be more likely to facilitate the successful collaborative relationships that are important to achieving desired outcomes for staff members and children. ◆

### NOTE

Migrant, tribal, and Early Head Start programs were excluded.

### REFERENCES

Alkon, A., Ramler, M., & MacLennan, K. (2003). Evaluation of mental health consultation in child care centers. *Early Childhood Education Journal, 31*(2), 91–99.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51,* 1173–1182.

Becker, K. (2005, October). *Oregon child care health consultation demonstration project: Phase 2 results.* Paper presented at the 11th annual Child Care Researchers' Roundtable, Salem, OR.

Bleeker, T., & Sherwood, D. L. (2003). *A final report of the 2001–2002 evaluation of the High Quality Child Care Mental Health Consultation Initiative.* San Francisco: City and County of San Francisco, Department of Public Health, Community Health Programs.

Brennan, E., Bradley, J., Allen, M. D., Perry, D., & Tsega, A. (2005, March). *The evidence base for mental health consultation in early childhood settings: Research synthesis and review.* Paper presented at Establishing the Evidence Base for Early Childhood Mental Health Consultation, Tampa, FL.

Buysse, V., & Wesley, P. W. (2005). *Consultation in early childhood settings.* Baltimore: Brookes.

Caplan, G. (1964). A method of mental health consultation. In G. Caplan (Ed.), *Principles of preventive psychiatry* (pp. 232–265). New York: Basic Books.

Center for Mental Health Services. (2002, July 30). Available from http://www.mentalhealth.org/publications/allpubs/CA-0013/default.asp

Cohen, E., & Kaufmann, R. (2000). *Early childhood mental health consultation.* Washington, DC: Center for Mental Health Services of the Substance Abuse and Mental Health Services Administration and the Georgetown University Child Development Center.

Donahue, P. J., Falk, B., & Provet, A. G. (2000). *Mental health consultation in early childhood.* Baltimore: Brookes.

Erchul, W. P., Hughes, J. N., Meyers, J., Hickman, J. A., & Braden, J. (1992). Dyadic agreement concerning the consultation process and its relation to outcomes. *Journal of Educational and Psychological Consultation, 3,* 119–131.

Geller, S., & Lynch, K. (1999). *Teacher opinion survey–Revised.* Richmond: Virginia Commonwealth University Intellectual Property Foundation and Wingspan, LLC.

Gillam, W., & Shahar, G. (in press). Pre-kindergarten expulsion and suspension: Rates and predictors in one state. *Infants and Young Children.*

Gould, M. (2003). *Evaluation of the early intervention program for young children and the consolidated child care pilot mental health mini-grants.* Denver: University of Colorado, Graduate School of Public Affairs, Center for Human Investment Policy.

Green, B., Simpson, J., Everhart, M., Vale, E., & Gettman, M. (2004). Understanding integrated mental health services in Head Start: Staff

perspectives on mental health consultation. *National Head Start Association Dialogue, 7*(1), 35–60.

Greenspan, S. I., Nover, R. A., & Brunt, C. H. (1975). Mental health consultation to child care. In F. Mannino, B. W. MacLennan, & M. Shore (Eds.), *The practice of mental health consultation* (pp. 105–131). *Washington*, DC: U.S. Department of Health and Welfare, National Institutes of Health.

Harden, B., Winslow, M. B., & Kendziora, K. (2000). Externalizing problems in Head Start children: An ecological exploration. *Early Education and Development, 11*, 357–385.

Langkamp, D. L. (2003). *Evaluation of the early childhood mental health initiative.* Akron: Ohio Department of Mental Health, Office of Program Evaluation and Research.

Lehman, C., Lambarth, C. H., Friesen, B., MacLeod, M., & White, D. (2005, March). *Evaluation of the incredible years and mental health consultation to child care centers.* Paper presented at the 18th annual conference of the Research and Training Center for Children's Mental Health, University of South Florida, Tampa, FL.

MacLennan, B. W., Quinn, R. D., & Schroeder, D. (1975). The scope of mental health consultation. In F. Mannino, B. W. MacLennan, & M. Shore (Eds.), *The practice of mental health consultation* (pp. 3–24). Washington, DC: U.S. Department of Health and Welfare, National Institutes of Health.

McDonnell, M. A., & Glod, C. (2003, Oct./Dec.). The prevalence of psychopathology in preschool-aged children. *Journal of Child and Adolescent Psychiatric Nursing*, pp. 1–13.

McGrady, H. J. (2004). *Creating a Connecticut system of multidisciplinary consultation for early care and education.* New Haven: CT: Hold, Wexler & Farnam, LLP.

Perry, D., Dunne, C., O'Neil, M., & Campbell, J. (2005). *Does mental health consultation increase social skills, decrease problem behaviors, and avoid expulsion for young children in child care?* Unpublished manuscript.

Puma, S., Bell, R., Shapiro, M., Broene, C., Cook, F., Friedman, W., et al. (2001). *Building futures: The Head Start impact study research design plan.* Washington, DC: U. S. Department of Health and Human Services, Office of Head Start Bureau.

Raudenbush, S., Bryk, A., Cheong, Y. F., & Congdon, R. (2000). *Planning, research, and evaluation, March, 2001: HLM5 hierarchical linear and nonlinear modeling.* Lincolnwood, IL: Scientific Software International.

Wesley, P. W., & Buysse, V. (2004). Consultation as a framework for productive collaboration in early intervention. *Journal of Educational and Psychological Consultation, 15*(2), 127–150.

Yoshikawa, H., & Knitzer, J. (1997). *Lessons from the field: Head Start mental health strategies to meet changing needs.* New York: National Center for Children in Poverty.

Zelman, A. B., Friedman, M., & Pasquariella, B. (1986). Use of a questionnaire to compare daycare staff and mental health staff attitudes: An aid to mental health consultation to daycare. *Journal of Preventative Psychiatry, 3*(1), 281–292.