Development of the Role-Play Inventory of Situations and Coping Strategies for Parents of Children with Cystic Fibrosis

Alexandra L. Quittner, Valerie E. Tolbert, and Mary Jean Regoli
Indiana University

David M. Orenstein
Children's Hospital of Pittsburgh

Judy L. Hollingsworth and Howard Eigen
Indiana University School of Medicine

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Critiqued previous conceptual and methodological approaches to the measurement of stress and coping. Applied Goldfried and D'Zurilla's behavior-analytic model to create a context-specific measure of problematic situations and coping strategies for parents of school-age children with cystic fibrosis (CF). The sample was stratified by child's gender and illness severity. Forty-seven families (46 mothers, 32 fathers) and 8 health care professionals completed structured interviews or daily diaries to obtain the widest range of problematic situations; 1,725 situations were elicited across all participants and then content-analyzed into 97 nonredundant categories in 11 domains (e.g., Discipline, Medical Care). Few differences were found in problem frequency or difficulty as a function of either gender or illness severity. Using empirical criteria, the most frequent and difficult problem situations were selected and developed into role-play vignettes that

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2All correspondence should be addressed to Alexandra L. Quittner, Department of Psychology, Indiana University, Bloomington, Indiana 47405.
include relevant contextual, developmental, and interactional details. The Role-
Play Inventory of Situations and Coping Strategies (RISCS) consists of 31 audi-
taped vignettes designed to elicit and evaluate the coping strategies used by
parents of children with CF.

KEY WORDS: behavior-analytic model; stress; parenting; coping assessment; role-play measure; cystic fibrosis; childhood illness.

Research on coping behavior has grown tremendously in recent years because of
its potential importance as an intervening variable in the relationship between
stress and adaptation. Coping processes are also important because they may
serve as critical targets for prevention and intervention. However, despite consid-
erable interest and a plethora of investigations over the past 15 years, we cur-
rently have only a limited understanding of how and under what conditions
coping strategies affect the physical and psychological outcomes of stress (Me-
naghan, 1983; Taylor, 1990). Several conceptual and methodological problems
account for this limited knowledge, including the absence of clear and consistent
definitions of both the stress and coping constructs, and a lack of contextual
specificity in their measurement (Quittner, 1992). The purpose of the current
study was to reconceptualize the stress and coping process using Goldfried and
D'Zurilla's behavior-analytic model (1969), followed by the application of this
model to the development of a role-play measure for parents coping with chronic
childhood illness.

Stress has been variously defined as "specific external and/or internal de-
mands that are appraised as taxing or exceeding the resources of the person"
(Lazarus & Folkman, 1984, p. 141), or as a crisis resulting from the "hardships
of the situation or event itself" (Hill, 1949, p. 9). Common to these definitions is
an emphasis on the event itself and the individual's cognitive appraisal of it. This
has led to an almost exclusive focus on stressful life events, which have been
measured primarily with predetermined lists of general life events or minor
There are several problems inherent in this approach. First, there is a lack of
commonality across participants in the types of events they report and thus,
similar stress scores may be obtained by individuals who have experienced very
different stressful events (Hobfall, 1989). Second, some studies indicate that the
retrospective nature of this measurement process (i.e., checking off events that
occurred over the last 1 to 12 months) is flawed by problems with recall and
Finally, these checklists provide little information about the contextual aspects of
the event itself, such as when it occurred, how long it lasted, what demands it
placed on the individual, or who was involved (Pearlin & Turner, 1987; Quittner,
In particular, there is a dearth of research on chronic stressors, despite increasing evidence that these stressors, as opposed to discrete events, are more strongly related to negative outcomes such as depression and family disruptions (Quittner et al., 1990; Sandler, Wolchik, & Braver, 1988). One reason chronic stressors may be more predictive of psychological outcomes is that many stressful events (e.g., divorce, childhood illness) involve chronic strains both preceding and following the event itself (Quittner, DiGirolamo, Michel, & Eigen, 1992; Rolland, 1987). Complex events, such as childhood illness, typically include a number of stressful tasks and demands related to both the illness (e.g., medical regimens, frequent clinic visits) and normal development (e.g., peer relationships). Thus, their impact is likely to be more pervasive and negative.

To date however, most studies of parents caring for a child with a chronic illness have measured either stressful life events or general parenting stress (Bradley, Rock, Whiteside, Caldwell, & Brisby, 1991; Goldberg, Morris, Simmons, Fowler, & Levinson, 1990; Walker, Van Slyke, & Newbrough, 1992). Neither of these approaches provides specific information about the daily stressors parents of children with chronic illnesses may face. In addition, these studies have been limited by (a) an almost exclusive focus on mothers, with little attention given to the parenting demands experienced by fathers (Hauenstein, 1990), and (b) little regard for how stressors may vary with the developmental age of the child (e.g., infancy, adolescence; Phillips, Bonhannon, Gayton, & Friedman, 1985; Varni, Wilcox, & Hanson, 1988). A promising alternative to the life stress approach is to study stressors embedded within a specific context that includes factors related to the developmental stage of the child and family, and the specific tasks and demands that must be mastered for successful functioning (Drotar, 1992; Melamed, Siegel, & Ridley-Johnson, 1988; Moos & Tsu, 1977; Quittner & DiGirolamo, in press). Researchers have also called for the development of measures that are appropriate for child health populations and their family members (La Greca, 1994). The current study presents a method for systematically identifying these stressors as they arise on a daily basis for both mothers and fathers. Further, we focused on a particular illness (i.e., cystic fibrosis) for children at a particular stage of development (i.e., school-age).

Like the concept of stress, coping has been used as an umbrella term to encompass a wide array of variables, with little agreement on either the meaning or measurement of the construct (Compas, Malcarne, & Banez, 1992; Taylor, 1990). In general, research efforts have focused on two broad definitions of coping: coping styles and coping efforts (Cohen, 1987). Coping styles, or dispositions, have been defined as habitual preferences for ways of approaching problems, such as a tendency to use "sensitizing" rather than "avoidance" strategies, or denial versus rumination (Byrne, 1964; Haan, 1977; Moise, Drotar, Doershuk, & Stern, 1987). This approach has been criticized because little evidence of consistency in modes of coping from one situation to another, or from one
time period to another, has been found (Billings & Moos, 1981; Compas, Malar
carne, & Fondacaro, 1988). Furthermore, only weak or nonsignificant relationships have been found between measures of coping dispositions and observed behavior (Cohen & Lazarus, 1973).

A more promising line of research, originating from Lazarus’ transactional theory (Lazarus & Folkman, 1984), has focused on the coping efforts individuals employ in stressful situations. Coping efforts have been defined as the cognitions and behaviors, either covert or overt, that are performed in response to specific situations (Menaghan, 1983). The primary thrust of this research has been the development of a typology of coping strategies, typically divided into two broad categories: problem-focused and emotion-focused coping (Folkman & Lazarus, 1980).

However, problems with this approach have also been noted. First, factor analytic studies have not supported these two discrete dimensions, but in fact, reveal a more complex array and number of factors depending upon the sample (Aldwin, Folkman, Schaefer, Coyne, & Lazarus, 1980; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). Second, this coping framework has been based on the assumption that problem-focused strategies, which are aimed at modifying or “fixing” the problem, should lead to positive outcomes, whereas emotion-focused strategies, which are aimed at regulating emotion, should lead to negative outcomes. To date, however, the evidence is mixed: Whereas some studies have found that problem-focused strategies are associated with decreased psychological distress (Billings & Moos, 1981), others have found that strategies labeled “emotion-focused” (e.g., denial) tend to be positively associated with adjustment (Strauss & Wellisch, 1981; Wertlieb, Weigel, & Feldstein, 1987). This is not surprising if coping is conceptualized as a process; the initial use of an emotion-focused strategy, such as denial, may facilitate problem-solving efforts at a later point (Meyerowitz, Heinich, & Schag, 1983). These inconsistencies have led researchers to question the goal of identifying generally effective coping strategies, noting that the effectiveness of a coping strategy cannot be determined independently of the context in which it is used (Quittner & DiGirolamo, in press; Stone, Greenberg, Kennedy-Moore, & Newman, 1991).

In the current study, we have advocated a shift away from the arbitrary categorization of coping strategies into particular classes (e.g., problem-focused or emotion-focused). Instead, we have adopted Goldfried and D’Zurilla’s theoretical notions that behavior can only be evaluated as competent or incompetent by examining the specific context in which people respond to frequent and difficult situations presented in their environments. Situations are considered problematic (or stressful) “if no effective response alternative is immediately available to the individual confronted with the situation” (D’Zurilla & Goldfried, 1971, p. 108). Thus, a problematic situation challenges the individual to generate
Behavioral Assessment of Coping: RISCs

a solution or response that is most effective for that situation. Competent behavior is defined as "a response, or pattern of responses, to a problematic situation which alters the situation so it is no longer problematic, and . . . produces a maximum of other positive consequences and a minimum of negative ones" (Goldfried & D'Zurilla, 1969, p. 168). Further, since contextual details help define what is effective behavior, competence in one area does not imply competence in others.

The behavior-analytic model was chosen for this measurement study because it avoids many of the methodological problems of past research on coping, and affords several major advantages: (a) Stressors are conceptualized and measured as problems occurring in specific situations; (b) coping strategies are assessed as the responses (cognitive, behavioral, emotional) to those problem situations, directly linking these two processes; (c) the effectiveness of a particular coping strategy is determined within that context, as judged by those most familiar with the problem; and (d) sequences of coping responses can be incorporated into the measure to capture the interactive nature of the stress and coping process.

BEHAVIOR-ANALYTIC MODEL: PHASES OF MEASUREMENT DEVELOPMENT

This model consists of an in-depth analysis of the situations that are most common and difficult for a specific population, the responses made to these situations, and the effectiveness or competence of these responses. The final result is a role-play inventory of the most common and difficult problems as well as a behaviorally anchored manual indicating the competence of various coping strategies. Four phases of measurement development are included: Situational Analysis, Response Enumeration, Response Evaluation, and Instrument Development. Each phase is briefly described below.

Situational Analysis. In this initial step, the primary goal is to collect a large, representative sample of concrete problematic situations that are likely to confront a particular population. The focus is on situations that involve specific, meaningful, and frequently occurring problems that require an effective coping response. Detailed descriptions of problem situations are elicited, including important contextual features (e.g., setting, time of day), and ratings of frequency and difficulty. In addition, data are collected from individuals in the environment who are familiar with the problems confronted by this population (e.g., health care professionals) and are likely to provide consequences for competent or incompetent behavior. Multiple methods of data collection (e.g., structured interviews, daily diaries, behavioral observations) have been recommended to provide greater contextual detail and to elicit problems related to ongoing behaviors...
The next step involves a content analysis of the elicited problematic situations. Similar situations are grouped together, and statistical analyses are used to determine which situations occur most frequently and are most difficult across all respondents. Decision rules, based on the distribution of these scores, are then applied to select the most relevant problematic situations. This subset of problems comprises the items used to develop the role-play vignettes. For our sample, the vast majority of problematic situations involve others (e.g., in dyadic or triadic interactions). To capture the interactive dynamics, we expanded the behavior-analytic approach to include sequences of responses as part of the problem description (Quittner, DiGirolamo, Dodds, & Jacobsen, 1992). These common sequences were then incorporated into the role-play vignettes.

Response Enumeration. The purpose of this phase is to elicit a wide range of coping responses (i.e., from extremely competent to incompetent) to the vignettes generated in the Situational Analysis phase. Participants are presented with each problematic situation and asked to place themselves in the situation and describe how they would respond.

Response Evaluation. The purpose of this phase is to evaluate the effectiveness of each elicited coping response. A panel of judges, consisting of individuals who are familiar with the problems of this population (e.g., parents, health care professionals, psychologists), rates the effectiveness of each coping response on a scale from extremely competent to extremely incompetent. Judges are directed to rate the competence of each response by considering (a) how effective the response is in reducing the frequency or difficulty of the problem, and (b) how likely it is to decrease the probability of future negative consequences. Judges are also asked to provide a rationale for each of their ratings and a description of the elements that comprise a highly competent response.

Instrument Development. The purpose of the final phase is to refine the inventory (i.e., eliminate vignettes that do not produce an adequate range of coping responses) and to develop a manual to be used in rating participants' coping responses. The scoring criteria are derived empirically from the judges' ratings and descriptions of competent responses. The final manual consists of written descriptions of each vignette, scoring criteria for judging response efficacy, and examples of each response type (i.e., extremely competent to extremely incompetent).

In this study, we completed the Situational Analysis phase of the model with parents of school-age children with cystic fibrosis. Cystic fibrosis (CF) is a chronic, terminal illness that primarily affects the lungs and pancreas (Orenstein, 1989). It was chosen for this study because it typically involves a complex, time-consuming daily medical regimen (e.g., chest physiotherapy, alterations in diet) which places great demands on the children with the disease and their parents (Quittner, Opipari, Regoli, Jacobsen, & Eigen, 1992; Thompson et al., 1994; Thompson, Gustafson, Hamlett, & Spock, 1992). Thus, stressors related to both the medical condition
(e.g., hospitalization) and normal development (e.g., peer relations) can be easily identified because of their frequency and chronicity. Further, CF is a genetically transmitted disease that is randomly distributed across the population, and therefore, is not associated with potentially confounding factors such as low socioeconomic status (SES). Finally, although the demands of CF and its negative impact on family members have been documented (Quittner, DiGirolamo, Michel, et al., 1992), there is little systematic, developmental research outlining the specific nature of these stressors for either children or their parents.

**SPECIFIC OBJECTIVES OF THE STUDY**

The primary purpose of the study was to create a context-specific measure of problem situations and coping strategies for parents of school-age children with CF. The specific objectives of the study were (a) to broadly sample the problematic situations encountered by both mothers and fathers of children with CF; (b) to identify the most frequent and difficult problem situations through content analysis; (c) to create a role-play measure of relevant, context-specific problematic situations.

In addition, given how little is known about the specific problems of this population, we examined whether demographic characteristics, such as illness severity and child’s gender, would affect the types of problems encountered by these parents or their level of difficulty. We also wanted to test for differences in problem type and severity for mothers and fathers. If no differences on these dimensions were found, we would be justified in developing a single role-play measure that would be contextually relevant for all parents of school-age children with CF (regardless of their gender or level of illness severity).

A final objective was to examine the concurrent validity of the measure. The relationships between the problem indices developed in this study and two well-known outcome measures were assessed. Parents who mentioned more problems in the areas of household and child care domains were expected to report greater marital role strain (i.e., Who Does What? scale). In addition, parents who reported a greater number of problematic situations and rated these problems as more difficult were expected to score higher on a standardized measure of depression (i.e., Center for Epidemiological Studies-Depression scale).

**METHOD**

**Subjects**

The sample for the current study consisted of 47 families (46 mothers, 32 fathers) with at least one school-age child with CF between 6 and 11 years of
Families were recruited from two major medical facilities with CF clinics, Riley Hospital for Children in Indianapolis, Indiana, and Pittsburgh Children's Hospital in Pittsburgh, Pennsylvania. Most of the parents contacted agreed to participate in this study, 95% at Riley Hospital and 79% at Pittsburgh Children's Hospital. No differences in child characteristics were found between parents who did or did not participate in the study. To elicit the widest possible range of problematic situations, the sample also included health care professionals at both sites: 2 pediatric pulmonologists, 3 nurse clinicians, 1 pediatric dietician, and 2 social workers.

A majority of the parents were married or cohabitating (83%). The remainder were either single parents (5%) or separated or divorced (12%). Both partners were interviewed in 31 families; only 3 fathers were not willing to participate as a result of time constraints. The demographic characteristics of the mothers and fathers were analyzed separately. All parents were Caucasian. Mothers' mean age was 34.3 years (SD = 4.4), with an average of 13.7 years of education (SD = 2.2). Fathers on average were 37.7 years of age (SD = 5.5), with a mean of 14.9 years of education (SD = 2.8). Sixty-three percent of the mothers and 97% of the fathers worked outside the home. The average Hollingshead Four-Factor Index of SES (Hollingshead, 1975) was 3.1 (clerical, sales) for the mothers (SD = 1.5) and 3.7 (minor professional) for the fathers (SD = 1.3). Median family income fell between $30,000 and $40,000, for an average family size of four.

All children were between the ages of 6 and 11 years, with an average age of 9.1 (SD = 1.6). An effort was made to interview equal numbers of parents of boys (n = 23) and girls (n = 24) with CF. In addition, families were recruited in three categories of illness severity (i.e., mild, moderate, and severe) based on pulmonary function tests (i.e., forced expiratory volume, FEV$_1$). On the basis of the most recent FEV$_1$ scores in the hospital chart, 19 (40%) children were considered mildly ill (FEV$_1$ > 80% predicted), 14 (30%) were moderately ill (FEV$_1$ 56–79% predicted), and 14 (30%) were severely ill (FEV$_1$ < 55% predicted) (Casias, Mitchell, & Singer, 1994).

Procedure

Parents who fulfilled the study criteria were approached by the Clinical Nurse Coordinator at both CF clinics, given a letter explaining the objectives of the study. Of the 47 families, 34 had two parents living in the home and 13 families had a single parent in the home. In 12 of those families, the mother was the head of the household and in 1 family, the father was the head of the household.

Cystic fibrosis occurs most frequently in Caucasian populations, with an estimated incidence of one in 2,000 live births. However, it is found only sporadically among African American, Hispanic, and Asian groups. For example, the incidence among African Americans is estimated at only one in 17,000 live births (Fitzsimmons, 1993).
the study, and invited to participate. Based on the recommendations of Goldfried and D'Zurilla (1969), multiple methods of data collection were used to elicit detailed descriptions of problematic situations. Parents who gave written informed consent completed either (a) a structured interview in their homes or (b) a shortened version of the structured interview plus a 6-day phone diary procedure. Based on prior studies, the phone diary procedure was expected to generate a larger number of more minor problematic situations, or daily hassles, than the interview, while the structured interview elicited more serious problems that occurred less frequently (DiGirolamo, Quittner, Regoli, & Jacobsen, 1994). Because of the time-consuming nature of the daily phone diaries, 24% of the parents completed the shorter home interview and daily phone diary ($n = 19$) and 76% of the parents completed the longer interview ($n = 59$). To ensure greater comparability between procedures, parents completing the daily phone diary were also asked, at the end of the phone call, about the occurrence of problematic situations in areas that appeared on the structured interview. Assignment to these groups was random. All interviews were audi-taped for later transcription.

Demographic and medical information were obtained during the home interview for both groups of parents. In addition, standardized measures were completed to assess marital role strain and depression. Mothers and fathers were interviewed separately, each for approximately 1½ hours. Couples were paid $10 for their participation.

Health care professionals who worked closely with families of children with CF (e.g., pediatric pulmonologists, social workers) also completed a structured interview at the hospital. They were asked to describe problematic situations commonly experienced by parents of school-age children with CF. These interviews were also audi-taped and later transcribed.

**Measures**

*Illness Severity.* The most recent FEV$_1$, measured at a routine clinic visit, was used to classify children as mildly, moderately, or severely ill. This test measures the forced expiratory value recorded in a 1-second interval as a percentage of the Vital Capacity of the lungs (Dettenmeyer, 1992). A National Institute of Health review found that FEV$_1$ is highly correlated with clinical ratings of lung function and radiological status (Taussig, Kattwinkel, Friedwald, & di Saint Agnese, 1973) and demonstrates greater stability over a 5- to 7-year period than other pulmonary function indices (Corey, Levison, & Crozier, 1976).

*Home Interviews.* A majority of the parents completed a 76-item structured interview in their homes. In addition to demographic and medical information,

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5In a separate study of 45 adolescents with CF, FEV$_1$ scores were significantly correlated with the pulmonary function scale of the NIH Health Status scores ($r = .80$) 1 year later.
problematic situations were elicited across 11 domains that comprehensively represented aspects of daily life for parents of school-age children (Quittner, Opipari, et al., 1992). These domains were chosen on the basis of relevant parenting and developmental literature, and a prior application of this methodology to parents of newly diagnosed infants and toddlers (Quittner, DiGirolamo, Michel et al., 1992; Quittner, Rouiller, & DiGirolamo, 1990). As recommended by Goldfried and D'Zurilla (1969), both open-ended and domain-specific questions were asked, with follow-up probes to increase contextual detail (e.g., Who was there? Where and when did it happen?). The interview began with a series of open-ended questions asking about any "problems experienced in raising a school-age child with CF." Parents were explicitly asked to describe problems associated with both CF (e.g., medications and treatment) and normal development (e.g., school). For each problem situation mentioned, parents were asked to rate its difficulty on a 5-point scale ranging from 1 (not at all difficult) to 5 (extremely difficult). Parents were also asked to rate the overall stressfulness of problems occurring in each domain on a 5-point scale from 1 (not at all stressful) to 5 (extremely stressful).

**Daily Phone Diaries.** Parents who completed the Daily Phone Diaries (DPD) answered only the first 20 items of the structured, home interview which assessed demographic and medical information. Next, these parents were trained to use the Diary Logs to record the daily occurrence of problems and difficult interactions. Mothers and fathers were telephoned on three consecutive evenings, at two time points, separated by 3 weeks. They were tracked by the interviewer through the day with time markers and key events (e.g., getting up, breakfast). Problematic situations were elicited throughout the day, and difficulty ratings on a 5-point scale were obtained for each one (see ratings above). At the end of the cued-recall procedure, the interviewer asked about the occurrence of problematic situations in the 11 domains that appeared on the structured interview. In prior studies, the DPD has yielded high levels of interrater agreement (above 90%) and considerable stability in reports of activities over a 3-week period (Quittner & Opipari, 1994; Quittner, Opipari, et al., 1992). Because our research, and that of other stress researchers, has indicated that most stressful situations encountered in a family context involve interactions with others (Pearlin & Turner, 1987; DiGirolamo et al., 1994), parents completing either the structured interview or diary procedure were asked to describe how the sequence of interactions unfolded (e.g., Mother asks child to do treatment—child refuses—mother then issues a contingency; what is the next step in the interaction?). These interactional sequences were included in the development of the role-play items.

**Behavioral Role Division and Satisfaction.** How couples divided their household and child care responsibilities was assessed using the 36-item Who Does What? questionnaire (Cowan & Cowan, 1988). Each subscale (i.e., House-
hold, Child Care, and Decision-making) consists of 12 items and a rating of general satisfaction. Items are rated on a 9-point scale from 1 (woman does it all), to 5 (do it about equally), to 9 (man does it all). Respondents rate each item twice, once for “How it is now” and once for “How I would like it to be.” Discrepancy scores are calculated by subtracting ratings of the current role division from the subject’s ideal role division. Satisfaction with the division of responsibilities on each subscale is rated on a 5-point scale from 1 (very satisfied) to 5 (very dissatisfied). Three items on the Child Care subscale were modified to reflect content relevant to parents caring for a child with CF (e.g., “taking child to doctor” was changed to “taking child to clinic”). Convergent validity has been found between the Who Does What? scale and measures of self-esteem, parenting stress, and marital satisfaction (Cowan, Cowan, Coie, & Coie, 1978; Cowan et al., 1985).

**Depression.** Depression was assessed using the Center for Epidemiological Studies-Depression Scale (CES-D; Radloff, 1977). The CES-D is a 20-item scale designed to measure current levels of depressive symptoms and mood in the general population. Respondents rate how often they have experienced each mood symptom over the past week on a 4-point scale ranging from 0 (rarely) to 3 (most of the time). Several field studies have reported internal consistency coefficients of .84 to .90 (e.g., Turner, Frankel, & Levin, 1983), and there is evidence that the CES-D converges with other measures of depression.

**RESULTS**

**Problem Elicitation**

A major purpose of this study was to elicit a wide range of problematic situations from both the target population and others who are familiar with these problems (e.g., health care professionals). All interviews and diaries were audiotaped and then transcribed by trained research assistants. These transcriptions yielded a total of 1,725 problematic situations. As expected, a significantly greater number of situations were elicited from the DPD ($M = 26.0, SD = 15.1$) than home interview procedure ($M = 18.7, SD = 9.1$), $t(76) = 2.54, p < .05$, and these problems tended to be repetitive, minor hassles (e.g., siblings fighting). In total, parents provided 1,600 problem situations (i.e., 997 from mothers and 603 from fathers). Of these situations, 61% contained CF-specific content and 39% contained non-CF content. An additional 125 situations were elicited from health care professionals. On average, mothers mentioned 21.7 situations ($SD = 12.5$), fathers mentioned 18.8 ($SD = 8.8$), and health care professionals mentioned 15.6 ($SD = 6.7$). Overall, no significant difference was found between mothers and fathers in the number of problems mentioned, $t(76) = 1.10,$
In contrast, mothers' mean difficulty rating across all situations was higher than fathers' (3.0 vs. 2.6), $t(76) = 3.77, p < .001$.

Content Analysis

Three experimenters (i.e., the three senior authors) read the transcriptions and placed each problematic situation into the appropriate domain. For example, a problem situation related to having blood drawn was placed into the Medical Care domain. Within each domain, similar situations were grouped together into a specific category (e.g., "dealing with painful medical procedures"). Problems were placed into these categories only if the situational demands and characteristics were similar (e.g., the specific category of "painful medical procedures" also included problem situations such as starting an intravenous injection and receiving an injection). Final categorization was determined by consensus among the three experimenters.

This initial content analysis procedure yielded a total of 97 individual problematic situations across the 11 domains. Next, to establish the interrater reliability of the categorization scheme, two Research Assistants independently reread the original transcripts and recategorized each problematic situation. Good agreement was found between raters (proportion of agreement = 81%), indicating that these problems could be reliably identified and categorized.

Item Analyses

Analyses by Medical Site

First, we examined the indices of problem prevalence and difficulty for parents at both sites by domain. Using a Bonferroni correction for multiple $t$ tests (Hayes, 1991) only one difference between the Pittsburgh and Indiana site was found. Parents from Pittsburgh Children's Hospital mentioned more problems in the Outside Activities domain ($M = 2.1, SD = 2.2$) than did parents at Riley Hospital for Children ($M = 0.8, SD = 1.2$), $t(76) = 3.26, p = .002$. No other reliable differences in problem frequency or difficulty were found across the 11 domains. Therefore, we collapsed across the two sites in subsequent analyses.

Relationships Between Children's Demographic Variables and Problem Prevalence and Difficulty

Next, we examined relationships between three child demographic variables (i.e., gender, age, and illness severity) and the indices of problem frequency and
difficulty; the reports of mothers and fathers were analyzed separately. First, the number of problems mentioned for either girls or boys was compared based on mothers and fathers reports. Using a Bonferroni correction procedure, only one significant difference was found. Fathers reported a greater number of problems in the Outside Activities domain for boys ($M = 2.3, SD = 1.9$) than girls ($M = 0.7, SD = 0.8$), $t(30) = 3.12, p < .004$. No differences in ratings of problem difficulty were found for girls or boys based on either parent report.

For mothers, no significant relationship was found between the child’s age and the number of problems mentioned ($rs = .01-.26, ps > .05$). However, one significant positive association was found between the average difficulty rating of Outside Activities and child’s age, $r(23) = .42, p < .05$, with mothers of older children reporting greater difficulty for problems in this area. For fathers, one significant relationship was found between number of problems in the School domain and child’s age, $r(32) = .43, p < .05$, with fathers of older children reporting more problems in this area. In contrast, no relationship between age and problem difficulty was found in any domain ($rs = .01-.34, ps > .05$).

Children were grouped into three categories of illness severity based on their most recent pulmonary function test. For mothers, no significant differences in reports of problems were found between the three groups. Only one difference was found among the groups for ratings of difficulty. Mothers with severely or moderately ill children rated problems in the area of Diet and Mealtimes as significantly more difficult ($Ms = 3.2-3.3$) than mothers of mildly ill children ($M = 2.2$), $F(2, 29) = 3.88, p < .05$. Similarly, for fathers, no differences in problem frequency were found by illness severity groupings, and only one significant difference was found for ratings of difficulty. Fathers with moderately and mildly ill children rated Discipline problems as more difficult ($Ms = 2.3-2.8$) than fathers of severely ill children ($M = 1.0$), $F(2, 15) = 3.73, p < .05$.

Overall, few relationships were found between the three major child demographic variables and the indices of problem frequency and difficulty derived from the Problem Elicitation phase. Because these differences appeared to be minor and in isolated areas, these variables were not used to create a separate role-play measure.

**Analyses of Differences Between Mothers and Fathers**

First, to determine whether the same set of problems was experienced by mothers and fathers, we examined the percentage of parents mentioning problems in each of the 11 domains, as well as their ratings of problem difficulty.

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6Not all parents mentioned problems in each domain, so ns may vary for mean number of situations and average difficulty for each domain. All relevant ns have been cited.
Table I. Differences Between Mothers and Fathers on the Mean Number of Situations and Mean Difficulty by Domain

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<td>Meds and treatments</td>
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<td>2.94</td>
<td>3.47</td>
<td>2.32*</td>
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<td>3.09</td>
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<tr>
<td>School</td>
<td>2.07</td>
<td>2.72</td>
<td>1.34</td>
<td>2.74</td>
</tr>
<tr>
<td>Spouse</td>
<td>1.65</td>
<td>3.56</td>
<td>1.44</td>
<td>2.58*</td>
</tr>
<tr>
<td>Diet and mealtimes</td>
<td>1.57</td>
<td>2.92</td>
<td>0.72</td>
<td>2.08</td>
</tr>
<tr>
<td>Outside activities</td>
<td>1.33</td>
<td>3.05</td>
<td>1.53</td>
<td>2.72</td>
</tr>
<tr>
<td>Peers</td>
<td>1.24</td>
<td>2.61</td>
<td>1.16</td>
<td>2.66</td>
</tr>
<tr>
<td>Daily routines</td>
<td>1.07</td>
<td>2.72</td>
<td>1.22</td>
<td>2.19</td>
</tr>
<tr>
<td>Finances</td>
<td>0.83</td>
<td>3.09</td>
<td>1.13</td>
<td>2.83</td>
</tr>
<tr>
<td>Total</td>
<td>21.67</td>
<td>3.05</td>
<td>18.84</td>
<td>2.58*</td>
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</table>

* t test significant at p < .004.

Using a Bonferroni correction procedure for multiple t tests, no significant differences between mothers and fathers were found for number of problems mentioned in any domain. Furthermore, for only 3 out of 11 domains (i.e., Medications and Treatment, Medical Care, and Spouse) mothers rated problems as significantly more difficult than fathers (Table I). Given the overall similarity of both problem content and difficulty ratings for mothers and fathers, a decision was made to create a single role-play measure that could be administered to both parents.

Development of Selection Criteria

In selecting the specific problems to be included in the role-play measure, two dimensions of problem salience were considered. First, as recommended by Goldfried and D’Zurilla (1969), problematic situations were chosen on the basis of their likelihood of occurrence (i.e., percentage of sample reporting the problem). Second, because families caring for a child with a chronic illness also experience problems that may not occur frequently but are perceived to be very difficult (e.g., hospitalization of child), this dimension was also included. Although standardized criteria are not available in the literature, the goal is to select the most salient items based on the dimensions of both frequency and difficulty. Thus, meaningful cutoffs must be established post hoc, following an analysis of the distribution of scores that were obtained and a comprehensive sampling of the problem situations.

To determine the frequency of each problem situation, four sample groups were employed: mothers, fathers, or either parent group in combination with...
health care professionals. Average difficulty ratings were also calculated for each group. Three sets of criteria comprising both frequency and average difficulty ratings were created to select which problems would be included in the role-play measure: (a) If the average difficulty rating was less than 3 (somewhat difficult) for any sample, then 28% of that sample had to mention the problem; (b) if the average difficulty rating was 3 or higher (fairly difficult) for any sample, then 25% of that sample had to mention it; and (c) if the average difficulty rating was 4 or higher (quite or extremely difficult) for any sample, then at least 15% of that sample had to mention the problem.

The application of these criteria to the 97 items obtained in the Problem Elicitation phase identified 31 problems as the most common and difficult. See Table II for a description of the core concepts underlying each problem category. Each of the 11 domains was represented by at least one problematic situation (Figure 1). Interestingly, although we probed specifically for CF-related problems in only two domains (i.e., Medications and Treatment, Medical Care), CF-specific issues emerged in all domains. Further, although CF-related problems accounted for 61% of the problems originally elicited by the interviews and diaries, they represented 77% (i.e., 24 out of 31) of the situations that were selected using the criteria of frequency and difficulty.

**Development of the Role-Play Vignettes**

The overall purpose of this phase was to create brief vignettes that allowed parents to place themselves in a problematic situation that required some type of coping response (e.g., cognitive, behavioral). Once the set of salient problems was selected based on the criteria described above, the three senior investigators reread all of the relevant problem descriptions from the original transcripts. This enabled them to incorporate both the critical contextual details related to the problem (e.g., setting, emotional tone) and the dyadic nature of the interaction. In writing the role-play vignettes, attempts were made to capture the underlying commonalities among different descriptions of the same problem. For example, parents almost always reported some initial resistance from the child to performance of the chest physiotherapy regime, which they knew they would have to overcome. This vignette was written to capture the interactive nature of this problem:

You tell your child, "It's time to start treatment!" She/He refuses to come over and starts to fuss. She/He says, "NO! I don't want to do it. I'm not going to do it." She/He always wants to get out of doing treatment and you find it frustrating. What would you say or do in this situation?

Efforts were also made to create vignettes that contained enough information to allow participants to visualize the specific context of each problematic situation, but not so much detail that the generalizability of the situation was limited (Table III).
Table II. Core Concepts Underlying Each Role-Play Vignette

Daily routines
1. **Dawdling**—child reluctant to go to bed or get up in morning, slow getting ready in the morning
2. **Not doing chores**—child doesn’t clean his/her room or doesn’t do chores assigned

Diet and mealtimes
3. **Picky eater**—child refuses to eat certain foods, only eats small amounts
4. **Poor weight gain**—parents worried about weight loss or failure to gain weight, child receives a gastrointestinal tube, doctors say child needs to gain weight.

Medications and treatments
5. **Fitting in routines**—parents try to get everything done AND fit in treatment
6. **Resisting enzymes**—child resists or persistently forgets to take enzymes, child refuses to eat because he/she doesn’t want to take enzymes
7. **Finding or training babysitter**—parent needs to have a babysitter that is familiar with CF routines, parent doesn’t trust sitters or has to rely exclusively on family members for babysitting
8. **Getting medications at school**—child has problems getting enzymes at the right time from the school nurse or having an iv at school, child doesn’t want peers to see him/her take medication
9. **Treatment interfering with activities**—child or parent has to alter or cancel plans because treatment must be done on schedule
10. **Resisting treatment**—child tries to avoid treatment or doesn’t take an active part in treatment

Medical care
11. **Clinic visits long and boring**—child and parent bored and tired of waiting, clinic visits time-consuming and stressful, problems getting appointments
12. **Poor communication with doctors**—parent can’t get questions answered or calls returned, doctor not listening to parent’s concerns
13. **Stress of hospitalization**—parent doesn’t want to leave child alone, but also has work and other family responsibilities, living a long way from the hospital so can’t visit often
14. **Why me?**—child asks “Why am I different?” or “Why do I have CF?”, parent wonders why this happened to his/her child, explaining illness to child
15. **Terminal illness issues**—parent hears about other children with CF dying, parent wonders how long child will live or worries about child’s future
16. **Incompetence of health care professionals**—child doesn’t receive proper treatment while hospitalized, child gets wrong medication, nurses can’t insert iv properly
17. **Painful medical procedures**—child must have surgery, iv, injection, or blood drawn and child or parent is scared

Siblings
18. **Siblings fighting**—siblings bickering, arguing or generally not getting along
19. **Parental differential treatment of siblings**—parent doesn’t spend as much time with sibling as with CF child
20. **Sibling concerned about CF**—sibling worries about CF child, sibling asks questions about CF

Spouse
21. **Sharing responsibility for treatment**—parents can’t agree on division of responsibility for CF treatment or one parent is responsible for all CF chores
22. **Disagreements about everyday issues**—parents disagree on how to spend money or free time, etc.
23. **Sharing responsibility for child care (non-CF)**—spouse needs to help more with child care and discipline

Discipline
24. **Not obeying**—child doesn’t comply with parental requests, child whining or not respectful

(continued)
### Table II. (Continued)

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<tr>
<td>25. Overprotective (CF related)—parent restricts activities because of fears or won’t let CF child do things that siblings are allowed to do, parent is lenient or is unsure how to discipline CF child</td>
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<tr>
<td>School 26. Poor work habits—child doesn’t want to do homework or isn’t doing well in school</td>
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<tr>
<td>27. Explaining CF to teachers—parents have to educate teachers about CF and child’s special needs or have to alleviate teachers’ fears about having a CF child in the classroom</td>
<td></td>
</tr>
<tr>
<td>Peers 28. Teased about CF—child called names or teased about coughing by peers or peers treat child differently because of CF, explaining CF to peers</td>
<td></td>
</tr>
<tr>
<td>Outside activities 29. Embarrassed by CF in public—people asking insensitive questions about child’s health or making rude comments, embarrassed by coughing or medication and treatment regimen in public, people not understanding CF</td>
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<tr>
<td>Finances 30. Insurance reimbursement—getting reimbursement takes too long, too much paperwork involved</td>
<td></td>
</tr>
<tr>
<td>31. Extra costs of CF—parent has difficulty paying for medications, hospitalizations, and other CF expenses</td>
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Finally, it was critical that the problem present enough of a dilemma for parents that a coping response is needed. Coping strategies are elicited at the end of every problematic vignette with either the question, “What would you say or do in this situation?” or for situations that are more likely to elicit cognitive strategies, “How would you handle this situation?” We also attempted to create vignettes that were sufficiently challenging so that a range of coping strategies, from very effective (e.g., setting contingencies) to very ineffective (e.g., making

![Fig. 1. Percentage of situations selected in each domain.](https://academic.oup.com/jpepsy/article-abstract/21/2/209/866584)
Table III. Summary of the 31 Problem Situations

Daily routines
1. You let your child stay up a little later last night and this morning you can't seem to get him/her out of bed.
2. You've told your child several times to clean his/her room. You're tired of nagging him/her to do chores.

Diet and mealtimes
3. You know your child needs healthy meals, so you've fixed something you think he/she will really like, but your child won't eat it.
4. The doctors tell you that your child really needs to gain weight. You feel like you're already doing all you can, but your child still isn't gaining.

Medication and treatment
5. It's a typical hectic morning. You need to do treatment, but if you do, you'll be late for work and your child will be late for school.
6. You remind your child to take his/her enzymes when eating. The child doesn't comply and says that the enzymes aren't really important.
7. You and your partner have plans to go out, but you are worried about finding a babysitter who can handle the medication and treatment regimen.
8. Your child keeps coming home from school with stomach aches, because the school nurse isn't giving enzymes at the right time, even though you've already explained to him/her that the enzymes must be given on schedule.
9. Your child wants to visit a friend after ball practice. You want your child to do everything other kids do, but you also know your child needs to get his/her treatment.
10. You want to start treatment with your child, but your child says "NO! I don't want to do it. I'm not going to do it."

Medical care
11. You've been waiting long time at the clinic, and you and your child are bored and tired.
12. Your child is sick, but the doctor isn't clear about the treatment program. You feel like the doctor doesn't listen to you.
13. Your child has been in the hospital for over a week. You want to be with your child as much as possible, but you need to keep things going at home, too.
14. You give your child his/her enzymes and he/she asks, "Why do I have to take these? No one else does. Will I always have to take them?"
15. You are reading the newspaper and you see an article about a child with CF who just died. You try not to think about it, but you can't get it off your mind.
16. Your child is in the hospital, but isn't getting enzymes with meals. You wonder why your child is in the hospital if he/she isn't even getting basic care.
17. The nurse is starting an iv on your child. You know it will hurt and your child is scared and crying.

Siblings
18. The children are arguing at the dinner table and you would like a peaceful, quiet meal.
19. You are doing treatment with your child with CF. A sibling is jealous of the extra time you spend with your child with CF and you feel guilty about it.
20. Your child is the hospital and a sibling is scared and worried.

Spouse
21. You and your partner are tired, but it's time to do treatment. Neither one of you really feels like doing it tonight.
22. You and your partner have agreed to cut back on expenses. Now, he/she comes home with something you really don't need and can't afford.
23. You want to take a class two nights week, but your partner doesn't want to be responsible for the kids on those two nights.

(continued)
Table III. (Continued)

<table>
<thead>
<tr>
<th>Discipline</th>
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<tbody>
<tr>
<td>24. You need to run some errands and you have to take your child with you. He/she doesn’t want to go.</td>
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<tr>
<td>25. Your child wants to spend the night with a friend, and you’re worried about how your child will get his/her medication and treatment.</td>
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<thead>
<tr>
<th>School</th>
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<tbody>
<tr>
<td>26. Your child wants to play after school, but you know if homework isn’t done now, it probably won’t get done later.</td>
</tr>
<tr>
<td>27. You’ve already talked to your child’s new teacher about CF and your child’s needs, but today the teacher would not allow an emergency bathroom visit.</td>
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<table>
<thead>
<tr>
<th>Peers</th>
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<tbody>
<tr>
<td>28. The kids at school are teasing your child for coughing so much, and your child is really upset about it.</td>
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<table>
<thead>
<tr>
<th>Outside activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>29. You are shopping with your child and he/she starts to cough. Someone says, “That child sure sounds sick. Shouldn’t he/she be home in bed?”</td>
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<thead>
<tr>
<th>Finances</th>
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<tbody>
<tr>
<td>30. You are waiting for reimbursement from your insurance company. It always takes too long, and this time you really need the money soon.</td>
</tr>
<tr>
<td>31. The doctor has just prescribed a new, expensive medication for your child. Your insurance won’t cover the total cost, and you don’t know how you’ll pay for it.</td>
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7Because of the highly interactive nature of many (i.e., 70%) of the problematic situations (e.g., parents makes a request and child does not comply), the stem “What would you say or do in this situation?” was employed. The piloting process also indicated that this stem elicited more concrete and specific responses that could subsequently be evaluated in terms of competence. Thirty percent of the role-play items had the potential to yield cognitive strategies (e.g., concerns that child’s health is deteriorating; bored during long wait in CF clinic), and so the stem “How would you handle this situation?” was used.
play situations, two alternate forms were audiotaped—one for daughters and one for sons. In addition, several factors were considered in ordering the presentation of the vignettes, such as the sensitivity of the content (e.g., terminal illness issues) and the domains from which they were derived.

Predictive Validity

Preliminary analyses were conducted on the predictive relationships between the problem indices we developed and measures of role strain and depression. We used one context-specific outcome measure related to how couples divided their child care and household responsibilities, and one outcome measure related to global depression.

First, we examined the relationship between role strain as it is assessed on the Who Does What? measure and the indices of problem frequency and difficulty obtained in this study. We selected items and scales from the role strain measure that were expected to “match” specific problem areas reported by parents (i.e., daily routines, medical care, and spouse). In correlational analyses across parents, a significant relationship was found between the number of problems in our Daily Routines/Diet & Mealtimes domains and the Child Care subscale, \( r(64) = -0.28, p < .05 \), with more problems associated with greater child care strain. An association was also found between number of problems in the Spouse domain and overall satisfaction with the division of Household tasks, \( r(65) = 0.28, p < .05 \), indicating that a greater number of problem situations in this area was related to lower ratings of satisfaction with the division of these tasks. In terms of difficulty ratings, problem difficulty in the Spouse domain was significantly correlated with specific role strain items for child care, \( r(49) = -0.32, p < .05 \), and finance, \( r(48) = 0.38, p < .01 \). Thus, more difficult spouse-related problems were associated with greater role strain in the division of child care tasks. In addition, higher difficulty ratings in the Spouse domain were related to the husband assuming greater responsibility for the family’s income.

Second, correlations were conducted between the total number of problems elicited across all domains, the difficulty ratings averaged across all situations, and reports of depressive symptomatology on the CES-D. Mothers did not endorse significantly greater numbers of depressive symptoms (\( M = 11.0, SD = 8.7 \)) than did fathers (\( M = 8.4, SD = 5.4 \)), \( r(76) = 1.54, p > .05 \). However, 13 mothers (28%), and only 2 fathers (6%), scored at or above the clinical cutoff of 16. A significant relationship was found between the number of problems reported by all parents and scores on the CES-D, \( r(78) = 0.29, p < .05 \). Parents who mentioned more problem situations endorsed more symptoms of depression. However, separate analyses of mothers and fathers indicated that this relationship was significant only for mothers, \( r(46) = 0.34, p < .05 \), and not fathers, \( r(32) = 0.06, p > .05 \). Next, relationships between problem difficulty and depression were examined. A significant association was found between difficulty ratings
Behavioral Assessment of Coping: RISCS

... and depression across all parents, $r(78) = .34, p < .01$. Parents who rated their problems as more difficult also reported more symptoms of depression. In this case, the relationship between problem difficulty and depression approached significance for mothers, $r(46) = .27, p = .07$, and was significant for fathers, $r(32) = .39, p < .05$.

DISCUSSION

The behavior-analytic model is a successful method for generating a large number and variety of problematic situations encountered by parents of children with CF. Further, the focus on contextual details and sequential responses provides a descriptive richness that is often lacking in studies of stress using other assessment methods. Although individual parents gave us specific and personal details of their problems, considerable commonality emerged across parents and health care professionals in the key elements of problematic situations, which facilitated the development of realistic, interactional vignettes. We are now conducting the Response Enumeration phase, and many parents who have completed the RISCS have reported that the vignettes genuinely reflect how problem situations develop in their families. Parents who can readily identify with the situations described in the vignettes can provide more accurate information on what they would actually say or do, thus increasing the validity of the coping responses elicited.

It was also important to determine whether alternative sets of situations should be developed for different subsamples of parents (e.g., those with severely vs. mildly ill children). Our analyses reveal few differences in either the types or severity of problems mentioned by parents of boys versus girls, or children with severe compared to moderate or mild illness. Although we might not predict gender differences at this stage of development (i.e., middle childhood), our finding that parents of children who were severely ill did not rate their problems as more frequent or difficult may be unexpected. However, the results of prior studies examining the impact of illness severity on parental functioning (e.g., levels of stress and adaptation) have been inconsistent, with some studies finding significant relationships between illness severity and maternal adaptation (Shonkoff, Hauser-Cram, Krauss, & Upshur, 1992), whereas others have not (Jessop, Riessman, & Stein, 1988). Few differences were found in our study, indicating that parents of school-age children with CF appear to be struggling with a similar set of problems; thus, it was appropriate to develop a single role-play measure for all parents.

We also found few differences in either the number or severity of problems among mothers and fathers. Parents mentioned a similar number of problems overall, and in most domains. However, mothers generally rated problems as more difficult, and, in particular, endorsed higher difficulty ratings for problems...
in the areas of Medications and Treatment, Medical Care, and Spouse. These results fit with the larger literature on parents of children with chronic illnesses and disabilities, which suggests that mothers are primarily responsible for child care activities, particularly medical routines, and that this added responsibility is associated with increased role strain and depression (Bristol, Gallagher, & Schopler, 1988; Quittner, DiGirolamo, Michel, et al., 1992). The division of child care, medical, and household responsibilities in families caring for a child with a chronic medical condition is one area that should potentially be targeted in family interventions.

The comprehensive, behavioral analysis conducted in this study also indicates that the majority of problems faced by these parents are related in some specific way to the demands of the medical condition. We found that the content of most problems was specific to what children with this particular medical condition experience (e.g., teased about coughing). To some extent, these results call into question studies that employ a noncategorical approach to assess the problems of parents of children with chronic illnesses and disabilities. These studies typically combine children with diverse medical conditions, based on the assumption that there are more commonalities across pediatric conditions than there are differences, and that these differences do not lead to distinctive patterns of adaptation (Stein & Jessop, 1982). It may be premature, however, to draw this conclusion since very few "categorical" studies of one particular illness have been conducted.

Despite the advantages of developing measures that assess the specific problems of a particular medical condition, (e.g., greater depth of information), questions about the generalizability of our measure to other chronically ill populations remain. We believe that specific measures and interventions need to be created for different medical conditions. Families coping with a chronic illness, such as diabetes, certainly share some problems in common with the families in this study (e.g., daily medical regimen, frequent clinic visits), however, each illness also presents demands that are unique and difficult to cope with (e.g., terminal illness). By working with specific populations, researchers should be able to discover which processes are shared by families coping with different chronic illnesses and which processes are unique to a specific illness. Additional studies are needed to determine if and when the measure being developed in this study is applicable to other pediatric populations.

**Future Directions**

The Situational Analysis phase, described in the current study, is only the first step of Goldfried and D'Zurilla's (1969) behavior-analytic model. The next phases, Response Enumeration, Response Evaluation, and Instrument Develop-
ment are currently underway, and when completed, will yield a manual that includes the final set of vignettes, scoring criteria for judging the competence of coping responses, and prototypic examples of competent and incompetent responses. Completion of the next three phases entails presentation of the RISCS measure developed in this study to a large sample of parents to elicit their coping strategies, and the transcription and editing of those responses for the Response Evaluation phase.

Next, a panel of approximately 38 judges, including pulmonologists, psychologists, and parents, will be recruited and trained to rate each coping response in terms of its effectiveness in reducing the frequency or difficulty of a problem and its likelihood of reducing future negative consequences. Role-play items that do not elicit a range of effective and ineffective coping strategies, or agreement among the judges on what these strategies should be, will be deleted from the measure. The judges' ratings will then be pooled and used to construct a comprehensive rater's manual (i.e., Instrument Development phase). Validation of the measure will require administering the measure to a new sample of parents to assess its concurrent and predictive validity. The measure also will be administered to a sample of parents coping with a different chronic illness (e.g., diabetes) to provide evidence for or against the construction of population specific measures. Although the behavior-analytic model has been applied to other populations (e.g., college freshmen, cancer patients) (Goldfried & D'Zurilla, 1969; Schag, Heinrich, Aadland, & Ganz, 1990), it has been used primarily to generate “problem lists,” without systematically completing all four phases of measurement development. Despite the complexity and time-consuming nature of this process, our plans are to carry out the entire procedure.

How will this measure be utilized? A major limitation of prior research on stress and coping has been the difficulty of translating basic research findings into clinical interventions. One reason for this is the overreliance on global measures of both stress and coping. Checklists of stressful life events and predetermined coping strategies do not provide the level of information about the problem that is needed to develop an effective intervention. In addition, the lack of process-oriented research that links problems to coping efforts and back to the individual's appraisal of the situation makes it difficult to develop empirically based interventions (Quittner & DiGirolamo, in press). The development and evaluation of interventions for children with chronic illnesses or their family members are also strikingly rare (see Satin, La Greca, Zigo, & Skyler, 1989, for an exception).

One advantage of the measurement approach applied in this study is that it provides the level of detail needed to develop relevant and focused interventions. Further, there is a direct link between common and difficult problem situations and a set of strategies that have been validated empirically as effective or ineffective. When complete, this assessment system will provide detailed information
about an individual's areas of strength and weakness. As several studies have shown, individuals tend to be competent in certain areas and less competent in others. The RISCS should ultimately provide an individual profile of these strengths and weaknesses that could then be targeted in a clinical intervention. A parallel measurement process is being conducted with the school-age children of parents who participated in this study. Ultimately, this will enable us to conduct family-level analyses to determine levels of agreement in perceptions of problem severity and use of coping strategies, so that in the future, interventions can be developed to meet the needs of all family members (Quittner & DiGirolamo, 1995).

REFERENCES


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