Chapter 9

Peer-Referenced Assessment

Chapter Questions

- What contributions can peer-referenced techniques make to clinical assessments of children and adolescents?
- What are some ethical concerns in the use of peer-referenced assessments?
- What are the different types of peer-referenced assessments?
- What do sociometric exercises measure and why might this be an important component of clinical assessments?
- Besides social status, what other areas of a child's behavioral, emotional, and social functioning can be assessed by peer nomination techniques?

Peer-referenced assessment strategies are assessment techniques in which a child or adolescent's social, emotional, or behavioral functioning is assessed by obtaining the *perceptions of the child's peers*. One of the most common types of peer-referenced assessment is the sociometric assessment, in which the child's acceptance in or rejection by his or her peer group is determined. We discuss sociometric techniques in more depth later in this chapter. However, sociometric assessment should not be considered synonymous with peer-referenced assessment. There are many aspects of a child's adjustment, not just peer social status, that can be usefully assessed through the perceptions of a child's peers. A sampling of the most common psychological domains suitable for peer-referenced assessment and the different measurement strategies are the focus of this chapter.

The main reason for using peer-referenced assessment is that it provides important information that cannot be obtained from other sources. The importance of peer perceptions has both an intuitive and empirical basis. A child or adolescent's social milieu is considered a major influence on a child's psychological adjustment in most develop-

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mental theories. Therefore, one of the most devastating effects of a child's behavioral disturbance is the effect that it may have on his or her social environment (Mayeux, Bellmore, & Cillessen, 2007). Also, interventions that change many aspects of the child's behavior may not result in changes in the child's peer relationships (Hoza et al., 2005).

For these reasons, understanding how a child is viewed by peers is critical in developing a complete picture of a child's or adolescent's overall psychological adjustment. Peer-referenced assessment, whether it focuses specifically on a child's social relationships or indirectly assess a child's social milieu by determining how peers perceive a child's emotional and behavioral functioning, allows for a better understanding of a child's social network.

The empirical literature supports this theoretical emphasis on peer relationships. Parker and Asher (1987) conducted a meta-analytic review of studies that have tested the utility of peer relationships (primarily acceptance and aggression) in predicting later outcomes (dropping out of school, criminality, and psychopathology). Two of the major findings of this review were that low peer acceptance was consistently related to dropping out of school and that peer-rated aggression was consistently related to delinquency. Similarly, in another study of 445 girls who were first studied at ages 10 to 13, rejected peer status was related to increased risk for criminal offending and alcohol abuse almost 40 years later (Zettergren, Bergman, & Wangby, 2006).

This literature, therefore, clearly supports the importance of peer perceptions in predicting the negative outcomes of a child and, hence, it illustrates the need to assess and to intervene in a child's social milieu. Box 9.1 summarizes several other interesting findings from the Parker and Asher's review that have implications for the use of peer-referenced techniques in clinical assessments.

The assertion that peer perceptions cannot be obtained by other methods comes from the meta-analysis conducted by Achenbach, McConaughy, and Howell (1987). These authors calculated the average correlations across the studies between peer reports of social, emotional, or behavior functioning with the reports of teachers and with the child's self-report. Across 23 studies reviewed, the average correlation across all psychological domains was .44 between peer and teacher ratings, with the correlation being somewhat higher for behavioral (.47) problems than for emotional (.35) problems. Similarly, across 20 studies in which the correlation between peer ratings and the child's self-report of adjustment was determined, the average correlation was .26, again with the correlation for behavioral difficulties (.44) being somewhat higher than for emotional difficulties (.31). These data suggest that there are substantial differences between how peers rate children and how teachers rate children and how children describe themselves. Therefore, to understand a child's peer network that is heavily influenced by peer perceptions, these perceptions must be assessed directly.

Ethics of Peer-Referenced Strategies

Despite research on the unique and important contributions that peer-referenced techniques can make to clinical assessments, these techniques are probably one of the least used assessment techniques of any reviewed in this book. The failure to include peer-referenced techniques in many assessment batteries could be, in part, due to the paucity of standardized, well-normed, and readily available assessment procedures. This exclusion could also be due to the time-consuming nature of many of the peer-referenced techniques used in the research literature. However, as we discuss later in this chapter, there

Box 9.1

Research Note: Meta-Analysis of the Association Between Peer Relationships and Later Psychological Adjustment

Parker and Asher (1987) completed a comprehensive meta-analytic review of the predictive association between poor relationships in early to middle childhood and later (adolescent and adult) psychological adjustment. As mentioned in the text, this review clearly supported the importance of a child's social context in general, and peer perceptions of a child specifically, in terms of predicting later adjustment.

However, in addition to illustrating the overall importance of peer relationships to clinical assessments of children, this review had several other interesting results that can guide the assessment process. For example, in terms of predictive accuracy, a consistent pattern of errors emerged in which peer-referenced procedures tended to make few false-negative errors in predicting which children would have poor outcomes, but there were many false-positive errors. That is, most children who have problems later in life had peer relationship problems. However, a large number of children with relationship problems do not show later difficulties. Knowledge of this type of predictive relationship can be quite helpful in interpreting peer-referenced assessments.

The authors of this review also caution users of the literature to be aware of the fact that, despite knowing that there is a predictive relationship between early peer relations and later adjustment, we do not know *why* this relationship exists. For example, it could be that because these children are excluded from normal patterns of peer interactions, they may also be excluded from normal socialization experiences and deprived of important sources of support. However, it is also possible that early forms of a pathological process that may emerge more fully in adulthood may have a negative influence on early peer relationships. In essence, peer relationships could be an accidental by-product of a pathological process and not really have a causal relationship with later adjustment.

A final relevant point made by the authors of this review is the fact that future research should attempt to obtain a more comprehensive picture of children's social relationships. For example, the authors found very limited data on shyness and social withdrawal in predicting later outcomes, with most studies relying on indices of acceptance and aggression as the primary aspects of social relationship to be studied. Other aspects of peer relationships that could be studied systematically include impulsive/hyperactive behavior, bossy and demanding behaviors, and behaviors that define attributes that approximate how children choose their friends (e.g., Is this child fun to play with?).

Source: Parker, J. G., & Asher, S. R. (1987). Peer relations and later personal adjustment: Are low-accepted children at risk? *Psychological Bulletin*, 102, 357–389.

are several relatively time-efficient peer-referenced procedures that have been used extensively in research which could add to a clinical assessment battery. Therefore, the low frequency of use is probably the result of other considerations.

One such consideration could be the intrusiveness of peer ratings. Peer-referenced assessment typically involves the use of many peer raters, making it more intrusive than many other assessment techniques. For example, asking a teacher to complete a behavior rating scale adds only one person to the assessment process. In contrast, having a child's class participate in a sociometric exercise involves 15–30 additional people in the assessment process.

In addition to the sheer number of people that must be involved, the people involved are typically children who may

not appreciate the need for discretion and confidentiality. Therefore, special precautions to limit the intrusiveness of this intervention are essential. There are several necessary precautions for the use of any peer-referenced strategy. First, it is important that both the parent and the child being assessed are clearly informed and give their consent to the peer-referenced assessment (Gresham & Little, 1993). Second, peer-referenced techniques should be designed to ensure that the child's classmates do not know that the assessment is focused on any one individual (see Box 9.2 for an example of instructions provided in a sociometric exercise). Finally, administration of peer-referenced techniques should be carefully monitored to ensure that answers are not shared, and those involved in the assessment should be instructed on the importance of the confidentiality of their responses after the assessment (McConnell & Odom, 1986).

One of the most controversial aspects of peer-referenced strategies is the use of negative ratings from peers (e.g., nominations of children who are not liked or who are aggressive). Teachers and parents are often concerned about the possibility that these negative ratings will lead to social rejection and other negative reactive effects. Fortunately, over 50 years of research using peer-referenced strategies has not found any evidence for these negative effects (McConnell & Odom, 1986). In fact, the potential for negative effects has been specifically tested (Hayvren & Hymel, 1984; Mayeux, Underwood, & Risser, 2007). For example, Mayeux, Underwood, and Risser (2007) completed a sociometric exercise with 91 third graders and then interviewed them and their teachers. Their results indicated that children were not hurt or upset by the procedures nor did the participants feel that their peers treated them differently following the testing.

Despite the lack of evidence for reactive effects of negative ratings, it would be nice to be able to use only positive ratings. Unfortunately, research has clearly shown that negative ratings are not simply the opposite of positive ratings. Negative ratings add crucial additional information to the assessment. For example, rejected children are not simply unaccepted children in terms of peer status, but they are actively disliked by their classmates (Coie, Dodge, & Copotelli, 1982). Therefore, one cannot simply assess peer acceptance and then consider those low on acceptance as being rejected by peers. As we discuss later in this chapter, this rejected status, which requires negative ratings to assess, is one of the most important indices of a child's social status. Therefore, negative ratings appear to be an important part of a peer-referenced assessment strategy. However, clinical assessors should be sensitive to concerns about negative ratings and assure parents and teachers that appropriate safe-guards are being used in the assessment procedures and explain to them the critical need for this information in the evaluation.

Types of Peer-Referenced Techniques

Peer Nominations

Peer nominations are the oldest and most commonly used form of peer-referenced assessment (Asher & Hymel, 1981). The procedure involves asking children in a classroom to select one or more of their peers who display a certain characteristic (e.g., liked, fights, cooperates, shy, leader). Although this procedure is relatively simple and straightforward, there are several variations of peer nomination procedures. For example, there can be a predetermined number of children that can be selected in each category (*fixed-choice format*). Alternatively, the number of peers nominated in each category can

Box 9.2

Instructions for Two Peer-Referenced Techniques

Assessor-Administered Exercise with Unlimited-Choice Format (Carlson, Lahey, & Neeper, 1984)

After discussing the importance of confidentiality, sheets are provided to each child with the class role and each of 30 nomination categories.

Now we're ready to begin. We have written down lots of things kids do, and we would like you to check which kids in your class do these things. Look across the list of names along the top of the page until you find your name. We'll ask you to tell us about what things you do later, but for now put a line through your name and draw a line down the column your name is in so you will remember not to check these things for yourself. Go to the other page and do this every time you see your name.

Now go back to the first page. See the number one? After the number one, it says, "Those who are tall." Now look across the names. Who is tall? Put an "X" under their name. Who isn't tall? Put a "0" under their name. Go through every name one at a time and put an "X" under it if they are tall, and a "0" under it if *they* aren't tall. Be sure to read every name on the top so you don't forget to check anyone. When you finish with number one, you may turn back to the first page and wait for the rest of the group to finish.

Following the completion of item one, all subsequent items were completed in a similar manner, with each item read aloud.

Items

1. Those who are tall
2. Those who say they can beat everybody up
3. Those who complain a lot
4. Those who bother people when they are trying to work
5. Those who stand back and just watch others who are playing
6. Those who get mad when they don't get their way
7. Those who start a fight over nothing
8. Those who act like a baby
9. Those who do not follow the rules when they play games
10. Those who tell other children what to do
11. Those who try to change the game when they join in
12. Those who help others
13. Those who speak softly and are difficult to understand
14. Those who do not pay attention when someone is talking to them
15. Those who daydream a lot
16. Those who keep talking even when someone is talking to them
17. Those who ask a lot of questions when they join a group
18. Those who always talk about themselves when they join the group
19. Those who do not want your help even if you offer it
20. Those who do not know how to join in the group
21. Those who show off in front of the class
22. Those who share their things
23. Those who give in to others too much
24. Those who are afraid to ask for help
25. Those who often change the subject
26. Those who are honest
27. Those who do not try again when they lose
28. Those who can not wait their turn
29. Those who never seem to be happy
30. Those who let others boss them around a lot

Teacher-Administered Exercise with Fixed-Choice Format (Strauss et al., 1988)

A. Pass out paper to all of the children in the class.

(Continues)

Box 9.2 (Continued)

B. Read the following statement to the children: "Class, I want us to do an exercise now that will help me learn more about you as people and about your friendships. It will just take a couple of minutes and should be fun, but if anyone does not want to take part, you may feel free to sit quietly while the rest of us do the exercise. Because the questions that I will ask are about private feelings, I want to ask you not to discuss your answers with each other and not to let your neighbors see your paper."

C. Then ask the children to list the *three* children in the class that you…
   1. Like the most
   2. Like the least
   3. Think fight the most
   4. Think are the meanest
   5. Think are the most shy

D. After the exercise is completed, collect the papers. To protect the feelings of the children, you may wish to briefly look through the collected papers and state, "I haven't had a chance to look carefully at these, but it looks like everybody was named as most liked by at least one person. That's really nice." Reiterate the need for the children not to discuss their responses with each other.

E. Count the total number of children who participated in the exercise, and the number of times the child being evaluated was named in response to each of the five questions. Please write this information on the back of the page and mail it in the self-addressed stamped envelope provided.

F. Thank you again for your assistance. If the parent gives us permission to do so, a copy of the evaluation results will be sent to you. It is important to note that the fact that this child is being evaluated does not necessarily mean that he or she has psychological problems; many of the children that we evaluate turn out to be perfectly normal.

Note: Procedures are provided with permission of the authors.

be left entirely to the child providing the nominations (*unlimited-choice format*). An example of instructions for both a fixed-choice and an unlimited-choice format is provided in Box 9.2. Although some authors prefer the unlimited-choice format to avoid forcing a set number of children into categories, especially negative categories (McConnell & Odom, 1986), there is little empirical evidence for any clear advantage of one format over the other.

A second dimension on which peer nomination procedures can vary is the degree of explicitness that defines the nominating pool. For example, some procedures simply instruct the children to consider any child in their class (Strauss, Lahey, Frick, Frame, & Hynd, 1988). In contrast, other nomination strategies provide children with a roster of names from which to choose (Coie & Kupersmidt, 1983) or may even provide pictures of classmates from which the rater selects nominees for the individual categories (Moore & Updegraff, 1964). The rule of thumb is that the younger the rater, the more explicit the definition of the nominating pool should be. Also, if the pool of potential nominees is not within a well-defined group (e.g., only part of a class is participating in the procedure), then more explicit definitions are required.

Because of the difficulty and level of intrusiveness involved in collecting peer nominations from entire classrooms, Prinstein (2007) compared two alternative methods for obtaining peer perceptions. That is, this author compared nominations obtained from a full sample of 232 adolescents ages 15–17 years old, with those obtained (a) using only a randomly selected subsample of 26 students and (b) using only two students in each class to

rate other students. These students were chosen by their teachers as "social experts." The correlations between nominations obtained in the full classroom and those completed by experts were generally quite high (*r*'s ranging from .55 to 93). Similar correlations were found between the full classroom procedure and the nominations completed by a random subsample (*r*'s ranging from .49 to 90). Thus, these results suggest that there may be some less cost intensive alternatives to obtaining peer nominations, at least in classrooms with adolescent students.

The typical level of interpretation of a peer nomination procedure is the number of times a child was nominated in a given category. This number is then compared to a normative base for that particular procedure to see if the child was nominated at a level that is atypical for children his or her age. However, there are some instances where more complex combinations or adjustments of peer nominations are desired. For some purposes it may be useful to compare the number of nominations obtained by a child in one area with the number of nominations that the same child received in another area. For example, in sociometric techniques, one often compares the number of times a child was nominated as Liked Least with the number of times he or she was nominated as Liked Most by classmates. This allows one to determine the relative balance of two nomination categories. However, to make such comparisons, the two scores should first be converted to standard scores (e.g., Z-scores; Coie et al., 1982) to equate for possible differences in the variance of the raw scores.

A second type of conversion is warranted if one wishes to compare nominations of one child with the nominations of another child from another nominating pool (e.g., different class). To make this comparison the number of nominations must be adjusted to equate scores for differing class sizes. For example, 5 nominations of Most Cooperative in a class of 12 should be interpreted differently than 5 nominations in a class of 30. As an example of this conversion, Strauss et al. (1988) divided the number of nominations obtained by a child by the number of children participating in the assessment. The quotient was multiplied by 23, so that the nominations were all expressed in terms of a common class size of 23.

Sociometrics

Sociometric techniques focus on a specific, important aspect of a child's peer relationships: a child's social status. It answers the question of whether or not a child is liked and accepted by his or her peer group. Sociometrics do not assess specific behaviors of the child. It answers the question of whether the child is liked and not what is the child like or why the child is liked (Asher & Hymel, 1981). Sociometric exercises have appeared in the research literature since the 1930s (see Gresham & Little, 1993; Hughes, 1990), and the most commonly used procedure has changed very little over this time. An example of this basic technique from Strauss et al. (1988) is provided in Box 9.2.

Sociometric exercises can take the form of peer ratings, whereby peers rate a child on a Likert scale as to how well liked or disliked he or she is (Hamilton, Fuchs, Fuchs, & Roberts, 2000). However, the more common method of obtaining sociometrics is through peer nominations. In this technique, children can be nominated by peers as a child who is *Liked Most* (sometimes defined as Most like to have as a best friend or Most like to play with) and/or they can be nominated by peers as a child who is *Liked Least* (or alternatively, Least like to have as a friend or Least like to play with). Although there is no definitive normative study that specifies exact cut-offs for when nominations are considered indicative of problems,

in a fixed response format allowing three nominations in each category in a class size of approximately 20 students, Liked Most (LM) nominations of less than two and nominations of Liked Least (LL) of greater than four are generally considered indicative of problems in peer relations (Dodge, Coie, & Brakke, 1982; Green, Vosk, Forehand, & Beck, 1981; Strauss et al., 1988).

A common way of interpreting sociometric nominations is by combining the LM and LL nominations into five distinct social status groups (Hughes, 1990). As mentioned previously, when combining LM and LL nominations, the nominations should first be converted to standard scores to equate for potential differences in the variance of the two categories. The five groups are based on two difference scores. The social preference score is the difference between LM and LL scores (LM – LL = Social Preference). High social preference scores indicate substantially more LM nominations than LL nominations. The social impact score is the sum of the LM and LL scores (LM + LL = Social Impact). High social impact scores simply determine the number of nominations a child receives, regardless of whether they are negative or positive. A combination of these scores leads to a child being considered in one of several social status groups: Popular, Rejected, Neglected, Controversial, and Average. The method of combining these scores to determine a child's social status and two computational formulas that have been used in research are provided in Box 9.3.

Although there have been several variations in the formulas for determining a

Box 9.3

Determining Social Status from Sociometric Nominations

Category	Description	Computational Formula Using Standard Scores (Coie, Dodge, & Coppotelli, 1982)	Computational Formula Using Raw Scores (Strauss et al., 1988)
Popular	High social preference scores (LM – LL) but few LL nominations	(1) ZLM – ZLL > 1 (2) ZLM > 0 (3) ZLL < 0	(1). LM > 4.5 (2) LL < 1.5
Rejected	Low social preference scores with few LM nominations	(1) ZLM – ZLL < –1 (2) ZLM < 0 (3) ZLL > 0	(1) LM < 1 (2) LL > 4.5
Neglected	Low social impact scores (LM + LL) and few nominations in LM category	(1) ZLM + ZLL < –1 (2) LM = 0	(1) LM < 1.5 (2) LL < 1.5
Controversial	High social impact scores and above-average LM and LL scores	(1) ZLM + ZLL > 1 (2) ZLM > 0 (3) ZLL > 0	
Average	Average social preference scores	(1) ZLM – ZLL > –.5 (2) ZLM – ZLL < .5	

NOTE: .Both computational formulas are based on a fixed-choice format allowing for three nominations in both the Like Most (LM) and Like Least (LL) categories. ZLM refers to LM nominations converted to standard Z-scores and ZLL refers to LL nominations converted to standard Z-scores. The unstandardized formulas are based on scores adjusted to a class size of 23.

child's social status, the validity of these groupings has been consistently shown in research (see Gresham & Little, 1993), including showing good convergence with statistical methods for clustering children based on peer nominations (Zettergren, 2007). Further research has suggested that these nominations are quite stable over time. Jiang and Cillessen (2005) conducted a meta-analysis of 77 studies of over 18,339 participants and reported that the average level of stability for social status over periods of less than 3 months ranged from r = .70 to r = .80. For periods of over 3 months, the average ratings ranged from .52 to .58.

Importantly, research has suggested that sociometric nominations can be influenced by the racial composition of a classroom with social preference scores being higher when nominations are obtained from same-race peers (Singleton & Asher, 1979). Jackson, Barth, Powell, and Lochman (2006) reported on 1,268 sociometric nominations from children ages 9 to 11 years old across 57 classrooms that ranged from 3 to 95% African-American. The results indicated that African-American students nominations were more sensitive to the racial composition of the classroom than for Caucasian students. Specifically, African-American students' social preference scores and nominations for fighting and being a leader improved as the percentage of African-American students in the classroom increased. The effects for Caucasian students was less clear, although there was a small effect of Caucasian students having lower preference scores if the classroom was less than 33% Caucasian.

Social status has also been associated with emotional and behavioral characteristics of the child. One of the most consistent findings is that rejected children show higher levels of aggressive and acting-out behavior than nonrejected classmates (e.g., Dodge, 1983). However, neglected status is also associated with problems in adjustment, most notably with anxiety (Strauss et al., 1988). Several behavioral characteristics are associated with popular children, including being more likely to contribute to conversations during play, being more likely to engage in parallel play, receiving and initiating more positive social behavior, and using effective peer-entry strategies (Gresham & Little, 1993). Children in the controversial status group have been less well studied. However, one study suggests that children in this social status group tend to exhibit aggressive and disruptive behaviors, like the rejected children, but also tend to be viewed as socially skilled and as leaders, like the popular children (Coie et al., 1982).

A distinction that research has increasingly shown to be important is between whether a child is well liked by their peers (i.e., accepted) and whether the child is viewed as "popular" (Prinstein, 2007). First, these ratings have only been modestly correlated with each other (Prinstein, 2007; Vaillancourt & Hymal, 2006). Second, ratings of greater peer acceptance have consistently been related to more positive behavioral (e.g., less aggression; more prosocial behavior) and emotional (e.g., higher self-esteem) functioning (Gresham & Little, 1993; Sandstrom & Cillessen, 2006). However, children perceived by their peers as popular often show more physical and relational forms of aggression (McDonald, Putallaz, Grimes, Kupersmidt, & Coie, 2007; Vaillancourt & Hymel, 2006). Third, peer popularity seems to be more strongly related to peer-valued characteristics such as power, physical attractiveness, athleticism, and dress than peer acceptance (Prinstein & Cillessen, 2003; Vaillancourt & Hymel, 2006).

From this research, it is clear that a child's social status is intertwined with his or her behavioral and emotional functioning, both in terms of current and future functioning. Therefore, sociometrics can contribute important information to many clinical assessments by providing a reliable method of assessing a crucial aspect of a child's social functioning.

Most sociometric exercises are conducted in school classrooms because they provide a very clear and well-defined reference group of peers from which to judge a child's social acceptance or rejection. However, an important consideration in the usefulness of data obtained from sociometric exercises conducted in classrooms is the level of student participation in the exercise. That is, there is evidence that even moderate declines in full classroom participation in the sociometric exercise can have a major influence on the results. For example, Hamilton et al. (2000) compared sociometric results using a peer-rating procedure across varying levels of classroom participation. These authors reported that, even with a 75% rate of classroom participation, there were substantial differences in the results compared to those obtained from the full classroom. The results for 25 and 50% participation rates were even more divergent from those obtained with full participation. Importantly, the instability in the results across the varying levels of participation was greatest for children with adjustment problems compared to well-adjusted children. Therefore, for children with problems, who are often of most interest in sociometric exercises, participation rates seem to be especially important for interpreting the results. These findings highlight the need to interpret information from sociometric techniques in the context of the level of classroom participation in the exercise. In Box 9.4 additional findings from the Hamilton et al. (2000) study that have potentially important implications for interpreting information from sociometric exercises are summarized.

Box 9.4

Research Note: A Comparison of Sociometric Results Across Varying Levels of Classroom Participation

Hamilton et al. (2000) investigated the effects of different rates of classroom participation on peer ratings of social acceptance. These authors reviewed 26 studies using sociometric ratings to assess the social acceptance of children with learning or behavioral disorders and found that the vast majority of studies did not report the rate of participation in the sociometric exercise and, for those studies that did, the rates varied from 67 to 100%. The potential effects of these varying rates was investigated in 14 classrooms (grades 3 through 6) with full, or nearly full, rates of participation (i.e., 92 to 100%). The authors used a group sociometric procedure in which each student was provided with a class roster. Each student's name was accompanied by four circles closing (1) a smiling face to indicate that the student is liked, (2) a straight-mouthed face to designate that the rater is indifferent to the student, (3) a frowning face to indicate that the student is disliked, and (4) a question mark to indicate that the rater is unsure of the student's likability. Each student received a percentage score for each of the four categories by dividing the number of responses (e.g., smiles) by the number of student raters minus one, thereby creating percentage scores for each type of acceptance rating.

To assess the effects of classroom participation rates, the classrooms were then sampled randomly and repeatedly three times for each level) so that 25, 50, and 75% of students were involved in the exercise. At each participation level, peer ratings were compared against those obtained at the full level of participation. The results were quite consistent indicating that, as the rate of classroom participation decreased, ratings tended to be increasingly divergent from those obtained at full participation. Even the ratings at the 75% level were significantly different from the ratings obtained at full participation (ranging from 3 to 18%). Importantly, the authors compared the ratings of students with learning

(Continues)

Box 9.4 (Continued)

disabilities and nondisabled students that were underachieving to average and high-achieving students. The decline in participation rates was especially problematic for the ratings of the two groups with learning problems.

The authors noted that the effects of classroom participation on this peer-rating procedure may not generalize to the more common peer nomination procedure, although they make the important point that participation effects on nomination procedures need to be tested in light of their results. They also offer an interesting explanation for why participation rates may affect the ratings of less well-adjusted children to a greater degree. The authors suggest that the better-adjusted children may be viewed more similarly across classmates, with a general consensus across students on their likeability. In contrast, students may have more "polarized" views of children with problems in adjustment, with some classmates liking them, others disliking them, and still others having a neutral view. As a result of this polarization, the ratings of these children may be more dependent on which children are participating in the sociometric exercise. In actual practice, the problems in the accuracy in the peer ratings of disturbed children at lower levels of participation may be exacerbated if these children tend to have disturbed friends who may be less likely to volunteer to participate in the exercise. The authors conclude by noting that it is impossible to identify a specific "minimum rate" of participation that should be obtained before the results of a peer-rating sociometric exercise are uninterpretable. However, they suggest that these data clearly indicate that assessors using sociometric ratings need to recognize the potential effect of participation rates on the results of these exercises, especially when assessing children with adjustment problems.

Aggression

Another common aspect of a child's functioning that is assessed by peer nominations is aggression. The typical format is to have a class nominate the children in the class who "Fights most." As with other nomination techniques, the format can either be in a fixed-choice or unlimited-choice format. Peer nominations of aggression have been shown to be correlated with a psychiatric diagnosis of conduct disorder and therefore can be considered an important indicator of the impairment associated with this syndrome (Walker et al., 1991). However, one of the most interesting and troubling characteristics of peer-nominated aggression is its stability. In their 5-year study, Coie et al., and Dodge (1983) found that peer nominations of "Starts Fights" showed the most stability across the5 years of any of the peer-nomination categories that were obtained, exhibiting correlations of .83 between third and fourth grades and .84 across fifth and sixth grades. Huesmann, Eron, Lefkowitz, & Walder (1984) provide even more dramatic evidence for the stability of peer nominations of aggression. These authors found that peer nominations of aggression at age 8 significantly predicted aggression *30 years later*. Therefore, peer nominations of aggression assess an aspect of problematic interpersonal functioning that can be highly stable for a child and is thus an important target for intervention.

Hyperactivity

Assessment of inattention and motor hyperactivity, behaviors typically associated with ADHD, has relied primarily on information

obtained from parents and teachers (Loeber, Green, Lahey, & Stouthamer-Loeber, 1991). However, Schaughency and Rothlind (1991) provide some interesting data to suggest that peer nominations of inattentive and hyperactive behavior could aid in the assessment of ADHD. Specifically, these authors reported that peer nominations of "Can't pay attention," "Can't wait turn," and "Can't sit still" correlated with teacher and observer measures of inattention and hyperactivity. In a second study, these authors reported that peer nominations of "Doesn't pay attention" and "Can't sit still" significantly discriminated between youngsters diagnosed with ADHD from other clinic-referred children.

Although these results are promising and suggest that peer nominations can aid in the assessment of ADHD behaviors, there is no evidence that these peer nominations should take the place of parent and teacher ratings as a primary information source for these behavioral domains. Also, it is unclear whether or not peer nominations add anything to the assessment of ADHD behaviors over the information provided by other assessment techniques.

Depression

Lefkowitz and Tesiny (1980) developed the Peer Nomination Inventory of Depression (PNID) to aid in the assessment of childhood depression. A list of 13 depression-related categories was developed by nine expert judges. These nomination categories are provided in Box 9.5. Lefkowitz and Tesiny found that the 2-month test-retest reliability of the individual depression items (mean r = .66) and the depression composite for all 13 items (r = .79) were acceptable. More importantly, the PNID Depression composite was significantly associated with teacher (r = .41) and child (r = .23) ratings of depression. As was the case with peer nominations of inattention

Box 9.5

Depression Items on the Peer Nomination Inventory of Depression

Procedures

Children were provided a class roster. Each item was read aloud twice, and children were instructed to draw a line through all the names on their class roster "which best fit the question" (Lefkowitz & Tesiny, 1980, p. 45). Self-nominations were not permitted, but children could choose not to nominate anyone in a category.

Depression Items

Who often plays alone?
Who thinks they are bad?
Who doesn't try again when they lose?
Who often sleeps in class?
Who often looks lonely?
Who often says they don't feel well?
Who says they can't do things?
Who often cries?
Who does not play?
Who does not take part in things?
Who does not have much fun?
Who thinks others do not like them?
Who often looks sad?

The 13 items are only the depression items on the PNID. The PNID includes 20 items, with additional items measuring happiness and popularity.

Source: Lefsowitz, M. M., & Testiny, E. P. (1980). Assessment of childhood depression. *Journal of Consulting and Clinical Psychology, 48*, 43–50.

and hyperactivity, peer assessment of depression is promising as a component to a comprehensive evaluation but has not been sufficiently tested to determine its contribution relative to more traditional measures of depression.

Other Peer-Referenced Techniques

Although we have focused most of our discussion on peer nomination techniques, there are other peer-referenced assessment strategies that have been used in research that may be applicable to some clinical settings. *Peer ratings* require children to rate on a Likert-type scale each member of their class or peer group (Gresham & Little, 1993; McConnell & Odom, 1986). Like any rating scale, peer scales vary on the behavioral dimensions included on the scale, the number of points on the scale, and the behavioral descriptions used as anchors on the scale. For example, a rating scale for young children used a happy face to anchor the positive end of the continuum, a neutral face to anchor the middle, and a sad face to anchor the negative end of the continuum (Asher, Singleton, Tinsley, & Hymel, 1979).

One of the most reliable forms of peer assessment, especially for very young children McConnell & Odom, 1986), is the *paired comparison technique*. In this procedure, photographs are taken of all the children in the class and photographs of each possible classmate dyad are paired. The rater is then asked to choose between the two children in each dyad in reference to some criterion (e.g., Fights, Liked, Shy, Cooperative, etc.). The salient cues used in making the choices between peers make this procedure much more reliable for young children, especially of preschool age. However, it is so labor-intensive that it is not feasible for use in most clinical assessments. As McConnell and Odom (1986) point out, for a class of 20 children, each child will have to make 171 selections for each criterion.

Conclusions

Peer-referenced assessment strategies share the common characteristic of having a child or adolescent evaluated on important psychological dimensions by his or her peers. Due to several practical and ethical considerations, peer-referenced strategies are not commonplace in many clinical assessments. This is unfortunate because, if designed appropriately and with precautions taken to ensure safe administration, peer-referenced assessment can provide an invaluable picture of child's social context. This picture of a child's social relationships is essential for treatment planning given the importance of social relationships for a child's current and future psychological adjustment.

One of the most commonly used peer-referenced techniques is the sociometric exercise. This peer nomination technique allows one to determine whether or not a child is accepted, rejected, or ignored (neglected) by his or her peer group. These dimensions of social status cannot be adequately assessed by other methods of assessment, such as teacher ratings or a child's self-report. In addition, this crucial aspect of a child's social context has been highly related to emotional and behavioral disturbances. Therefore, sociometric assessment is a type of peer-referenced assessment that could be an especially important component of many clinical evaluations.

Chapter Summary

1. Peer-referenced assessments provide information on how a child or adolescent is viewed by his or her peers and, thereby, provide important insights into a child's social milieu.

2. Peer-referenced assessments must be conducted in light of two important ethical issues: the importance of minimizing the intrusiveness of the assessment and the need to minimize potential reactive effects of negative ratings by peers.
3. Peer nominations are the most commonly used forms of peer-referenced assessments. They involve having a child's or adolescent's peers select one or more children who display certain characteristics.
4. Sociometric exercises are a type of peer nomination that determines whether a child is accepted, rejected, or neglected by his or her peers.
5. Aggression, hyperactivity, and depression have also been assessed through peer nomination procedures. Unfortunately, the relative utility of peer-referenced assessments of these psychological dimensions, in comparison to other assessment modalities, has not been tested.
6. In addition to peer nominations, perceptions of a child's peers can be obtained by having children rate each other along certain dimensions on a Likert-type scale.