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2. Families As The Focus Of Assessment: Theoretical And Practical Issues

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The role of early and concurrent family relationships in the etiology of individual development and psychopathology has received increased attention in both research and practice within psychology in recent decades. Although the importance of family relationships in shaping personality has always been central in psychology, it was assumed with psychoanalytic theory that these forces were internalized within the individual such that intrapsychic dynamics were the dominant forces controlling behavior. Consistent with the premises of the dynamic model, the individual was the focus of assessment, treatment, and research within the discipline of psychology. Several converging developments in the 1950s led clinicians to break with the individualistic premises of psychology to view behavior as meaningfully related to the social system in which it was embedded. Systems theory was readily embraced by many clinicians disenchanted with the efficacy of individual treatment approaches for problems which had roots in dysfunctional relationships. The paradigmatic shift to a systems conceptualization of individual pathology generated the development of theoretical conceptualizations and treatments that were distinctive from those developed for the individual. The family was the obvious target for systemic intervention as the
social context with the earliest, most continuous, and most affect-laden influence on individual behavior and development.

Conceptually, interventions with the family system are unique in that they emphasize human behavior as it occurs within the relationship matrix of an active social system and acknowledge and integrate multiple sources of psychological influence (individual, relationship, family, social) within a single treatment approach (Bednar, Burlingame, & Masters, 1988). As noted by these family scholars the conceptual distinctions are far from trivial:

They suggest the wisdom, if not the absolute necessity, of having the family therapies based on psychological and treatment principles (a) that reflect multiple levels of psychological influence, (b) with variables that can be conceptually defined and empirically measured, (c) that capture the essence of personal, interpersonal, group, and systemic influences within any active social system, (d) at higher than usual levels of psychological immediacy and intensity, (e) that are derived from methods of measurement and data analyses that can identify reciprocal influences among interacting variables, (f) that will eventually define and describe the principles that regulate human behavior in complex social systems....Even the most seasoned researcher and practitioner should feel overwhelmed by the complexity of the phenomena we are discussing. (Bednar, Burlingame, & Masters, 1988, pp. 408-409)

Despite the challenges presented by the systems perspective, it has had a dramatic influence on the conceptualization of models of family functioning and the related development of family assessment measures. A review of recent measures and methods of family assessment, for example, found all measures of the family unit to be considered by their authors to be consistent with the premises of systems theory (Grotevant & Carlson, 1989). The influence of systems theory has also been evident in recent research and conceptualization within developmental psychology (e.g., Ford & Lerner, 1992), suggesting a stronger impetus to construct measures and to determine analytic methods for evaluating the premises of systems theory.

This chapter on family assessment, although acknowledging the input from diverse theoretical perspectives, will emphasize the family systems perspective because this premise underlies the development of the majority of current clinical models of family functioning and the operationalization of their constructs in measures (see Grotevant & Carlson, 1989, and Touliatos, Perlmutter, & Straus, 1990, for reviews). As will be evident in subsequent discussion, one's theoretical orientation will strongly influence decisions about assessment of the family. The emphasis on systems theory as the
underlying framework for family assessment in the present chapter is not intended to communicate that general systems theory is a valid, scientific theory of family relationships, or that it is the only valid theory. In fact, systems theory, which has provided such a useful paradigm for clinicians, has been criticized as overly holistic and antianalytic, with constructs that are difficult to operationalize, and a theory that is difficult to falsify (see Grotevant, 1989). Lending some validity to the antianalytic accusations, assessment has been viewed by many family clinicians with ambivalence. This has been due, in part, to the "action" orientation of family therapy which mediates against the systematic gathering of information to arrive at a diagnostic formulation (Karpel & Strauss, 1983). If one accepts the scientist-practitioner model of psychology, however, which emphasizes the reciprocal value of scientific inquiry to accountable practice and the importance of clinical results to theory building, then the field is faced with either the falsification of systems theory as a model of family process or the reconciliation of systems theory in family assessment.

Systems theory does, however, pose considerable challenge to family assessment. It is the purpose of this chapter to examine the theoretical and practical challenges inherent in assessment of the family as a system. The chapter will be organized commonly accepted steps of the assessment process:

1. Define the purpose, objective, or research question.
2. Make theory or assumptions explicit.
3. Inventory instruments or resources.
4. Perform the assessment.
5. Analyze and interpret the data.

Within the first step the differential goals of family assessment in research versus clinical practice will be discussed. In the second assessment step the links between theory and assessment will be discussed, and a brief review of the diverse theoretical influences on family assessment will be provided. An overview of methods of family assessment will next be provided (Step 3) followed by a discussion of the practical concerns in the selection and integration of family assessment measures and methods (Step 4). Finally, issues in the compilation and interpretation of family assessment data (Step 5) will be examined with particular attention to the use of statistical analytic techniques for resolving family assessment challenges.

**STEP 1: DEFINE THE PURPOSE OF THE FAMILY ASSESSMENT**

The choice of measures and methods for a family assessment should be consistent with the goals, objectives, or research questions
that are to be answered by family assessment data. The importance of careful and specific measurement in the ordering and classifying of behavior, the prediction of behavior, and the modification of behavior is emphasized in the scientist-practitioner model (Hersen & Bellack, 1984). Family assessment as a means to systematically and empirically test theories and hypotheses regarding family behavior and attitudes is the central concern of the family-oriented social science researcher. Assessment of the family as a means by which to determine, guide, and evaluate treatment effectiveness should be a central concern of the family clinician. Thus, both family clinicians and researchers are concerned with the development of theoretically and psychometrically sound measures and methods of evaluating family process. Without minimizing this shared concern, it is realistic to also consider the distinctiveness of the goals of a family assessment conducted for purposes of research versus clinical practice. The following discussion of these differences is based on a previous articulation of this issue by the author (see Carlson, 1989).

The primary goal of a family assessment in research is to operationalize abstract concepts or constructs such that hypotheses derived from theory regarding the interrelations of the constructs can be tested. Assessment and measurement are interchangeable terms from the research perspective. Both imply identification of specific features of the phenomena and the creation and use of clear rules or procedures for quantification (Nunnally, 1978). The degree to which the identified abstract concepts have some rational and empirical correspondence with reality is the validity of the measure; the creation of good rules, that is, rules that can be repeatedly empirically tested is the measure's reliability. The psychometric quality of a family assessment measure is essential to the researcher.

It is acknowledged that theory development and empirical validation are progressive. The testing of theoretical hypotheses includes the multiple aims and strategies of description, correlation, prediction, and controlled experimentation. The methods and measures useful to these various stages of theory testing will vary. Moreover, as theories differ substantially from one another, so will the operationalization of their constructs in measures. Thus, research demands the continuous development of new measures or the adaptation of existing measures. The effects of the demands of the research context on family assessment can be seen, for example, in the development of family systems observation coding schemes (Grotevant & Carlson, 1987, 1989). These coding systems are all designed to capture the interactive processes of the whole family, yet each differs in the
behavioral constructs that are examined, a reflection of the variations in theoretical perspectives and questions of the researchers. Moreover, few, if any, of these coding schemes were used in multiple studies or across research laboratories, providing replication of findings. In summary, a family assessment conducted for the purpose of research must be most concerned that the methods and measures selected reliably and validly measure the constructs to be operationalized such that hypotheses can be tested. The continuous creation and revision of family assessment measures limits determination of their clinical utility.

Assessment in the clinical context has been defined as the careful analysis of clients such that the appropriate strategy of helping them can be undertaken (Filsinger, 1983). A clinical assessment of the family serves two distinct purposes: (a) it can assist clinicians in understanding complex family patterns and (b) it can permit the more accurate assessment of an underlying state or pathology that is hard for the clinician to perceive directly (Reiss, 1983). Unlike assessment in the research context, where the primary function is the operationalization of theoretical constructs, a clinical assessment can be differentiated by various sequential functions. These functions may include: (a) screening and general disposition; (b) definition, which may include diagnosis, labelling, or quantification of problem severity; (c) planning or matching treatment; (d) monitoring treatment progress; and (e) evaluation of treatment outcome (Hawkins, 1979). The criteria for an adequate family assessment method will vary depending upon the clinical function for which it is developed. The measurement issues related to each stage of clinical assessment have been articulated by Hawkins (1979) for behavioral assessment and intervention and adapted for family assessment by Carlson (1989). A summary follows.

Screening for family dysfunction requires a broad-band family assessment capable of detecting, but not necessarily specifying, the nature of a problem. Optimally a family measure used for screening would also provide guidance regarding the direction of further assessment for defining the problem. In addition screening instruments must be brief in terms of professional and family members’ time. At the screening phase the adequacy of a family functioning measure will depend primarily on its cost-effectiveness and predictive validity.

At the diagnosis phase, family assessment must confirm hypotheses regarding the functioning of the family unit, quantify or measure the severity of dysfunction, and determine the primary locus of the problem. The value of a family assessment method or measure at the
diagnostic phase would be determined primarily by its discriminative and differential predictive validity. Norm-referenced measures and validated clinical cutoff scores or profiles are particularly important for the diagnostic phase.

The goals of family assessment at the treatment planning phase are to specify objectives for change, analyze the contingencies maintaining the problematic behavior, identify family strengths and resources, and determine the intervention sequence and the level of change that is adequate for treatment to be terminated. The multiple goals of assessment at this phase may necessitate a multimethod approach.

Monitoring treatment progress requires a method of family measurement that is narrow in focus (targeted to the focus of change) and amenable to a repeated measures design. Family measurement techniques that are unresponsive to spurious influences, such as retesting effects or instrument decay, and that are sensitive to change and easily administered are important for this phase. In addition, the impact of the intervention on the subjective realities of family members may be as relevant to assess as changing family interaction patterns.

Evaluation of treatment outcome frequently requires a multimethod approach to assessment. The use of a pre-post treatment design is common, which would call for a repetition of relevant measures used in the diagnostic phase. Finally, in the follow-up of treatment, the goal of a family assessment would be to determine the durability and sufficiency of the behavioral and subjective changes that have resulted from treatment. A continuation of the family assessment method used in monitoring treatment progress, less frequently administered, may be an appropriate follow-up measure, as may be a repeat of selected measures used in the pre-post treatment design. In follow-up the criteria of breadth of coverage and economy are highlighted. Breadth is necessary to evaluate broader effects of treatment and economy is relevant as families are unlikely to be motivated to complete complex or time-consuming measures.

Thus, family assessment in the clinical context requires a consideration of a series of sequential decision-making functions demanded by treatment. A single measure or method may have multiphase utility; however, a measure may have excellent validity for one function and low validity for another. The multiple functions of assessment in the clinical context then may necessitate the selection or development of multiple, complementary family assessment methods, based upon a single theory regarding family process and change, and the subsequent psychometric evaluation of these measures as to
their utility for the specific purposes and phases of treatment for which they were designed.

To summarize, a family assessment conducted for purposes of answering a research question may have different requirements than a family assessment completed to determine appropriate treatment and/or treatment effectiveness. As noted by Hayes, Nelson, and Jarrett (1987), classical psychometric theory determines the structural but not the functional adequacy of a measure. Structural adequacy (i.e., reliability and validity) is essential for substantiating theoretical premises. Functional adequacy refers to the treatment utility of a measure (i.e., the degree to which it can be shown that treatment outcome is positively influenced by the measure). It is possible, according to these authors, for a measure to have functional or treatment utility without demonstrating structural adequacy. Furthermore, these authors argue that the evaluation of the treatment utility of assessment measures sets the stage for important theoretical development because it points out important functional differences which then require theoretical explanation. A review of the family assessment field (Grotevant & Carlson, 1989) suggests that neither treatment utility or structural adequacy are well tested in existing measures; thus, researchers and clinicians should be mindful of their goals in conducting a family assessment and attentive to data on structural adequacy.

STEP TWO: MAKE THEORY OR ASSUMPTIONS EXPLICIT

It is a basic assumption of assessment activities that these should be explicitly guided by theory. Family assessment potentially encompasses a wide variety of techniques, domains to be measured, and numerous family members or subsystem levels. As noted by Grotevant (1989), theory should provide a guide for separating elements that are worthy of attention from those that are not. Why we measure, what we measure, and how we choose to measure should be guided by theory. Multiple disciplines and theories have influenced the development of current family assessment measures and methods. These will next be discussed within a historical perspective followed by further discussion of the linkages between theory and family assessment proposed by Grotevant (1989).

Theoretical Influences

The many theoretical orientations and methodological strategies in family studies have been addressed comprehensively in a recent publication, Sourcebook of Family Theories and Methods: A Contextual
The following brief description of theoretical influences on family assessment is based on this publication as well as others (Grotevant, 1989; Jacob, 1987; Carlson, 1991).

The founding decades: family sociology. The study of the family is considered to have its origins in sociology with the publication of Ernest Burgess's (1926, cited in Jacob, 1987) paper, "The Family As A Unit of Interacting Personalities." Burgess's ideas can be seen as important forerunners to current conceptualizing about the family. Specifically, Burgess (a) emphasized the process versus the content of family interaction, (b) conceptualized the family as the unit of study, and (c) analyzed the family in terms of family patterns and roles (Jacob, 1987).

Post World War II family theorists shifted from the prewar focus on the family as a "closed system of interacting personalities" to a view of the family as a "semi-closed system" in transaction with other systems in society (Hill & Rodger, 1964, p. 178, cited in Doherty, Boss, LaRoss, Schumm, & Steinmetz, 1993). Important theoretical developments included Duvall's (1957) conceptualization of the family developmental life cycle and Talcott Parsons's (Parson & Bales,1955) structural-functional model of family process. Structural-functional theory of the family viewed the family as a small group with clear roles differentiated by gender. It also emphasized the harmony of goals and functions between families and society. Structural-functionalism appears to have been influential in the development of clinical models of family functioning that emphasize the fit between role performance and family organization (e.g., the Family Process Model, Steinhauer, Santa-Barbara, & Skinner, 1984; the structural family therapy model, Minuchin, 1974).

Structural-functional theory came under attack in the 1960s for its political conservatism, sexism, and lack of empirical validation (Doherty et al., 1993). One alternative theoretical framework proposed was social exchange theory which viewed social interaction in terms of such concepts as rewards and costs. Social exchange theory represented the joining of behavioral psychology, with its emphasis on reinforcement contingencies with utilitarian economic theory, with its emphasis on cost-benefit ratios, and provided a set of theoretical propositions that could be quantitatively analyzed. Social exchange theory also refocused the analysis of the family from it interface with society to analysis of exchange processes in dyads or small groups. Nye (1982) is credited as the leading articulator of social exchange theory and family processes. His influence is evident in current
family assessment measures in the measurement of domains related, for example, to role performance and task accomplishment.

In addition to these major theoretical streams, sociology contributed significantly to the methodology of family assessment. Parsons's and Bales's (1955) development of the Interaction Process Analysis observational coding scheme for analyzing small group process provided both the methodology and key variables for subsequent family process coding schemes (see Grotevant & Carlson, 1987). Strodtbeck's Revealed Difference Technique (Strodtbeck, 1951) continues to be the stimulus situation for many studies of family process and clinical evaluations of families.

In summary, sociology provided critical impetus to the family studies tradition and made a significant contribution to family assessment methodology, particularly with the development of observation coding schemes and marital questionnaires. Moreover, despite the diversity of theories within sociology, a consistent focus remained on the role of the family in adjustment. The hegemony of sociology in the family field, however, had clearly ended by the 1980s and has been replaced with more multidisciplinary, integrative theories (Doherty et al., 1993). The family studies field continues to influence the development of family assessment measures and methods; however, this is primarily within the academic or research domain. Clinical assessment of the family has been more strongly influenced by systems theory.

Systems/communications theory. Beginning in the 1950s, clinical researchers turned their attention to the role of the family in the etiology of severe adult psychopathology. Common to this research was a focus on family communication patterns, theoretical models that emphasized the primacy of the interactional context in understanding deviant behavior, and, over time, acceptance of the explanatory power of general systems theory (Bertalanffy, 1956).

At the core of a systems orientation is the concept that elements exist in a state of active communicative interrelatedness and interdependence within a bounded unit (e.g., the individual, the family, the classroom, the organization), such that the activities of one element cannot help but have a direct or indirect influence on the other elements of the system, resulting in a whole which is greater than the sum of the elements (Koman & Stechler, 1985). In addition to the concept of interrelatedness of elements, the concepts of organization and hierarchy are key within systems theory. All systems reflect an organization of parts and parts in relation to the whole. Hierarchy is frequently a characteristic of the organization of complex systems
such that certain elements or subsystems are hierarchically superordinate to lower subsystems. The properties of any living system, (e.g., the quality of interrelatedness, hierarchy, organization), as well as the mechanisms that maintain any dysfunctional behavior, are evident in the repeated interactional or communication sequences between members (elements) of the system who are in a mutual and interdependent relationship with one another.

The systems/communication perspective has significant implications for the methodology required for family assessment. First, individual dysfunctional behavior is viewed as meaningless without a view to the systemic context in which it is embedded. Second, a systems orientation implies a relational versus individual focus to assessment. A relational focus demands techniques that measure the interactions of elements within systems and between systems in contrast with traditional techniques which focus on individual variability across systemic settings such as the home and school. Third, this orientation underscores the complexity of relationships that can exist within and between systems, and between an individual’s dysfunctional behavior and their systemic contexts. Thus, this perspective encourages the utilization of family assessment procedures that go beyond single variables aimed at only one level of the family matrix (Jacob, 1987). In application, the premise of systems theory that the whole is greater than the sum of the parts has resulted in an emphasis on the development of measures that capture the “whole” of the family system.

*Family Development.* Family development theory provides an analytic understanding of the changing characteristics of families as they move through life cycle stages; more recently, the theory has been reconceptualized as a way to provide a longitudinal understanding of the interrelationships and processes among several levels of family analysis—individual, dyadic, group, and societal (Rodgers & White, 1993). Family development theory proposes that the family over time represents a set of mutually contingent individual developmental trajectories. With the passage of family members, and the family as a small group, through normative and paranormative developmental stages, roles, norms, and position transform. Family development theory is concerned with how families transform roles over time and the nature of the process of transformation. Concerns focus on both the process and content of normative role changes, changes in response to paranormative events (e.g., divorce, death of a family member), and transitional states. Family developmental theory has been criticized as lacking in empirical support and predic-
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tive power; however, recent reconceptualizations may prove promising (see Rodgers & White, 1993, for review). Family developmental theory has been applied to clinical work with families by Carter and McGoldrick (1989). These authors assert that an assessment of family functioning must consider the roles and structure appropriate for the developmental needs of family members.

Ecological psychology. Ecological psychology is concerned with the relationship between individual behavior and the total life space (Barker, 1968). Much of early ecological psychology research was concerned with the study of the inextricably linked behavior-environment interface such that behavior of participants and the surrounding environment formed a bounded unit, the behavior setting (Barker, 1968; Wicker, 1979). More recently, ecological theory has been integrated with developmental psychology (e.g., Bronfenbrenner, 1979), with home economics theories about the family (i.e., human ecology theory) (Bubolz & Sontag, 1993), and in clinical practice with systems theory (e.g., Jasnowski, 1984); however, the distinctions between the two perspectives are salient. Ecology is a broader construct that includes the concept of system; however, the concept of system does not necessarily include the concept of ecology (Mannino & Shore, 1984). With regard to family assessment, the system frequently refers to the family context, whereas ecology frequently refers to the embeddedness of the family system within a matrix of relationships with systems beyond the family (e.g., the school, church, neighborhood). Thus, the primary contribution of ecological psychology to assessment of the family has been to provide a theoretical framework for operationalization of constructs that assess the family-environment interface or to provide impetus to the development of measures of the family as a life space for individual members (e.g., the Family Environment Scale, Moos & Moos, 1986).

Social learning theory. Another major influence on family measurement has been behavioral psychology, and particularly, social learning theory. Although far from a homogeneous discipline, the research tradition of social learning can be characterized by the following: (a) a continuing view that behavior and its variation is a function of the reinforcement contingencies of the environment; (b) a concern with illuminating the reciprocal, bidirectional chains of interaction or social exchange that comprise the environment; (c) a preference for naturalistic observation as an assessment methodology; (d) a commitment to scientific, methodologically rigorous procedures and the clinical application of findings; (e) concern with the macro-environmental contingencies that impact on the family (Jacob, 1987).
social learning researchers concerned with child problems (e.g., Patterson, 1982) have made substantial methodological contributions to family assessment with the provision of valid and reliable observation and quasi-observation procedures, as well as excellent models of multimethod/multilevel studies of family process (see, for example, Patterson & Dishion, 1988).

Emerging theories in psychology. A final category of influence, expected to have a more significant impact on the future course of family assessment than the present as reflected in current measures of the family, derives from current research that emphasizes two distinct sources of explanation for the behavior of individuals—relationships and biology. Three theoretical models, that have had as their goal the explication of the processes governing close social relationships, are viewed as having a potentially significant impact on family assessment measures and practice. These include the transactional model within developmental psychology and within social psychology, the close relationships model and the social relations model. In addition, research in behavioral genetics and more recently, the genetic influences on family processes, is proving to have significant implications for family assessment.

Within developmental psychology research on the parent-child relationship has shifted over the past decades from a “social mold” theoretical viewpoint, in which parent influences were viewed as unidirectional from the parent to the child, to a transactional view (see Sameroff, 1989), in which the parent and child are viewed as establishing organized, reciprocal patterns of interaction that characterize their relationship (Hartup, 1978). Moreover the origins of adult interactional style and self-organization are viewed as the direct outcome of these organized, reciprocal dyadic interaction patterns within the family (Sroufe & Fleeson, 1986). Research on the effect of the family on child development has emphasized the effect of relationships on relationships (see Hinde & Stevenson-Hinde, 1988). In contrast to the emphasis on assessment of the whole family that has been viewed by family psychologists as consistent with systems theory, developmental psychology researchers have emphasized assessment of the interrelatedness of dyadic relationships within the family. (An excellent collection of research studies using this approach can be found in Hinde & Stevenson-Hinde, 1988.) Hinde (1989) argues that exclusive measurement of the family as a unit is too wholistic to be meaningful. Consistent with systems theory, Hinde views the family as an organization composed of hierarchical, nested relationships; however, he argues that each relationship or nested level contains properties that
may be shared but also may be irrelevant to the preceding one. Thus, developmental psychologists concerned with the effect of relationships on relationships within family processes may contribute significantly over time to the field of family assessment by enhancing our understanding of how the parts or subsystems of the family relate to one another and how relationships or subsystems relate to the whole in contrast with the current focus of family psychology, which has been how the whole family system affects the individual.

A second potentially important theoretical influence on family assessment may emerge from the research of social psychologists on close relationships (see Kelly et al., 1983). Within this literature a relationship is defined as existing when two entities have an impact on each other or are interdependent. A relationship can be described as close if the two people are highly interdependent upon each other, where interdependence is revealed in four properties of their interconnected activities: (a) the individuals have frequent impact on each other; (b) the degree of impact is strong; (c) the impact is upon diverse kinds of activities for each person; (d) all of these properties characterize the causally interconnected activity series for a relatively long duration. (Kelly et al., 1983). The close relationships model has been extended by Berscheid (1986) to include the role of emotion, which would appear to have particular relevance for close relationships within the family.

The close relationships literature has provided a useful methodological distinction relevant to family assessment, that is, the differentiation of measurement of interpersonal events, subjective events, subjective conditions, and relationship properties (Huston & Robins, 1982). Interpersonal events or event sequences refer to the overt, observable behaviors of family members measured with formal and informal observation methods. Subjective events refer to the covert and momentary ideas, thoughts, and emotions of each family member. When a relationship endures over time, as characterizes family relationships, stable attributions, attitudes, and beliefs about family members, their relationships, and characteristics of the whole family unit emerge. These relatively stable emotions and cognitions are termed subjective conditions and are measurable primarily by self-report methods. Once subjective conditions are in place they can affect patterns of interpersonal and subjective events. These recurrent patterns of interpersonal or subjective events reflect relationship properties. Relationship properties, by definition, must be observed or recorded as a repetition of behavior or subjective response over time. In summary, the close relationships model would argue for the assessment of
subjective events, subjective conditions, and the observed recurrent behavioral or subjective patterns within the family.

A third model which appears promising for conceptual advances, primarily in the analysis of family assessment data, is the social relations model (Kenny & LaVoie, 1984). The social relations model was designed to address the complexities of social interaction research. The model proposes that the behavior of one member of the family toward another member is a function of multiple independent components: the family or group effect; the actor effect (e.g., the tendency of the person to behave similarly regardless of partner); the partner effect, (e.g., the general tendency of the partner to elicit the same response from others); the relationship effect, (e.g., the degree to which the actor and partner's behavior cannot be accounted for by their individual effects). The social relations model has been successfully applied to family data (Cook, Kenny, & Goldstein, 1991; Cook & Goldstein, in press). As noted by Cook et al. (1991), a special advantage of the social relations model is that it provides indices of reciprocal effects in family relationships.

Finally, the biological revolution in psychology is challenging existing methods and conceptualizations of the family (Bussell & Reiss, 1993). Investigations of the genetic influences on family process, both with twin and sibling studies, are essentially finding that the use of the term family environment may be a misnomer. Rather family environment is experienced by each member of the family differently, that is, it is nonshared environment. Behavioral geneticists have proposed at least four classes of sibling differential experience (Bussell & Reiss, 1993): (a) differential parenting; (b) differential experiences with one another; (c) differential experiences in peer groups; and (d) differential experiences exposure to life events. Currently little attention is paid to these processes in family assessment.

More portentous for family assessment, behavioral geneticists have begun to examine the role of genetics in family processes. Two sorts of mechanisms are proposed to influence family interaction patterns (Bussell & Reiss, 1993). Parents genes may shape, in part, their perceptions and reaction patterns in relations with other family members and/or the heritable characteristics of the child might elicit from parents differential parenting. Specifically related to family assessment, using a behavioral genetics approach to the analysis of family environment measures, 26% of the variance was explained by genetic differences. Moreover, genetics appears to be differentially implicated in dimensions of family environment. Cohesion, for example, has been found across studies to demonstrate a higher
heritability component (as much as 50%), whereas family control shows much less genetic influence (Bussell & Reiss, 1993; Rowe, 1983).

The implications of these findings are significant for family assessment in clinical practice and research. Based on Bussell and Reiss (1993), implications for family assessment include: (a) the necessity of including more than one child within a family in the assessment, as environments are child-specific; (b) as genetics can mediate environmental effects, these must be considered in data analysis; (c) as the family environment is a multidimensional construct that includes common exposure but differential experience, it can only be understood with data capturing both observed and subjective processes.

Emerging trends in the family studies field. In addition to emerging research in psychology, emerging trends in the family studies field are expected to impact family assessment. As noted by Doherty et al. (1993), emerging trends in family studies focus on diversity with the new era of family studies expected to be influenced by the following issues: (a) the impact of feminist and ethnic minority theories and perspectives; (b) the realization that family forms have changed dramatically; (c) the trend toward more theoretical and methodological diversity; (d) the trend toward more concern with language and meaning; (e) the movement toward more constructivist and contextual approaches to knowledge generation; (f) an increased concern with ethics, values, and religion; (g) cross-disciplinary study of the family; (h) a breakdown of the dichotomy between family social science and family intervention. One implication of some of these issues for family assessment measures and practice would appear to be increased concern, caution, and research regarding the validity of existing measures and methods with diverse family structures and populations, as well as the development of more culturally sensitive measures if needed.

The context of family research methods. Just as multiple theoretical influences can be seen in the domains measured in current family assessment measures, the methods by which families are evaluated are varied and have developed historically (see Doherty et al., 1993). The early study of the family in the 1920s and 1930s was characterized by both qualitative and quantitative methods. From the 1940s to the 1970s, quantitative methodology, especially the use of questionnaires and standardized interviews, was and continues to be the standard. Experimental studies of family interaction, using observational coding schemes, characterized the studies of the family as a small group in the 1950s and 1960s. Although based in other theoretical paradigms, observational studies of family process continue to be impor-
tant (e.g., Patterson, 1982). Observation studies have been greatly enhanced by video technology, which has allowed the preservation of family interactive processes for repeated analyses. The technology of computers has provided social scientists with unprecedented ability to conduct complex multivariate analyses of data. Thus, the current decade is witness to the application of sophisticated statistical analytic procedures to the analysis of family data, regardless of family assessment method, (e.g., Cook et al., 1991; Cole & McPherson, 1993). In addition to the emphasis on increasingly sophisticated quantitative methods for capturing the complexity of families, there is also renewed interest in qualitative methods of family research (e.g., Gilgun, Daly, & Handel, 1992). This would appear consistent with the emerging trend in family studies toward constructivist and contextual approaches to understanding the family.

**Linking Theory with Family Assessment**

Evident in the above discussion, multiple theoretical perspectives have influenced and continue to influence the development of family assessment methods and measures. Each theoretical perspective and research tradition has distinct assumptions and thus, places a somewhat different emphasis on how and what to measure in the family. Grotevant (1989) notes the following linkages between theory and family assessment to be appropriate:

1. Theory should specify the domain of family functioning that is being investigated so that the full relevant domain can be sampled.
2. Theory should lead to clear definitions of constructs and variables.
3. Theory should drive decisions about assessment strategies.
4. Theory should provide guidance for the ‘levels of analysis’ dilemma.
5. An interactive relationship should be established between theory and assessment.

In his evaluation of the current status of theory development and family assessment, Grotevant (1989) noted that numerous theories in the middle range have been developed for family functioning; however, no unifying theory has gained acceptance. Thus, current measures of the family as a unit suffer from a lack of construct validity, as evidenced in the lack of convergence across measures. In addition, a theory of the family has not yet provided an answer as to how the various parts of the family system relate to the whole and in what
ways the parts are similar and distinctive from the whole. The recent work of Broderick (1993) represents an effort within systems theory to integrate theoretically the diverse levels of family process. This work, however, is too recent to have been operationalized with measures and tested empirically. Recent trends in family studies suggest that rather than simplification greater diversity and plurality of theories, measures, and methods will be characteristic of the field. It is therefore expected that family assessment measures and methods will continue to proliferate. Given the diversity of methods and measures, we turn to an examination of diverse family assessment methods.

STEP 3: INVENTORY INSTRUMENTS

The third step in the assessment process is to decide upon methods and measures to be used. As noted above, one's theory and assumptions, as well as the goals of assessment, should guide this choice. In addition, practical considerations, such as intrusiveness, the resources required for various assessment procedures, and fit with the setting, are likely to influence the choice of family assessment methods and measures. A variety of methods have been utilized to evaluate the family context. These include self-report questionnaires, interviews, formal and informal observation procedures, behavior ratings of self or others, projective methods, and structured tasks. It is beyond the scope of this chapter to review or recommend existing measures. Reviews of family assessment measures include Marriage and Family Assessment (Filsinger, 1983), Family Assessment: A Guide for Clinicians and Researchers (Grotevant & Carlson, 1989), and Handbook of Family Measurement Techniques (Touliatos, Perlmutter, & Straus, 1990). Reviews of family measures are also included in the Mental Measurements Yearbooks (e.g., Kramer & Conoley, 1992). In this section several key distinctions among methods of family assessment will be noted followed by a discussion of the most commonly used methods: observation and self-report questionnaires.

One key distinction among family assessment methods is the degree to which the data derived can be considered objective, that is, the data are numerical, and precisely and systematically describe the relationship or family. In contrast, data considered subjective are expected to be influenced by the attitudes, values, and beliefs of the family members and/or the researchers/clinicians. Subjectivity, in the form of beliefs and cognitions, is considered a legitimate topic for family assessment and research. The methodology of the social sciences, however, has remained focused on precision, and thus, the objective measurement of subjective conditions (Becvar & Becvar,
Regarding observation methods, coding schemes, clinical rating scales, and participant observation reports, respectively, provide greater to less objectivity. Standardized self-report questionnaires provide the most objective index of family members' subjective reality. Although there is increasing interest in qualitative methodologies related to the study of the family (e.g., Gilgun, Daly, & Handel, 1992), in general, family assessments conducted for purposes of research have required a methodology that provides numerical data for analysis. For an extended discussion of the tension between the logical positivistic tradition of the social sciences, with its demands for objective measurement, and the systemic-cybernetic paradigm of family therapy, the interested reader is referred to Becvar and Becvar (1993).

A second distinction that can be made among the various methods of family assessment involves differentiating procedures based upon reports of family members from procedures based upon the direct observation of the interactions of family members. This distinction has often been characterized as the "insider" versus the "outsider" perspective in family relationships, that is, how viewpoints of members within the family system differ from the views of members outside the system (Olson, 1977; Gurman & Kniskern, 1981). Methods that utilize the outsider frame of reference include all measurement strategies that capture the observed behavior of the individual family members. Insider methods, which measure family members' subjective conditions, include self-report questionnaires, projective tests, and the family members' reports of their viewpoints in an interview. The insider and outsider perspectives have been found to tap distinct realities of family relationships, and to have a low correspondence with one another (Olson, 1977). For example, a family's perception of their level of closeness or cohesion may be only weakly correlated with a clinician's rating of the same dimension. Although the low correlation between insider and outsider viewpoints of the family has been attenuated when the methods are both derived from the same family functioning model (Hampson, Beavers, & Hulgus, 1989), the unique dimensions of family relationships captured by each method has led to the recommendation to family researchers and clinicians that both an insider and outsider perspective should be gathered in a family assessment.

In the remainder of this section, the two broad categories of family assessment methods—the observation methods of the outsider and the self-report questionnaires of the insider, will be discussed. The discussion is based on previous articulation of the distinctions in

OBSERVATIONAL METHODS

Observational methods permit the direct assessment of family interaction patterns. Appreciation for the value of observational methods has increased in recent decades due to a variety of factors: (a) the emphasis of many current theories of family therapy on here-and-now interactions versus history, (b) the questionable validity of self-report as a measure of actual behavior, and (c) technological and psychometric advances that improved the feasibility of collecting and analyzing observational data. Observational methods of family assessment range on a continuum from informal to formal, nonstandardized to standardized, clinical to scientific, unreliable to reliable. Specifically, along this continuum from subjective to objective lie several observation methods including interview procedures, clinical rating scales, and coding schemes.

Observation methods can vary also in degree of observer participation with the family. Participant observation refers to observation procedures in which the observer is clearly visible to the family or family members being observed. The observer may maintain a passive, noninteractive role, such as when trained coders observe interactions within the home setting, or observers may be involved in interaction with the family, such as during a clinical interview with the family (Margolin, 1987). Participant observation also refers to directives to the family or to family members to monitor or observe the behaviors of others within the family. Because the observer’s objectivity is recognized to be influenced by participation in the interaction with the family and by the history of the association between the observer and the observed, several techniques have been developed to aid in the validity and reliability of these data (see Margolin, 1987). Participant observation within the home is frequently used by behavioral theorists. The focus of these observations, however, is seldom on the family as interacting unit, but rather on individuals or dyads within the family. With regard to assessment of the family unit, participant observation is most likely to occur within a clinical interview.

Interview procedures. Participant observation of family members during a clinical interview is the most common family assessment method of clinicians who are guided by theoretical perspectives that focus diagnosis on transactional patterns which occur in the here-and-now. A clinician engaged in observation of the family might direct
attention to family transactions that reflect the quality of boundaries, hierarchy, emotional closeness, and clarity of communication among family members. In order to assure that transactions between family members which are of theoretical or clinical interest are likely to occur, family treatment models have developed interview procedures to aid in informal clinical evaluation (e.g., Weber, McKeever, & McDaniel, 1985), and several family functioning models have developed interview procedures to be used in conjunction with clinical rating scales, (e.g., the Beavers Systems Model, Circumplex Model of Marital and Family Systems, the McMaster Model) (for review, see Walsh, 1993). The interview procedure is also useful for eliciting and evaluating family members' subjective beliefs, such as attitudes and attributions regarding the family, family relationships, or a particular family member or problem. Procedures focusing on the cognitions of family members within a family interview are most well developed by cognitive-behavioral family therapists (see Epstein, Schlesinger, & Dryden, 1988).

Informal observation of family functioning during an interview with the family has distinct advantages and disadvantages. One advantage is cost. Informal observation during a family interview is relatively easily incorporated into one's clinical practice. The primary disadvantage of informal observation, of course, is the lack of objectivity, validity, and reliability of data that derive from the clinical judgment of the observer, albeit well trained, who is participating in the system being observed. Thus, informal participant observation is unlikely to be useful as a research methodology without the use of some means by which observations can be recorded, quantified, and completed by a second observer such that interrater reliability can be determined. Clinical rating scales of family functioning have been developed for such a purpose.

Clinical rating scales. Clinical rating scales are a family assessment measurement technique designed to permit a summary judgment on the part the rater/observer with regard to placement of an individual, dyad, or whole family on some psychological dimension. Family clinical rating scales are useful following a family interview as a means by which impressions can be recorded in a more standardized fashion or in a nonparticipant observation of the family in interaction, for example, from behind a one-way mirror or from video recordings. The advantages of clinical rating scales include cost efficiency, generation of quantitative data which can be evaluated for reliability and validity, and communication with other professionals.

The usefulness of clinical rating scales is largely constrained by two factors, rater competence and psychometric quality of the rating
scale. Rating scales utilize the complex information-processing capabilities of humans in the ascription of a summary judgment regarding the family on particular dimensions; however, this very capacity of humans to integrate diverse information has contributed to the lack of reliability of rating methodology. Thus, for the clinical rating method to be useful in family assessment the following assumptions must hold (Cairns & Green, 1979): (a) raters share with the scale author, and with other raters, a theoretical concept of the quality or attribute to be rated; (b) raters share a concept of which behaviors reflect that quality or attribute; (c) raters are able to detect information relevant to the attribute in the stream of behavior; (d) raters share the same underlying psychometric "scale" (e.g., normal distribution), on which the attribute will be judged; and (e) raters have sufficient knowledge about the comparison or reference group to place observed behavior on a distribution. These rater assumptions are enhanced, of course, with rater training as well as with careful construction of the rating scale. Rating scales with clearly defined and behaviorally defined anchor points, equal psychological distance between anchor points, and an adequate number of anchor points, increase the likelihood that ratings will be reliable. A review of family clinical rating scales found evidence of validity to be emerging but incomplete, primarily as a function of the recency with which these measures have been developed (Carlson & Grotevant, 1987a). For additional discussion of clinical rating scales of family functioning, the reader is referred to Carlson and Grotevant (1987a) and Grotevant and Carlson (1989).

Coding schemes. The most objective and scientific observation method in family assessment involves the use of a family interaction coding scheme. Coding schemes refer to the precise recording of the precise actions of individuals in a group, the analysis of which is essential for understanding processes of interaction (Grotevant & Carlson, 1989). There are many research advantages to the use of family interaction coding schemes. Observational procedures require fewer inferences, are less susceptible to confounding influences, have greater face validity and generalizability, preserve the actions of family members for multiple analyses, are flexible in providing quantitative indices, are usable by nonprofessionals, and have enhanced reliability. In short, observation codes provide the most "objective" view of the family, and research aimed at determining the contingent patterns of interaction within families typically requires formal observation as the primary method of data collection.

Many of the characteristics of family interaction coding schemes that enhance the objectivity of this form of family assessment also
create limitations. The recording of precise actions of family members in an interaction with one another is typically more costly than other family assessment or observation methods, even with the availability of advanced technology. For example, on a recent project by the author the recording, transcribing, and coding of a 20-minute family interaction required approximately 100 hours per family. The higher cost of using coding schemes frequently limits observation of the family to a single session, which may be unrepresentative of the family’s behavior. Another limitation of observation coding schemes is their microanalytic perspective on the family. The precise recording of actions and reactions among family members requires a limited number and scope of behavioral codes. Every decision to limit the scope of behavior to be coded is likely to enhance reliability, and to afford greater power in data analysis, but at the cost of comprehensiveness. Analysis of data derived from coding schemes, particularly if sequential analytic or log linear methods are used, can require a large number of events, thus limiting the complexity of coding schemes and between family member analyses.

Additional threats to the validity of coding family interaction behaviors are related to the setting, task, reactivity, and recording method of the observation. To enhance reliability of the coding and comparability across families, codings of family interaction usually require consistency of task, setting, number, and role of family members. All of these controls for purposes of reliability may alter the pattern of family interaction that is desired by the researcher. Laboratory settings, for example, may constrain negative interactions among family members. Similarly, if the focus of the research is family conflict, it will be essential to develop a procedure and task that elicit conflict. The presence of the observer as well as the intrusiveness of the recording procedure are also likely to affect the family’s interaction. Thus, the family researcher has numerous decisions to consider in coding family interaction.

In sum, family observation coding schemes are a method well suited to the investigation of well-focused, theoretically based research for which the goal is describing and analyzing the contingent behaviors of individuals within family relationships. Coding schemes have typically posed greater challenge to researchers attempting to capture molar qualities of the family system. Generally the use of systematic observation coding schemes is too costly for use in family assessment for clinical practice. For additional information on reliability and validity issues with family interaction coding schemes the interested reader is referred to Grotevant and Carlson (1987, 1989).
Self-Report Methods

In contrast with observation methods of family assessment, which are considered to provide an "outsider" perspective of the family (Olson, 1977), self-report methods provide the "insider" view of family functioning. Self-report measures are defined as standardized questionnaires which provide information about individual family members' subjective reality or experience, including perceptions of self and of other family members, attitudes regarding family (roles, values, etc.), and satisfaction with family relationships (Huston & Robins, 1982). Self-report measures of family relationships have numerous advantages including reliability, and ease of administration and scoring, as well as the demonstrated link between individuals' subjective reality and their behavioral interaction patterns (e.g., Gottman, 1979). In addition, self-report measures yield quantitative data useful for both research and clinical goals. Most importantly, family members, by virtue of their participation in the system, have access to a unique body of information that is unavailable to the clinician. Because family members see each other behave in a variety of situations, they may be able to differentiate cross-situational stabilities from situational effects on each others' behavior. Family members also observe one another over an extended period of time and, therefore, have the opportunity to differentiate temporally stable from temporally unstable behaviors. Finally, family members observe behaviors that are not displayed in public and not available to outside observers. Self-report measures of family functioning, therefore, are often the assessment method of choice for research or treatment evaluations involving families.

Issues in the use of family self-report instruments center on psychometric quality and clarity regarding the measurement goal. Regarding psychometric quality, Grotevant and Carlson (1989) concluded that researchers and clinicians must be judicious in their use of measures as the stability and validity of many measures is not yet well determined. Another issue in the use of self-report measures of the family is the discrepancy between the unit of perception, that is, the subjective evaluation of an individual family member, and the unit of inquiry, the whole family unit. The extent to which an individual respondent can provide useful information about systems variables is an important consideration in using this method in family research. Self-report measures are the method of choice only when the research question concerns the attitudes and comparisons of different family members' points of view; these measures cannot be used as a
true indicator of whole family characteristics without statistical manip­ulation, as will be discussed later (see Step 5) in this chapter.

In summary, self-report measures of family functioning are a useful method for the assessment of individual members’ subjective evaluations of their family and family relationships. Although these measures purport to be measures of the whole family unit, and utilize constructs that are, in fact, consistent with characteristics of the whole family, self-report questionnaire scores represent the perceptions of individuals.

Multiple Method Approaches

Faced with multiple choices of measures and methods, the researcher/clinician may seek a “battery” approach to family assessment. Several models of family functioning have been empirically derived and include multiple methods of family assessment, which, when used together, form a family assessment battery. The objective of these models, for the most part, has been the assessment and classification of family functioning on a variety of dimensions, which may include, but are not limited to, the ideals proposed by the various schools of family treatment (Becvar & Becvar, 1993). Although multiple conceptual models of family functioning have been elucidated, only a limited number have been operationalized in measures. Models which have developed family assessment measures useful to the clinician as well as the family researcher include the following: Beavers Systems Model (Beavers & Hampson, 1993), Circumplex Model of Marital and Family Systems (Olson, 1993); McMaster Model (Epstein, Bishop, Ryan, Miller, & Keitner, 1993), and Process Model of Family Functioning (Steinhauer, Santa-Barbara, & Skinner, 1984). Each of these models includes a self-report measure of whole family functioning as well as a clinical rating scale to be completed by clinicians based on their observations of the family in interaction. In addition, several of the models have developed interview protocols and/or interaction tasks designed to capture data on the dimensions of interest in the model. Although not yet adequately developed to provide a comprehensive assessment of the family, these models of family functioning with their related measures provide the beginnings of useful batteries for conducting a family assessment.

STEP 4: PERFORMING THE ASSESSMENT

Evident in the previous discussion are the numerous choices available to the family researcher and clinician in methods of family assessment and measures or techniques within each methodological
group. Each method has noteworthy strengths and limitations. Limited empirical data exist to support the predictive differential validity of particular measures or methods of evaluating family functioning (Grotevant & Carlson, 1989). Nor does there currently exist a theoretical consensus regarding the salient characteristics of the family to be assessed that predict or relate systematically to psychopathology (Grotevant, 1989). Given the state of the science, a multisystem-multimethod (MS-MM) approach to family assessment has been proposed as a solution, compatible with the hierarchical nature of the family organization, by which to minimize error that may occur with the use of a single measure (Cromwell & Peterson, 1983; Peterson & Cromwell, 1983). An MS-MM family assessment would include the use of multiple family evaluation methods across multiple family system levels. In a multisystem-multimethod assessment of the family context, Cromwell and Peterson (1983) indicate that the following steps are appropriate:

1. Conceptualize the family in terms of hierarchical levels.
2. Identify the system level(s) hypothesized to be most involved in the problem behavior.
3. Identify methods that correspond with the system level to be evaluated.

Given the lack of correspondence between insider and outsider perspectives on the family (Olson, 1977), it would also seem appropriate to include measures that capture both perspectives.

In a multisystem-multimethod analysis, data from each system level and method are juxtaposed and examined both within and across system levels for convergence and divergence of data. Assessment data examined across methods of collecting information about the marital subsystem, for example, might show a convergence of data regarding marital strain but a divergence of opinion between spouses about either the source or degree of strain. Self-report data, for example, might reveal that the husband evaluates his wife moderately negatively on task accomplishment whereas the wife is extremely dissatisfied with the level of affective involvement in the relationship. Observations of interaction might converge with self-report data finding the marital couple distant, guarded, or argumentative. Data examined across the levels of the family system reveal information about concerns, as well as strengths, that cut across relationships, as well as assist in focusing on specific subsystem dysfunction. For example, if the marital conflict were being detoured through a child, data might reveal a reported lack of cohesion across all levels of the family system but indicate that conflict is reported
only in the father-adolescent relationship. The consistencies and discrepancies in data collected across multiple methods and system levels, interpreted in relation to the presenting problem, can suggest diagnostic hypotheses and treatment goals.

An example of the MS-MM approach within a single theoretical framework can be seen in the development of the Family Assessment Measure (FAM-III; Skinner, Steinhauer, & Santa-Barbara, 1983, 1984). The self-report measure developed by these family researchers assesses the multiple system levels of the family by creating three versions of the measure: a whole family scale, a dyadic scale, and an individual [within the family] scale. All three scales contain the same constructs regarding family functioning based on the Process Model of Family Functioning (Steinhauer, Santa-Barbara, & Skinner, 1984; Steinhauer, 1987). Items that comprise the subscales are also similar across the three versions with wording altered to reflect the unique perspective of each level (e.g., the individual, dyadic relationship, and whole unit). The Family Assessment Measure Clinical Rating Scale (FAM-CRS; Skinner & Steinhauer, 1986), to be used in conjunction with the self-report measure, provides an outsider method of evaluation. The FAM-CRS is dimensionally consistent with the self-report measure and intended to be used with a structured clinical interview based on the Process Model (see Grotevant & Carlson, 1989, p. 264). Thus, within a single theoretical framework three methods of family assessment have been developed, which tap both the insider and outsider perspectives of family functioning and cross the hierarchical family levels of individual, dyad, and whole system.

Olson (1988) has built on Cromwell’s multisystem family assessment model and extended it to the measurement of treatment effectiveness. As such the assessment process is focused on capturing family change. Consistent with Cromwell and Peterson (1983), Olson recommends conceptualizing the family as a hierarchical system that includes the individual, marital, parent-child relationship, the family system, and the community level. In addition, he proposes three major categories of therapeutic domains that should be measured in an evaluation of treatment effectiveness: (a) symptoms and presenting problems, (b) mediating goals or first-order change, and (c) ultimate goals or second-order change (see Table 1).

As a measure of symptoms and presenting problems, Olson (1988) recommends the use of checklists of issues or problems. Goal Attainment Scaling is recommended as a method of measuring mediating goals, that is, therapist-specific goals for each family system level. It is expected that mediating goals will be unique to each family
and therapeutic modality, and therefore, the use of a standardized measurement is not appropriate. Olson defines ultimate goals as the desired outcomes of treatment that would relate to changes in the underlying dynamics of the family system. Ultimate goals, according to Olson, could appropriately be measured with an existing "common battery." Several recommendations for family assessment are highlighted by Olson's model. These include the importance of the following: (a) measuring the complexity of the family system; (b) including all relevant members of the family system in the assessments; (c) using both behavioral and self-report methods; and (d)

Table I. Baseline and Outcome Variables for Family Therapy Studies

<table>
<thead>
<tr>
<th>Problem of Concern</th>
<th>Intermediate: First-Order Change</th>
<th>Long-Range: Second Order Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person</td>
<td>Psychiatric Disorders</td>
<td>Treatment goals developed in consultation with family</td>
</tr>
<tr>
<td>Marriage</td>
<td>Relationship issues</td>
<td>Couples identify strengths and weaknesses of relationship</td>
</tr>
<tr>
<td>Parenting</td>
<td>Parent-child issue</td>
<td>Parent and child skills needs are identified</td>
</tr>
<tr>
<td>Family Systems</td>
<td>Family subsystems and immediate environment</td>
<td>Goal attainment scaling (GAS) could be used to specify goals.</td>
</tr>
<tr>
<td>Social Systems</td>
<td>Social supports and networks</td>
<td>An ecomap is used to display available social support</td>
</tr>
</tbody>
</table>

including multiple assessments during the treatment process as well as the traditional pre-post assessment design.

Building on the work of Cromwell and Peterson (1983) and Olson (1988), Carlson (1991) proposed a multisystem-multimethod clinical framework for assessing the family when the presenting problem concerns a child. Consistent with the frameworks discussed, the family is conceptualized hierarchically and both observational and self-report methods are used. Five principal areas of family functioning are viewed as relevant to assess: (a) family transactional patterns; (b) family developmental stage; (c) family stress and coping; (d) family members’ subjective conditions; and (e) the presenting problem/symptoms. In addition, these domains of family functioning are evaluated within both the intergenerational and current sociocultural context. The methods used to assess these five areas and the family system level to which they are targeted are described in Table 2.

Information about each domain is obtained from multiple methods. For example, family members’ subjective reality is obtained both through self-report measures, interviews, and interaction task procedures. Family members’ evaluation of relationships may be consistent or inconsistent across these methods. In families where conflict is avoided, for example, data derived from self-report measures may give a more distressed evaluation than behavioral data. It is also

Table 2. Sample Multisystem/Multimethod Approach to Family Assessment with Children

<table>
<thead>
<tr>
<th>Outsider Perspective: observation methods</th>
<th>Family Interaction Tasks &amp; Clinical Rating Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insider Perspective: self-report methods</td>
<td></td>
</tr>
<tr>
<td>adolescents &amp; adults</td>
<td>FAM-Global, FAM-Dyadic, FAM-Dyadic, CBCL</td>
</tr>
<tr>
<td>children under 11 yrs.</td>
<td>FAT, PPI</td>
</tr>
<tr>
<td>Insider/Outsider</td>
<td>Initial Family Interview &amp; Goal Attainment Scale</td>
</tr>
</tbody>
</table>

Note. FAM = Family Assessment Measure; CBCL = Child Behavior Checklist; PSI = Parenting Stress Index; FAT = Family Apperception Test; PPI = Parenting Perception Inventory.
assumed that functioning in one domain is interrelated with functioning in another domain, and measures are likely to provide information about more than one domain. For example, the Child Behavior Checklist (Achenbach & Edelbrock, 1983) is a measure of individual child symptomatology but also a measure of parent(s) subjective reality.

The process of conducting the assessment described involves two sessions with the whole family, one 2-hour assessment session and a second hour-long initial interview session. Parents complete background questionnaires on individual and family history prior to the assessment sessions. Within the initial session, the family completes as a group the genogram (to assess transgenerational patterns) (McGoldrick & Gerson, 1985) and the ecomap (to assess stress and coping in the family’s interface with its community) (Holman, 1983). Family members are next separated to complete individually self-report measures appropriate to their age, role, and the family’s unique organization (see Table 2). Finally, family members complete a series of five 5-minute interaction tasks derived from the assessment procedures of Beavers (Beavers, n.d.). In a second session, an initial interview focused on the presenting problem is conducted with the family. Both the interaction tasks and the initial interview are videotaped and rated by two clinicians using a clinical rating scale. Assessment data are collected before, during and after treatment. Pre and post data are analyzed, as described above, with a view to the consistency and inconsistency of patterns and themes across methods and system levels. Data are integrated into a pretreatment and posttreatment report. The goal of the integration in the pretreatment report is creation of hypotheses regarding symptomatology that will form the basis for treatment. The goal of integration of data in the posttreatment report is to measure change in the system as well as to develop further treatment recommendations. Ongoing therapy is evaluated with goal attainment scaling as described by Olson (1988).

A final step in performing the family assessment is the provision of feedback to the family regarding the assessment results. Interestingly, this step in the assessment process has been almost completely ignored within the family field. As noted in previous discussion, this may reflect the ambivalence with which assessment is viewed by family clinicians and its perceived incompatibility with many family treatment models. Additionally, many popular family therapy models (e.g., structural, strategic) are based on the careful manipulation of feedback to the family system such that change can be maximized and resistance minimized. Thus, a search for guidelines in the communication of assessment data to families yielded only one publication.
which carefully addressed this topic (see chapter 3 in Sanders & Dadds, 1993); it is based theoretically in behavioral family intervention. Although embedded within a behavioral paradigm, the communication process outlined by Sanders and Dadds (1993) appears useful to the communication of family assessment data regardless of theory base.

Sanders and Dadds (1993) recommend sharing assessment findings with family members to increase treatment compliance, treatment commitment, and generalization of learning. As noted, "This process of sharing hypotheses and inferences with clients promotes better, more open, informed participation and collaborative problem solving" (Sanders & Dadds, 1993, p. 94). Regarding guidelines for sharing assessment data, these authors note that the information shared should be based on valid and reliable measures, not only on a clinical interview. They further recommend several steps in the preparation of data for communication. The first is the integration of all available assessment information into a coherent, empirically derived formulation (set of propositions or hypotheses) about the nature of the problem and its causes. This formulation should also include hypotheses of family members regarding the nature and cause of the problem. Next, this clinical formulation must be translated into language that is comprehensible to the family, including children, when appropriate. Finally, the therapist must be sensitive to the possible emotional impact of the data and use the data to introduce treatment goals and procedures. Sanders and Dadds (1993) present a step-by-step one-session process, which they term "a guided participation model of information giving," as a means by which to accomplish their noted goals.

In summary, several variations of the multisystem-multimethod assessment of the family have been presented. Although the MS-MM approach resolves some of the challenges of family assessment, it is not without it critics. Reiss (1983) has argued that the integration of such diverse data as in a multisystem-multimethod matrix requires specific theories to relate, for example, social processes in families to processes in marriage, to processes in the parental subsystem, and both of those to processes in the parent-child relationship, sibling relationship, and individual child and adult functioning. This lack of theory development seriously limits current family assessment practice. Of the existing family assessment measures, those developed in conjunction with The Process Model of Family Functioning (i.e., the Family Assessment Measure-III and the Family Assessment Measure Clinical Rating) come closest to operationalizing the interface between
the multiple system levels of the family. According to Steinhauer (1987), "The process model...emphasizes understanding each parameter [of the family] as a separate entity and also stresses the effects of ongoing interaction at the interfaces between contiguous parameters and subsystems" (p. 86). The process model, however, can be criticized because dimensions of process across family system levels are shared, as reflected in the use of identical constructs across measures of subsystems, possibly at the expense of important distinctions in subsystem processes. In fact, the lower reliability of the self in family scale (see Skinner et al., 1984) may provide some support to this argument.

Another concern for clinicians or researchers attempting to follow the MS-MM model is the lack of adequate measures within a single theoretical framework to complete an assessment of the family. As noted above, only one family functioning model has developed measures applicable across family subsystems. This dilemma is particularly acute for the family with young children as no family functioning models have developed measures for elementary-school-aged children. Thus, a comprehensive evaluation of the family using the MS-MM model requires mixing measures developed from distinct (albeit frequently systems based) theoretical models. As noted earlier, low correspondence across family measures for identical constructs has been common (see Grotevant & Carlson, 1989, for discussion). A comparison across family relationships then must consider that differences obtained may be a reflection of the distinctiveness of the measures.

In summary, several issues in the analysis and interpretation of data using the MS-MM framework have been discussed. These include concerns regarding the comparability of data collected across system levels that are derived from measures that are not theoretically compatible, the lack of an accepted theoretical model for the effect of relationships on relationships within the family, and the lack of adequate measures for certain subsystems. These all reflect current limitations of available family assessment measures. In addition to the limitations of existing family assessment measures, however, there are challenges inherent in the analysis of family assessment data, even when the measure used is psychometrically adequate. Central to this issue is the coordination in data analysis of the multiple perspectives of family members. Proposed resolutions of this challenge will next be discussed.

**STEP 5: ANALYZING FAMILY ASSESSMENT DATA**

Several methodological problems are inherent in the analysis of family assessment data, and the failure to resolve these problems has been noted to confound studies relating family processes and indi-
vidual pathology. Clearly summarized by Cole and McPherson (1993), the methodological problems include: (a) the uncritical use of global family constructs; (b) the overreliance on a single informant in research; and (c) the underutilization of statistical techniques that enable the researcher to control for unwanted sources of shared method variance. The uncritical use of global constructs refers to the traditional practice of combining individual ratings of family characteristics into a family unit score. The overreliance on single informants in research raises the question of whether any single family member can be representative of a family shared perspective. Finally, these authors argue for the use of statistical techniques that tease apart shared and nonshared variance in the reports of family members as a proposed solution to the first two methodological problems.

The first concern posed by Cole and McPherson (1993) is the use of global as opposed to specific family constructs. As has been noted throughout this chapter, the emphasis of systems theory on the premise that the whole is greater than the sum of the parts has resulted in the development of numerous self-report measures designed to measure characteristics of the whole family. When data are collected from more than one member on aspects of the family, however, the researcher will inevitably get a somewhat distinctive report from each person. The essence of the dilemma is whether to regard a family member’s report about the family system to be the unique and subjective perspective of an individual or whether it might reflect objective traits and processes of the family as a system that could be confirmed by other knowledgeable informants such as outside observers.

The traditional solution to the dilemma of creating a family construct from multiple individual family member perspectives on self-report data has been the creation of a family score by aggregating individual scores. Some researchers pool and average scores across the individual family members to create a family unit score. This strategy has serious limitations. It rests on the assumption that all members perceptions are equally valid and can distort important deviations on the part of a single family member(s) from others in the family (Larsen & Olson, 1990). Other proposed solutions to the problem of multiple perceptions, therefore, are the derivation of discrepancy scores or ratio scores; however, these solutions continue to leave unresolved the possibility that the perspective of a particular member is more related to the individual pathology than the discrepancy between members and do not allow an assessment of the reliability of the individual perspectives.
The theoretical rationale for aggregation is the operationalization of a family variable. The methodological rationale for aggregating over multiple raters is that systematic variance due to the shared perceptions of the raters will cumulate when reports from different raters are combined, whereas the random effects of errors in measurement will not cumulate (Kenny & Berman, 1980). It is expected that, compared to the report of a single rater, the ratio of true-score variance to error variance (i.e., reliability) will improve with aggregation across multiple raters, and, in fact, aggregating over multiple family members' reports has been found to result in improved precision of measurement (Schwartz, Barton-Henry, & Pruzinsky, 1985).

The degree to which individual family members share perspectives on the family environment, and/or the degree to which one family member's perspective is more valid than another, has become of central concern to family researchers. Recent studies of nonclinical families consistently find that family members hold distinctive viewpoints regarding their family milieu and family relationships (Carlson, Cooper, & Spradling, 1991; Feldman, Wentzel, & Gehring, 1989; Hampson & Beavers, 1987; Hampson, Beavers, & Hulgus, 1989; Noller & Callan, 1986). Furthermore, in conflict with the clinical viewpoint that disagreement among family members regarding their family milieu signifies stress and dysfunction, (Moos & Moos, 1986; Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1983), low intermember agreement about family relationships has been reported to be typical of families rated by clinicians as the most, not least, healthy (Hampson, Beavers, & Hulgus, 1989). Thus, the distinctiveness of family member's perceptions regarding their family may be a critical dynamic to measure in relation to outcome variables.

These findings support the second concern noted by Cole and McPherson (1993), the overreliance on a single informant in family research. As noted by these authors, implicit in this strategy is the assumption that the informant's view of the family converges with that of other members and that the informant is unbiased in his or her view of the family. Because convergence of perspectives among family members is uncharacteristic, it cannot be assumed that any one perspective represents an unbiased view of the family. In short, it would only appear appropriate to collapse the scores of individual family members into a single family construct when little or no information about the individual (or subsystem) is lost (Cole & McPherson, 1993). This is a decision that requires a statistical solution.

The third principal concern of family assessment expressed by Cole and McPherson (1993) was the underutilization of statistical
techniques that enable the researcher to control for unwanted sources of shared method variance. A recent solution to the problem is the use of structural equations analysis to distinguish variance attributable to individual members of the family, the family as a system, and to error (Cook, Kenny, & Goldstein, 1991; Cole & Jordan, 1989; Cole & McPherson, 1993; Kenny & LaVoie, 1985). The following discussion of structural equations analysis is based on a previous articulation of this topic by the author (Carlson, Cook, & Cooper, 1995).

Structural equations analysis permits the separation of individual and shared perspectives on family functioning such that the presence of systematic individual respondent effects can be determined. In order to distinguish variance due to the unique perspective of family members from variance due to the common or group effects in family self-report data, one must first specify what is meant by a group effect. In the present context, a group effect is the degree to which the reports of multiple family members are in agreement. Another way to express this is to say that the family member’s reports are all measures of the same family construct, although their reliabilities and validities might vary. This type of agreement can be operationalized within a structural equations analysis by specifying that all the ratings of a particular construct load on a common factor. By way of contrast, variance unique to the individual is indicated by the extent to which a family members’ rating is not a function of the common underlying factor. The path model in Figure 1 presents these ideas graphically.

In the model the shared or family unit perspectives, indicated by the large circles, are unobserved or latent variables. The individual perspectives or reports of mothers, fathers, and adolescents (indicated by squares) are specified as imperfect indicators of the shared perspective on family conflict and control. The single-headed arrows directed from the latent variables of family conflict and family control to the observed scores (i.e., individual reports) reflect the hypothesis that family members’ scores are caused by the family’s actual levels of conflict and control (i.e., the intersubjective reality). The estimated value of these effects are factor loadings. In the completely standardized model, the factor loadings can be interpreted as reliability estimates. In other words, the extent to which a rater is a reliable judge of the family’s conflict or control is estimated by the extent to which his or her rating is predicted by the underlying factor. The residuals (E1 through E6) represent the extent to which the individual reports are not predicted by the common perspective. Conceptually, the residuals represent sources of variability that are unique to the individual family member. These sources may include errors of measure-
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Residuals

Family Raters

Latent Variables

Key: M = Mother, F = Father, C = Child.
Curved lines with double arrows are correlations.
Straight lines with single arrows are structural paths.

Figure 1.

ment and method variance (i.e., social desirability and acquiescence response sets), as well as variance due to the unique perspective of the rater. If a family member’s rating of the family on a particular domain were perfectly predicted by the latent variable, there would be no residual variance, which would imply both the absence of a unique perspective on the particular construct for that rater and the absence of errors of measurement.

In addition to providing a means to separate individual effects from group effects, structural equations analysis allows one to investigate and control for systematic rater effects. Systematic rater effects are represented in Figure 1 by the correlations between those residuals that are common to a particular individual family member. For example, the correlation between E3 and E4 measures the extent to which the individual effects in mother’s ratings of family conflict are associated with her individual effects in rating family control.
In summary, structural equations modelling permits the separation of individual from group or family effects. The latent variables provide an indicator of the family’s shared perspective and thus the operationalization of a family variable. The residuals provide a measure of the variance due in part to the unique perspective of the individual family member. Correlations between residuals permit the assessment of systematic rater effects in the data. Systematic rater effects, that is, the tendency of a particular family member to respond consistently regardless of dimension, unless examined, can result in spurious correlations between aggregate family unit variables (Kenny & Berman, 1980).

Structural equation modeling was used with self-report data by Cole and McPherson (1993) to separate individual and subsystem (not family unit) effects in an assessment of the family environment as it relates to adolescent depression. Using this method of data analysis these researchers were able to ascertain that mothers were the most valid reporters of the family environment and adolescents least valid. They also found significant differences between all family subsystems in their perceptions of family variables underscoring the distinctiveness of subsystems and measurement of that distinctiveness. Finally, characteristics of specific subsystems were found to differentially relate to the adolescent’s depression. Moreover, these researchers suggest, based on results of their analyses, that family researchers consider examining family subsystem structure differently depending on the phenomenon under investigation. For example, family subsystems were found to correlate highly on the dimension of interpersonal conflict; however, they diverged considerably on perceptions of cohesion. These data certainly suggest that within this sample some constructs could more appropriately be viewed as relational or subsystem constructs where scores could perhaps be aggregated, whereas others clearly reflected individual perspectives and aggregation would create spurious correlations between variables.

Structural equations modelling was used by the author (Carlson, Cook, & Cooper, 1995) to separate individual and whole family unit effects in an assessment of the family environment as it related to teacher ratings of adolescent school competence. Results indicated that both a unique and a consensus or a shared family perspective on several family variables could be identified. In addition, the shared perspective of control in the family was significantly related to teacher ratings of the adolescents behavior in school. Although a latent family variable was confirmed for key characteristics, systematic rater
bias on the part of the adolescents was also supported by the data, with adolescent’s responding differently from parents, regardless of the family characteristic to be measured.

Taken together these two studies provide an illustration of the usefulness of the structural equations approach to the analysis of family self-report data. Structural equations modelling has several advantages. It provides a valid method for the integration of individual data into a family variable. It permits examination of systematic rater effects, that is, the consistent discrepancy of one family member from the others. It can be used to determine the correct level of analysis regarding an outcome variable. Because structural equations analysis corrects for attenuation due to measurement error, it provides more adequate control for the effects of third variables. In addition, the structural equations approach, although used with self-report data in the current examples, is applicable to a broad range of family research questions and designs (see, for example, Cook & Goldstein, 1993; Kenny & Berman, 1980). There is, however, a significant disadvantage to structural equations analysis, that is, the necessity of a large sample size. A sample of 100, for example, is considered small. Thus, structural equations modelling is more relevant to family assessment for purposes of research than clinical practice.

Conclusion

It has been the purpose of this chapter to examine the theoretical and practical issues related to family assessment in research and clinical practice with particular attention paid to the challenges inherent in evaluating the family as a systemic whole. Illustrated throughout the chapter, the family researcher/clinician has numerous choices and few clear guidelines at each step in the assessment process. At Step 1, the importance of being clear about the goals of family assessment was underscored, as these may differ somewhat in the research versus clinical setting. In Step 2, clarity regarding one’s theoretical perspective was emphasized, because when to assess, how to assess, and what methods will be used in family assessment are strongly influenced by theoretical orientation. Moreover, multiple theoretical perspectives have in the past, and continue in the present, to influence the development of family assessment measures. Without a commonly accepted theory of family process and functioning, theoretical clarity for both the researcher and clinician becomes essential to the communication and comparability of family assessment results across samples. In Step 3, selecting measures, the choices in methods of family assessment were presented with an emphasis on
the two broad categories of observation and self-report methods. Advantages and limitations of all methods were noted and must be considered in selection. In Step 4, performing the family assessment, the multisystem/multimethod of family assessment was recommended for clinicians operating within the systems framework as a way to capture processes at multiple levels and from multiple perspectives (insider and outsider) of the family system. This is viewed as the "best possible" solution given the current state of family assessment development. As noted, the relationships between family levels and perspectives have not been adequately explained theoretically nor has a battery of measures been developed that permits a multisystem/multimethod evaluation within a single family functioning model. The multisystem/multimethod approach, which emphasizes a comprehensive evaluation of the family, was not uniformly recommended for family assessments conducted in research as the research questions may not necessitate such a broad assessment. Finally, in Step 5 of the assessment process, analysis and interpretation of the data, the use of the structural equations approach was discussed as an analytic method that permits the separation of individual from subsystem or individual from whole family system effects. The ability to differentiate the variance attributable to the parts versus the whole of the family system greatly enhances the validity of research findings regarding the linkages between family processes and individual outcomes.

This is an exciting, but also unruly, period in family theory and its related domain of family assessment. Despite the optimism of the early family studies researchers that a unified theory of the family would be forthcoming, none has gained acceptance. Family systems theory has perhaps been the most unifying theory, clearly providing a useful framework for clinicians; however, it remains challenging to researchers who attempt to operationalize systemic constructs and test systemic premises. Furthermore, greater, not less, diversity appears to be on the horizon for the field of family psychology. Diversity in family assessment can be expected as researchers attempt to explain processes in nontraditional family forms and within a multicultural social milieu. Diversity in family assessment is also anticipated as social scientists focus their lens on the interrelatedness of the parts of the family systems, that is, the linkages between individual family members and the whole, members and subsystems, and subsystems with the whole. Finally, the biological revolution in psychology is challenging existing methods and conceptualizations of the family (Bussell & Reiss, 1993). Family assessment in clinical
practice and research can no longer exclude consideration of genetic effects in measurement and must assume differential experience of the family by different members. Each of the theoretical advances noted challenges conceptualizations of the family as a system to become more precise. Although this is most welcome to the field of family studies and will likely result over time in much improved measurement of family processes, in the interim it would appear that the metaphor of the hydra from Greek mythology, noted by Grotevant and Carlson (1989) in their review of the domain of family assessment, continues to be relevant. As will be recalled, the hydra was a nine-headed monster, and when one head was severed, two new heads grew in its place. Within family psychology researchers have managed to develop psychometrically reliable and valid measures for use in family assessment and thus, one head of the hydra has been severed. In its place, however, emerge significant challenges to the adequacy of existing measures and analytic strategies designed to measure the family as a system.

REFERENCES


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