

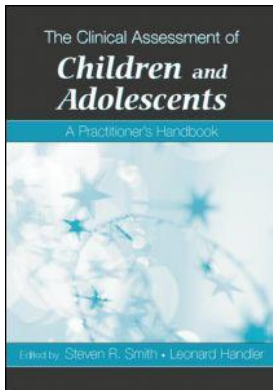
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THE ROUND-ROBIN FAMILY ASSESSMENT WITH SOCIAL RELATIONS MODEL ANALYSIS

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The approach to family assessment presented here is based on the notion that a family is a system of interdependent individuals. For many years family therapists, psychiatrists, clinical and developmental psychologists, and social workers have been advocating the view that individual behavior and functioning cannot be understood in isolation from the person's primary social context, usually the family. However, because the family system is a complex organization, the methods for studying interdependence in family relationships are complex as well. Most family assessment instruments have tried to simplify the procedure, obscuring the systemic nature of family relationships in the process. In this chapter I present the Round-Robin Family Assessment with Social Relations Model analysis (RR-SRM), a quantitatively based method for assessing individual families that goes a long way toward revealing the complexity of family systems and how each family member fits within the complex whole (Cook & Kenny, 2004). I begin with a brief discussion of the theoretical framework that underlies the approach. This is followed by an extended presentation of the method and the type of information it provides. Finally, I present a case example of a family seeking treatment for an adolescent who is in the prodromal phase of psychosis.

FAMILIES AS SYSTEMS

There are actually many different perspectives on what it means for a family to be a system, and different models of family therapy are loosely tied to these different conceptualizations. Structural family therapy (Minuchin, 1974), for example, emphasizes the importance of boundaries and structure within the system. When the boundary between the parent and child generations gets either too rigid or too diffuse, the child may develop a problem. Thus, boundaries are defined in terms of patterns of interaction between family members; they are relational. The model of brief family therapy developed by the Palo Alto group (Watzlawick, Weakland, & Fisch, 1974) emphasizes the unhelpful feedback loop that exists when the solutions people

attempt exacerbate the problems they were intended to solve. For example, a father may lose his temper in a childish way while trying to get his child to be more responsible and adult-like. One thing that these and most other systems-oriented theories of family have in common is the idea that “a change in one part of the system is followed by compensatory change in other parts of the system” (Bowen, 1982, p. 154). However, whether or not a change in one person will elicit a change in another person depends on whether there is interdependence in the relationship. Thus, interdependence is fundamental to any view of the family as a system. There is interdependence whenever what happens to one person matters (in a positive way or in a negative way) to another person. Much of what happens to us on a day-to-day basis is routine and has no effect whatsoever on those around us. Interdependence is observable only when certain thresholds are reached or when particularly significant events occur. Thus, the measurement of interdependence must be specific to particular variables within particular relationships.

Some forms of interdependence can be described as instrumental. For example, if my wife wins the lottery, it will undoubtedly affect how I spend my time. Other forms of interdependence are emotional. For example, when a child becomes ill, family members become emotionally focused on and behaviorally organized around the child. Often the emotional and functional aspects of interdependence overlap. Not only do a child’s illness and distress elicit caretaking and nurturance from his or her parents, but a parent may have to miss work to stay home with the sick child, take the child to the doctor, or otherwise alter the plans for the day. A sibling may temporarily feel neglected because of the focus on the other child. When a parent is the one who becomes ill, the other parent may take on the chores that the ill parent normally performs, expanding his or her usual workload. In some cases, a child may take on adult responsibilities prematurely to compensate for a parent’s illness. If it is a chronic illness, the child may forfeit his or her childhood.

The Individual within the System

In some respects, the ability to describe the organization of the family in terms of interpersonal dynamics is a goal in its own right. Thus, it is reasonable to study family variables without a particular focus on the outcomes of any one family member. However, that was not the original goal when psychiatrists and other professionals first began describing families as systems (e.g., Ackerman, 1956; Bateson, Jackson, Haley, & Weakland, 1956; Bowen, Dysinger, Brodey, & Basamania, 1957; Bowlby, 1949). The goal then was to understand how family relationships were affecting the course of illness for psychiatric patients (mostly people with schizophrenia). The ideas that were generated by the early thinkers were so exciting that understanding the system often became all important and the individual became almost insignificant. In this chapter I take the view that the focus of a clinician should be primarily on the outcomes of the identified patient. However, the role of the family should be understood in terms of whether it contributes positively or negatively to the identified patient’s (IP’s) outcomes and whether the patient’s outcomes contribute positively or negatively to family members’ outcomes. More radical views of the role of the family in the development of a person’s psychological problems, such as the idea that having a member with a psychiatric illness somehow benefits (provides homeostatic balance to) certain types of families (Jackson, 1957), have not to my knowledge been supported empirically.

The Assessment of Family Functioning

Historically, the most common way of assessing the family system quantitatively has been through the use of measures where an individual rates the family as a whole. The Family

Environment Scale (FES; Moos & Moos, 1981) and the Family Adaptability and Cohesion Scales (FACES III; Olson, Portner, & Lavee, 1985) are well-known versions of whole-family assessments. An example of an item from such a scale is "People in my family look out for each other." Such scales are problematic for a number of reasons (Cook & Kenny, 2005). First, each family member may have a different perspective on how the family is functioning (Jacob & Windle, 1999). Because the perspective of the rater is confounded with the target of the rating (i.e., the family system), it is difficult to know in any given case whether an extreme score is due to characteristics of the rater or characteristics of the family. Thus, when the developers of these instruments report validity data showing that the instruments distinguish between clinical and nonclinical families, the differences could be due to rater effects, perhaps reflecting an individually based illness, or it could be because the families are actually different in some way (i.e., a target effect). Summing over the ratings of different family members to create an aggregate score, an attempted solution to this problem, is not adequate. Ratings from as many as seven different family members may be needed to cancel out the effect of one extreme rater (Schwarz, Barton-Henry, & Pruzinsky, 1985).

A second problem with whole-family ratings is that the target of the rating is not as obvious as it might first seem. For example, if a teenage daughter does not get along with her mother, how should one rate the family as a whole? One family member may report that the family as a whole functions well, despite problems in one subsystem in the family. Another family member may believe that the mother-daughter dyad epitomizes the family as a whole, even though other relationships in the family are functioning well. Because the family is not a thing like a tree or a car, it cannot serve as an unambiguous target of an assessment rating. There are too many components of the system that might be differentially salient to different family raters. Because the items measuring whole family functioning have more than one possible meaning, methodologists call them *double-barreled items* (Judd, Smith, & Kidder, 1991). Such items should be avoided in the development of psychological or psychosocial measures.

The third problem is a conceptual one. It has been said that the difference between a group of individuals and a family system is like the difference between a pile of bricks and a house. The number of bricks in a pile and the number used to make a house can be the same, but it is the architecture, the way the bricks fit together, that defines the house. The same is true for the family system. The patterns among the relationships, not the group size or group average, define the proverbial "whole" that is greater than the sum of the parts. Ratings of dyadic and whole family functioning do not reveal the patterns in a family system, that is, how the individuals fit together. In this fundamental regard, measuring families at the group level disregards the defining features of the family system. I suspect that the idea that "the whole is greater than the sum of the parts" has been misunderstood by those who have developed measures of whole-family functioning. Rather than a pattern, they have given us a pile.

Finally, ratings of whole-family functioning assume that family members are similar to each other. Although there are aspects of the environment that family members do share (e.g., the size of the home, the neighborhood, income), family members do not share the same set of family relationships. For example, an overly rebellious child often has a conforming sibling in his or her environment, whereas an overly conforming sibling often lives with a rebellious sibling. A permissive parent often has to co-parent with someone he or she experiences as overly strict, whereas a strict parent often feels the need to compensate for the behavior of a permissive parent (Cook, 2001). The point is that family dynamics often make family members different as they compensate for the behaviors of each other. The existing measures of whole-family functioning do not measure or reveal such patterns.

THE SOCIAL RELATIONS MODEL

The only way to obtain full information on all of the components of the family system is to measure each person's thoughts, feelings, behavior, or perceptions vis-à-vis each of the other family members. Such measures are called *relationship-specific measures* (Cook, 2000). An example of a relationship-specific measure of perceived negativity is "This person criticizes me." When each member of a group reports on his or her relationship to each of the other group members individually—or is observed interacting with each of the individual members—it is called a *round-robin design*. In a round-robin design involving a mother, a father, and a child, there will be six relationship-specific measures (mother-father, mother-child, father-mother, father-child, child-mother, child-father). In a two-parent two-child family there will be 12 such measures, as illustrated by Figure 7-1.

The use of a round-robin design provides a snapshot of the family system from every angle. Moreover, each of these measures can be compared with the mean and standard deviation of a comparison sample to determine whether, relative to that sample, a particular relationship within the family is extreme. Even though this orientation takes very seriously the idea that the family is a system and that the relationships may be interdependent (more will be said about this shortly), it is not assumed that all family relationships defined over all variables of interest are always interdependent with all of the other family relationships. In a particular family, for example, a conflict may be restricted to one relationship. This is what is supposed to happen, in fact, in relatively healthy families. On the other hand, a conflict in one family relationship may be just the tip of the iceberg. It could be that the entire

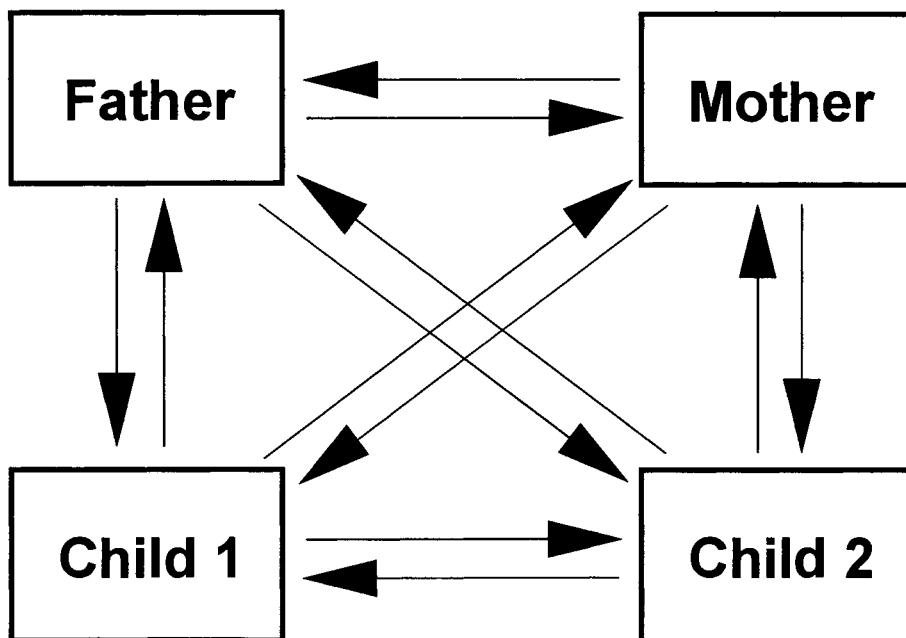


FIGURE 7-1. The round-robin family design. Each person reports on their relationship with each of the other family members. The arrows point from the person making the rating to the person being rated. In a 4-person family, 12 relationship measures are collected.

family is embroiled in conflict. One purpose of assessing the whole family is to determine where the conflict lies and who is affected.

It might seem that collecting data on directed family relationships according to a round-robin design and comparing these data with a set of appropriate norms would achieve the desired results of a family assessment; this is not true. Such measures are confounded by both psychological and relational factors that should be central to the psychosocial assessment. For example, if a given husband has a high level of trust for his wife, it could be because he is a trusting person. If we find that he shows a high level of trust in all of his relationships, we could conclude that he is a trusting person. Thus, the measure may reflect a characteristic of the perceiver. On the other hand, the husband may trust his wife because she is very trustworthy. If she is trusted by everyone, her husband's trust may say more about her than about him—a target effect. It is also possible that his trust of her is unique to his relationship with her. In this case it is not because he trusts everyone (his perceiver effect) and it is not because everyone trusts her (her target effect). Rather, it is a relationship-specific effect, perhaps reflecting the chemistry or goodness of fit of their personalities. Likewise, her trust of him may reflect her general level of trust (perceiver effect), his trustworthiness (target effect), or her unique experience of him (relationship effect). Note that his relationship effect with her is not assumed to be the same as her relationship effect with him. Rather, it is assumed that their relationship is two-sided. Finally, both his trust of her and her trust of him could reflect a characteristic of their family. In this case we would expect everyone in the family to trust everyone else.

As this discussion suggests, when a measure of one person's relationship with another is to be used in an assessment of family functioning, it is important to determine the specific sources of the score. It makes a big difference if we attribute a disturbance in a relationship to the perceiver when it really reflects characteristics of the target. Attributing the problem to the family as a whole when it really reflects a unique, isolated relationship effect is equally problematic. In contrast to other methods for the quantitative assessment of family functioning (see Cook & Kenny, 2005), the Social Relations Model (SRM; Kenny & La Voie, 1984; Cook & Kenny, 2004) provides the means of making these distinctions. According to the SRM, the thoughts, feelings, or behavior of one person toward another are functions of four systematic components plus errors of measurement. The systematic components are the actor effect, the partner effect, the relationship effect, and the group effect. Because we focus here on perceptions of family relations, actor effects are called "perceiver effects," partner effects are called "target effects," and the group effect is called the "family effect." Relationship effects are still called "relationship effects."

Procedure

In an RR-SRM assessment, relationship-specific data are collected from each member of the family participating in the assessment. This information is typically collected with questionnaires, but other modes of data collection could be used (e.g., interviewing young children who cannot complete questionnaires). There is no prescribed set of constructs that must be measured, but there should be a comparison sample for each type of relationship and construct to be assessed. The raw scores from a given family and the SRM effects that explain these raw scores can then be compared with the corresponding measures from the comparison sample. As in many evaluations, the specific scores are subtracted from the sample mean and divided by the standard deviation to obtain a Z score. The Z score indicates how much the individual deviates from the sample mean. Ideally the comparison sample is representative and the effects of age and sex can be controlled.

The formulas for the SRM effects have been presented elsewhere (Cook & Dreyer, 1984; Cook & Kenny, 2004; Warner, Kenny, & Stotto, 1979). For a two-parent two-child family measured within a round-robin design and assessing one psychosocial construct (e.g., negativity), there will be 1 family effect, 4 perceiver effects (1 for each rater), 4 target effects (1 for each partner), and 12 relationship effects. The Z scores for each of these SRM components can be interpreted, yielding information about family relationships at three levels of analysis. Perceiver and target effects operate at the individual level of analysis. Relationship effects operate at the dyadic level of analysis, and family effects operate at the group level of analysis. As numerous SRM studies have shown, family-, individual-, and relationship-specific factors can all contribute significantly to measures of family relationships (Cook, 1994, 2000, 2001; Cook, Kenny, & Goldstein, 1991; Delsing, Oud, De Bruyn, & van Aken, 2003; Ross, Stein, Trabasso, Woody, & Ross, 2005; Branje, van Lieshout, & van Aken, 2005).

Interpreting the Results

There are two steps in the interpretation phase of the RR-SRM assessment. The first step is to interpret the round-robin raw scores. For each variable (e.g., perceived negativity), there will be 12 raw scores for a 4-person family: Mother-father, Mother-child 1, Mother-child 2, Father-mother, Father-child 1, Father-child 2, Child 1-mother, Child 1-father, Child 1-child 2, Child 2-mother, Child 2-father, and Child 2-child 1. For a 3-person family there will be 6 such scores to interpret. As noted earlier, by comparing the observed scores for a particular family with the mean scores and standard deviations of the same measures observed in an appropriate sample of families, a Z score is obtained for each raw score. Thus, if the mother's report of the father's negativity toward her has a Z of 1.96, she experiences significantly more negativity from her husband than the average mother in the comparison sample. One may choose to interpret any Z score above or below 1.0 as above or below average, respectively, and report Z scores greater or less than 1.96 as "extreme."

The second step is to interpret the SRM effects. For clinical purposes, the primary focus should be the interpretation of the SRM effects that are components of a statistically significant raw score. If the mother reports unusually high levels of negativity from the father (e.g., a Z score > 1.96), one would then inspect the SRM effects that explain it. For the mother's report of the father's negativity, the relevant SRM components are the family effect, the mother perceiver effect, the father target effect, and the mother-father relationship effect. One does not generally need to explain raw scores that are not somewhat extreme. A more detailed introduction to the interpretation of the SRM effects follows.

Family Effects. The family effect is based on the average of all of the scores from a particular family (for a particular variable). It is the family mean and, therefore, represents the experience of the average member of the family. For perceived negativity a family Z score greater than 1.96 indicates that the average member of the particular family experiences significantly more negativity than the average member of the families in the comparison sample. For example, the mother's experience of negativity from the father may be explained by the fact that she lives in a highly negative family.

Perceiver Effects. Families are not monoliths, so different family members are likely to report experiences that differ from the average. The perceiver effects reflect the degree to which the experience of each family member differs from the family mean. The calculation

of perceiver effects is based on a weighted mean of a given person's ratings of his or her relationship with each of the other family members. The weighting is necessary to adjust for the fact that the person does not have him- or herself as a partner. The perceiver effect would be simply a weighted mean for the rater's experience, except that the family mean is subtracted out (see Cook & Kenny, 2004). Thus, if the mother's perceiver effect for negativity is positive, it means she experiences more negativity than the average member of her family. It is very important to inspect the actual SRM effect prior to interpreting the Z score for the effect. It is possible for a particular mother to have a negative perceiver effect (she experiences less negativity than the average member of her family), but her Z score is positive (her perceiver effect is greater than the perceiver effect for the average mother). A mother who experiences a high level of negativity from her husband may be a mother who experiences a higher level of negativity from all of her family members than does the average mother. Thus, her perceiver effect would provide quite a different explanation of her experience of the father than if it were found that her experience was due to the father's target effect.

Target Effects. Just as family members differ in terms of their experiences of other family members, so too do they differ in how they are experienced by other family members. Target effects reflect the degree to which each family member is experienced as different from the family mean. Like perceiver effects, target effects reflect deviations around the family mean. Consequently, the family member who is experienced as most negative will have a positive target effect for perceived negativity, and the family member who is least negative will have a negative target effect. As with perceiver effects, it is important to inspect the actual SRM effect before interpreting the Z score for the effect. The SRM effect reflects how the person compares with other members of the same family, whereas the Z score reflects how the effect compares with the same effect from the average family in the comparison sample. If the father's target effect for negativity is positive, it means he is experienced as more negative than the average member of his family. If the Z score for his target effect is positive, it means that his target effect is larger than the average target effect for fathers. In this case, the mother's experience of the father's negativity would be explained at least in part by his characteristics.

Relationship Effects. As mentioned in the discussion of perceiver effects, not all family members have the same experience of the family; thus their scores may differ from the family mean. Similarly, individual family members do not experience each of their partners in the same way. Consequently, a person's scores may vary across partners. Insofar as the perceiver effect reflects a kind of average score for the person's experience of his or her partners, relationship effects reflect deviations around this average score. Thus, relationship effects have the same relation to perceiver effects that perceiver effects have to the family mean. They qualify the perceiver effect by indicating how particular relationships differ from the person's "average" relationship.

The formulas show that a relationship effect is what is left after the family mean, the actor effect of the perceiver, and the partner effect of the target are subtracted from the observed or raw score for a particular relationship (see Cook & Kenny, 2004). One implication of this is that relationship effects qualify target effects. A target effect reflects how the person is experienced on the average (by the perceivers). However, a given person may be experienced differently by different perceivers. For example, the daughter may experience less negativity from the father than the mother does, and the son may experience less negativity from the father than the daughter does. In this scenario, the mother-

father relationship effect for negativity will tend to be positive, the daughter-father relationship effect will tend to be near zero, and the son-father relationship effect will tend to be negative.

The formulas for relationship effects (see Cook & Kenny, 2004) have the constraint that all of the relationship effects contributing to a particular perceiver effect must sum to zero, and all the relationship effects that contribute to a target effect must sum to zero. In three-person families, a particular perceiver has only two partners. If these two effects must sum to zero, his or her relationship effect in relation to one partner will be equal to and opposite in sign relative to his or her relationship effect in relation to the other partner. Likewise, the relationship effect for the relationship of one perceiver (e.g., mother) to a particular partner (e.g., father) will be equal to and opposite in sign compared with the relationship effect of the relationship of another family member (e.g., daughter) to that partner. This makes sense when one considers that a relationship effect is a unique adjustment to a partner. When there are only two partners, the unique adjustment reflects the difference between the two relationships after the family, actor, and partner effects have been removed. Another way of saying this is that there is only one degree of freedom for relationship effects in three-person families. In four-person families, there are six degrees of freedom for relationship effects. Consequently one can learn much more about unique family relationships when four or more family members are evaluated.

Assuming that the mother in our example is from a four-person family, we may find that one of the reasons she experiences her husband as high in negativity is her relationship effect in relation to him. If the mother-father relationship effect is positive, it means she experiences him as more negative than she experiences other family members on average. In this respect, it qualifies or moderates her perceiver effect. It also means that he is experienced as more negative by her than by other family members on average. In this respect it qualifies his target effect. If the Z score for the mother-father relationship effect is statistically significant, it means that compared with other mother-father relationships, this mother's unique adjustment to her husband is more pronounced.

Reciprocity. When the SRM is estimated on a sample of families, reciprocity can be measured for the "average family" at both the individual and dyadic levels of analysis (Cook, 1994). At the individual level, reciprocity is estimated by the correlation of the perceiver effect for a particular role (e.g., mothers) and the target effect for the same role. Thus, if mothers who perceive others as negative are perceived by others as negative, the actor-partner reciprocity correlation will be statistically significant. Actor-partner reciprocity correlations are estimated for each role (mother, father, and each child). At the dyadic level, reciprocity is measured by the correlation of the relationship effects of the two individuals in the relationship. For example, the mother-father relationship effects could be correlated with the father-mother relationship effects to measure reciprocity in marital dyads. Dyadic reciprocity is measured for each of the dyads in the family (mother-father, mother-child, and father-child).¹

Technically, reciprocity cannot be estimated for a given dyad with the SRM approach. Nonetheless, because reciprocity is so important to the evaluation of family systems (it represents the positive and negative feedback processes that constitute the family's self-organizing capacity), it is worthwhile to use the data to come to some tentative conclusions regarding the presence of reciprocity. Thus, when both the SRM effects that go into a reciprocity correlation are substantially (e.g., one standard deviation) above or below average, we may tentatively conclude that reciprocity has resulted in deviation of the effects from the norms.

Measures

To some degree, the variables one chooses for a family assessment should be determined by the theory of family intervention being practiced. For example, a follower of Boszormenyi-Nagy (Boszormenyi-Nagy & Spark, 1984) would want to use measures of family loyalty (Delsing, Oud, De Bruyn, & van Aken, 2003), and an attachment theorist would be interested in measures of interpersonal attachment security (Cook, 2000; Horowitz, Rosenberg, & Bartholomew, 1993). However, factor analyses of family assessment measures (Gondoli & Jacob, 1993; Jacob & Windle, 1999) and other measures of interpersonal relationships (Kiesler, 1987; Wiggins, 1979) have repeatedly demonstrated that there are two primary domains in the measurement of interpersonal relationships: Affiliation and Control. These dimensions also underlie the major assumptions of Interpersonal Theory (Leary, 1957; Kiesler, 1996), that the needs for control (power, dominance, or autonomy) and affiliation (love, acceptance, friendship) are two of the most basic human motivations. In the present assessment, two dimensions of each domain are used. Affiliation is represented by relationship-specific measures of Positivity (e.g., Person X shows approval or compliments me) and Negativity (e.g., Person X criticizes or complains about me). Both scales consist of four items scaled in a seven-point Likert format. The items were selected from a set of items originally used in the assessment of marital relationships (Wills, Weiss, & Patterson, 1974). Across the 12 family relationships represented in a two-parent two-child family, both scales have average reliabilities (coefficient alpha) of at least .77. The Control domain is measured by the Effectance dimension (e.g., It is easy for me to get person X to change his or her mind.) and the Acquiescence dimension (e.g., Person X can get me to do things I at first did not want to do.) of the Interpersonal Sense of Control scales (Cook, 1993, 2001). The reliabilities averaged across 12 family relationships are .80 for Effectance and .72 for Acquiescence.

The following illustration is written to resemble a written report of a Round-Robin Family Assessment with SRM analysis. It may be that in an actual report the statistics would not be included, in order to make the report more readable. They are included in this report to underscore the fact that the report is based on empirical results.

Illustration

This family was referred to the PIER Program because the daughter had symptoms that may be early signs of psychosis (a drop in functioning, brief auditory hallucinations, and social withdrawal). She has also been depressed and has been diagnosed with ADHD and ODD. She was a patient in an intensive outpatient program from August 2003 to January 2004. The mother (age 49), father (age 45), brother (age 15), and daughter (age 16) participated in the assessment. The questionnaires were completed in May 2004. The family members did not differ significantly in age from the nonclinical sample against which the family was compared.

Family members completed questionnaires concerning their relationships with each other. Two domains of family functioning were assessed, each of which contains two dimensions. The first domain is interpersonal affectivity, consisting of four items measuring Positive Affectivity (e.g., Person X shows approval or compliments me) and four items measuring Negative Affectivity (e.g., Person X criticizes or complains about me). The second domain is the interpersonal sense of control, consisting of six items measuring Interpersonal Effectance (i.e., the sense that one can influence the partner) and five items measuring Interpersonal Acquiescence (i.e., the sense of being influenced by the partner). Differences from the comparison sample were evaluated for the relationship-specific scales measuring each

dimension. In addition, for each dimension, four types of Social Relations Model effects were compared with those of the comparison sample: (1) Family effects reflect characteristics of the family as a group; (2) perceiver effects reflect the general experience of the respondent across his or her family relationships, independent of the overall family effect; (3) target effects reflect the general experience of family members in relation to a particular family member, independent of the overall family effect; and (4) relationship effects reflect the unique relationship of the respondent to the partner, independent of family, perceiver, and target effects. Z scores greater than or less than 1.50 are interpreted as "elevated" or "diminished," respectively, and Z scores greater or less than 1.96 are interpreted as "extreme."

Interpersonal Affectivity. The family mean for positivity, 3.77 on a 7-point (1–7) scale, differs significantly from the norm. Family members on the average report much less positivity from each other than is found in the standard sample (family $Z = -2.12$). The family mean is low because observed scores for three relationships are substantially below the standard score for those relationships. Compared with the standard family, the mother experiences significantly less positivity from her son ($Z = -2.22$), the father experiences significantly less positivity from the daughter (-2.27), and the daughter experiences significantly less positivity from the father ($Z = -2.96$). The low level of positivity the mother experiences from the son is not due to her characteristics as a perceiver, or to her son's characteristics as a partner. It is due primarily to the mother-son relationship effect. In other words, the mother experiences less positivity from the son than she does from other family members in general (relationship effect = -1.08 , $Z = -2.23$). The father's experience of low positivity from the daughter is explained only by the overall family mean. It cannot be definitively attributed to his perceptions, her traits as an interaction partner, or his unique relationship to her. The low level of positivity the daughter experiences from the father, however, is explained by three factors: (1) she comes from a family that is low in positivity; (2) her father is generally experienced as low in positivity (target effect = -1.25 , $Z = -1.91$); and (3) her unique relationship with him produces low positivity (relationship effect = -1.21 , $Z = -2.96$). On the other hand, the mother's target effect for positivity is large on the plus side (effect = 2.06 , $Z = 2.84$), indicating that she is experienced as more positive than the average member of her family.

The family as a whole does not differ from the average family in the amount of negativity experienced (family mean = 3.67 on a 7-point scale), but two of the observed relationship scores are large. The father experiences more negativity from his daughter than does the standard father ($Z = 1.89$), and the daughter experiences more negativity from the father than does the standard daughter ($Z = 2.95$). The negativity the father experiences from the daughter is not explained by his characteristics as a perceiver, but rather by the daughter's characteristics as a partner (target effect = 1.28 , $Z = 1.68$). The negativity the daughter experiences from the father is partially explained by his being someone who is generally experienced as a negative partner (target effect = $.84$, $Z = 1.90$). However, over and above his generally being experienced as negative, she has unique experience of his negativity (relationship effect = $.90$, $Z = 2.14$). Consistent with being experienced as the most positive family member, the mother is experienced as the least negative family member (target effect = -1.94 , $Z = -3.35$).

Interpersonal Sense of Control. In this family, individuals are relatively low, overall, in the sense of control (i.e., Effectance) in their relationships (family mean = 2.24 on a 5-point scale, $Z = -2.10$). Four of the observed relationship measures differ substantially

from the corresponding means in the standard sample. The father feels a high degree of control in relation to his son ($Z = 1.85$) and a diminished sense of control in relation to his daughter ($Z = -2.20$). Both the son ($Z = -1.54$) and the daughter ($Z = -1.92$) have a diminished sense of control in relation to the father. The father's elevated sense of control in relationship to his son is partially explained by his relatively strong sense of control in the family (perceiver effect = $.50$, $Z = 1.77$) and partially by his unique sense of control over his son (relationship effect = $.64$, $Z = 1.89$). His relatively low sense of control in relationship to his daughter is explained by the overall low sense of control of all family members (i.e., the family effect), the low level of control all family members feel in relationship to the daughter (partner effect = $-.75$, $Z = -1.80$), and his unique relationship to her (relationship effect = $-.65$, $Z = -2.14$). The daughter's weak sense of control in relationship to her father reflects the overall low level of effectance in the family and the daughter's generally weak sense of control as an individual (perceiver effect = $-.54$, $Z = -1.52$). The son's weak sense of effectance in relationship to the father is primarily due to the family group effect.

Acquiescence is the sense of being influenced by others. It can be elevated either because one feels controlled by others or because one gives control to others (i.e., one is responsive). In this family only one relationship differed substantially from the standard. The son reports being more acquiescent to the father than is typical of boys his age ($Z = 1.61$). However, the explanation for his relatively high level of acquiescence cannot be attributed to any particular component (family, perceiver, target, or relationship). These four SRM components were each within 1.5 standard deviations of their respective means in the standardization sample, but their cumulative effect resulted in an extreme score. Nonetheless, the SRM analysis reveals two interesting facts about acquiescence in this family. The mother's unique acquiescence to the father was less than in her average family relationship (relationship effect = $-.90$), a substantially smaller mother-father relationship effect than is found in the standard family ($Z = -1.87$). In addition, the father's unique acquiescence to the son is negative (relationship effect = $-.50$, $Z = -1.67$), indicating that he is relatively less acquiescent to his son than he is to other family members in general. Given that the raw scores for mother-father acquiescence and father-son acquiescence are not significant, we cannot conclude that these relationships are problematic. Nonetheless, the SRM effects do inform us about unique relationships in the family.

Summary

As a group, members of this family experience unusually low levels of positivity and interpersonal effectance. Thus, the daughter's difficulties reflect, in part, the consequences of living in a distressed and distressing social context. Compared with other members of the family, the mother is experienced as relatively more positive and relatively less negative. She experiences relatively less positivity from her son than from other family relationships, and she is relatively less acquiescent to her husband than to other family members. There do not appear to be any relationship-specific problems between her and her daughter. The father is experienced as less positive and more negative than the family average. This pattern appears to be the complement of the pattern observed for the mother, suggesting that she compensates for him. The father reports a relatively high degree of effectance in his family relationships, a sense of control that is even more pronounced in his relationship with his son. He also reports being relatively less acquiescent in relationship to his son. One would expect the father's high effectance and low acquiescence in relationship to the son to make the son feel dominated by his father, but there is nothing in the son's reports to substantiate this. The father

experiences relatively less effectance in relationship to his daughter. The daughter is like the father in being experienced as relatively negative by other family members. She experiences him as less positive and more negative than she experiences other family members in general, even after controlling for the father's target effect (i.e., that he is generally perceived as high in negativity). The daughter's family difficulties are not limited to her relationship with her father. She is on both the giving end and receiving end of a diminished sense of effectance, even after controlling for the overall low level of effectance experienced by the average family member. That she neither experiences nor affords others a sense of control is indicative of a reciprocal power struggle and is consistent with her diagnosis of ODD.

Treatment Implications. In this family the daughter is the "identified patient" and she has also been identified as being at risk for psychosis. Consequently, the highest priority for treatment is to alter family dynamics that might be psychologically distressing for her, because such stressors may precipitate a conversion to psychosis. Negativity directed toward a vulnerable family member, often referred to as Expressed Emotion (Brown, Birley, & Wing, 1972) is known to be a significant psychosocial risk factor for psychosis. In this family, such negativity is most likely to come from the father. He is experienced as negative not just by the daughter, but by all family members. Unfortunately, the daughter experiences even more negativity from him than do other family members. Treatment that reduces the father's overall level of negativity and alleviates the relationship-specific conflict between father and daughter would have the greatest immediate benefit for the daughter.

It would be helpful to assess whether the father's negativity belies an underlying affective disorder. However, treatment of the father-daughter conflict will also need to address the dynamics of control. The degree to which the daughter allows other family members a sense of control (i.e., effectance) is significantly less than what is typical in well-functioning families, and the father experiences even less control in relationship to her than other family members do. His lack of control in relation to her may be a source of his negativity. The daughter also has a very low sense of control in relation to other family members, suggesting a reciprocal exchange characteristic of a power struggle. A diminished sense of control in family relationships can be a source of learned helplessness and depression. For the daughter to feel more control in her relationships, she may have to give more control to others. Control is usually given more freely to those to whom one has a positive affective relationship, so the key to the power struggle might also lie in improving the affective climate. This process may begin by strengthening the mother-daughter relationship, the least problematic of the daughter's family relationships. That the mother, like the daughter, resists influence by the father, may be a point where their bond may be accentuated. However, the mother's resistance of the father's influence also suggests conflict in the marital relationship. It may be that the daughter has been fighting the mother's battle with the father, and that the label of ODD has been her reward for this activity. Further investigation should clarify whether the daughter's behavior is related in any way to marital problems.

DISCUSSION

In this article I describe and illustrate the RR-SRM family assessment. Additional information on this approach can be found in Cook and Kenny (2004) and Cook (2005). The purpose of the RR-SRM family assessment is not to replace other psychological or interpersonal assessments, but rather to complement them with empirically based information regarding

the interdependence that exists among family relationships, the interpersonal dynamics that result from interdependence, and the subjective experience these experiences bring to family members.

Clearly the application of the SRM to family assessment is in its infancy, so there is much development yet to take place. In particular, the comparison group of families is a sample of convenience and should not be considered representative (Cook, 2000, 2001). It is also quite likely that some of the decisions about procedures presented at this time will be modified as experience with the approach is gained. For example, a novel aspect of the method presented for the first time in this chapter is the emphasis on SRM explanations of statistically significant raw scale scores of family relationships. Previously all statistically significant SRM components were interpreted as clinically significant regardless of whether they were tied to statistically significant scale scores. Given that the raw scale scores are aggregates of the SRM effects, it is their deviation from the norm that implies clinical significance and makes important the explanations provided by the SRM effects.

Despite the current shortcomings, the RR-SRM approach has numerous advantages over conventional family assessment methods. Instead of treating all of the individuals in the family as if they have the same experience of the family, the SRM approach preserves individual, dyadic, and family-level factors that contribute to whole-family functioning. At both the individual and dyadic levels of analysis, this approach provides information on the direction of effects, clarifying, for example, whether a relationship score should be attributed to characteristics of the perceiver or the target. By investigating both sides of relationships, the presence of reciprocal dynamics can also be preliminarily inferred. Finally, the RR-SRM approach is psychometrically more precise because it does not require the use of ambiguous, double-barreled items.

Although the RR-SRM approach can also be applied to observational data (e.g., Cook & Dreyer, 1984; Stevenson, Leavitt, Thompson, & Roach, 1988), there are several reasons why one might prefer to use a self-report approach to family assessment rather than a more objective, observational approach. Observational approaches to family assessment are much more time and labor intensive. The data must be collected within a standardized observational context (e.g., a problem-solving task), the interactions must be coded with the use of a validated coding system by trained, reliable coders, and the results of these observations must still be compared with some standard against which they can be judged to be unusual or maladaptive. Although observational assessments do not pose a problem for a funded research program, for the ordinary clinician they are not feasible.

Although lacking in objectivity, most clinicians would agree that family members' subjective experiences of each other's behavior is as important as the behavior itself in determining subsequent outcomes. For example, whether one person perceives another to be rejecting can be quite idiosyncratic and may reveal more about the perceiver than about the sender of the comment. However, the perceiver will likely respond according to his or her interpretation of the situation, regardless of the sender's intention. Consequently, the subjective experience of family members is essential to the understanding of family process. Nonetheless, the SRM analysis does add a quasi-objective aspect to the assessment. When all family members have the same experience of a particular partner (i.e., there is a target effect), one can no longer say that an individual's experience of that person is subjective. Minimally, the experience is intersubjective and quite likely reflective of an objective reality. Without the SRM analysis, however, perceivers and targets are totally confounded.

Further support for the RR-SRM family assessment will come from data being collected in a randomized controlled trial of multi-family psycho-educational problem-solving groups

(McFarlane, Cook, Downing, & Robins, 2003). These data will relate the components of the RR-SRM assessment to symptoms of young adults at risk for psychosis and to their responses to both medication and psycho-social treatments. Moreover, plans are under way to computerize the input of family responses to the items, scoring, and interpretation of the results via an internet connection. This will make possible the dissemination of the approach to the treatment community at large. Given its numerous advantages over other approaches, greater accessibility to the assessment procedure plus supporting validity data could make the RR-SRM family assessment the gold standard for the quantitative assessment of family functioning.

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NOTE

1. One should not infer reciprocity if two raw scores representing the two sides of a relationship (e.g., husband and wife) are both significantly above or below the mean. Both raw scores could be significant because the family effect is significant. Gottman (1979) has made a similar statement about the correlations between raw scores.

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