MENTAL RETARDATION AND DEVELOPMENTAL DISABILITIES
RESEARCH REVIEWS *5: 21–29 (1999)*

FAMILY AND CHILD INFLUENCES ON THE PEER-RELATED SOCIAL COMPETENCE OF YOUNG CHILDREN WITH DEVELOPMENTAL DELAYS

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Young children with developmental (cognitive) delays experience unusual difficulties in establishing relationships with their peers and developing friendships. A conceptual model of children's peer-related social competence is presented by identifying information-processing and emotional regulation processes governing the production of social strategies occurring during social tasks. Contemporary family factors and children's cognitive, communicative, and behavioral characteristics that influence the development of these processes are discussed and form the framework for designing intervention programs to promote children's peer-related social competence. The interplay between the fields of child development and developmental disabilities is emphasized. © 1999 Wiley-Liss, Inc.
MRDD Research Reviews 1999 5:21–29.

Key Words: peer social competence; family and child influences; developmental framework; process model; implications for intervention

By the time young children reach preschool age, most have established productive relationships with their peers and have been able to form meaningful friendships. This complex developmental task of early childhood is important in its own right, but also serves to encourage and support advances in other domains including cognitive and communicative development as well as various forms of prosocial behavior [Bates, 1975; Garvey, 1986; Hartup, 1983; Howes, 1988; Rubin and Lollis, 1988]. Unfortunately, for preschool-age children with developmental (cognitive) delays, even those with mild delays, substantial problems in their ability to establish relationships with their peers and to develop friendships are evident in peer group settings and in community activities involving peers [Guralnick, 1990; Guralnick, 1997; Odom et al., 1992]. These difficulties affect a far larger percentage of children with delays than the estimated 10% of otherwise typically developing children who appear to experience significant peer interaction problems [Asher, 1990].

Problems are especially evident when children with mild delays participate in unstructured activities, such as playgroups, or during free-play activities as part of an early childhood program. Specifically, in comparison to typically developing chronological-age matched children, preschool-age children with mild delays exhibit the following patterns: (a) lower levels of sustained socially interactive play (social participation) with peers but higher levels of solitary play [Guralnick and Groom, 1987a, 1987b; Guralnick, Connor, et al., 1996; Kopp et al., 1992]; (b) more negativity and discontent during peer interactions and an unusually difficult interactive style during conflicts (e.g., predominance of negative and absence of conciliatory strategies; lack of responsiveness during conflict episodes) [Guralnick and Paul-Brown, 1989; Guralnick et al., 1998]; (c) less success in gaining a positive response to their social bids and fewer directive interactions initiated during play [Guralnick et al., 1996; Guralnick and Groom, 1987a, 1987b]; (d) an unusual developmental progression in peer interactions and one that is easily disrupted by environmental change [Guralnick and Weinhouse, 1984]; (e) form only a limited number of reciprocal friendships [Guralnick and Groom, 1988; Guralnick et al., 1996]; (f) less acceptance by both typically developing and mildly delayed peers based on peer sociometric and behavioral measures [Guralnick and Groom, 1987a; Guralnick, Connor, et al., 1996]; and (g) more limited linkages across school and community settings are formed as part of their peer social networks [Guralnick, 1997]. These findings appear to be robust, consistently appearing for diverse sets of measures and evident in both laboratory and natural group settings. Of considerable importance, the majority of these difficulties remain after controlling for children's developmental level [see Guralnick, 1999]. Apparently, characteristics related to children's developmental status (i.e., mild cognitive delay), rather than simply their developmental level are responsible for this pattern, suggesting the existence of a true deficit in peer-related social competence.

In the absence of appropriate interventions, young children with mild developmental delays are likely to remain on a developmental trajectory leading to later adjustment difficulties [Parker and Asher, 1987] and to social isolation [Taylor et al., 1987; Williams and Asher, 1992]. In this article, information is summarized regarding those factors that appear to govern developmental processes related to children's peer relations and friendships and present a model that can provide a framework for the design of intervention programs. Specifically, to organize this information, a model is presented that includes both family

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influences and influences related to the developmental characteristics of the children. This model is cast within a broad developmental context and the interplay between the fields of child development and developmental disabilities is emphasized. Of importance, although a developmental pattern established in early caregiver-child relationships (e.g., attachment patterns) or continuity due to specific child characteristics evident before children reach preschool age (e.g., attentional difficulties) can be expected to be associated with peer relations and friendship abilities by the preschool years [e.g., Booth et al., 1991], this discussion is limited to contemporary factors (preschool-age children) of influence.

Conceptual Model of Social Competence

The interrelationships found among the extensive number of peer relations and friendship measures (e.g., aspects of social participation, peer sociometric ratings, negative interactions, conflicts) suggest that they constitute indicators of a more general construct referred to as peer-related social competence [Guralnick and Neville, 1997; LaFreniere and Sroufe, 1985]. This construct has been conceptualized as the ability of children to successfully and appropriately select and carry out their interpersonal goals [Guralnick, 1990]. In the context of peer interactions, these interpersonal goals usually take the form of important social tasks such as gaining entry into an existing peer group at play, resolving conflicts, or maintaining play [Dodge et al., 1986]. It is within these social tasks that social strategies are generated (e.g., conciliatory or non-conciliatory conflict resolution exchanges; behaviors compatible or incompatible with ongoing peer play when attempting to enter a peer group) and their level of competence evaluated (i.e., appropriateness and success). Social strategies associated with peer competence have been well documented for peer group entry [Black and Hazen, 1990; Corsaro, 1981; Dodge et al., 1983; Hazen and Black, 1989; Putallaz, 1983; Putallaz and Gottman, 1981; Putallaz and Wasserman, 1989; Ramsey and Lasquade, 1996], conflict resolution [Eisenberg and Garvey, 1981; Genishi and Di Paolo, 1982; Hartup et al., 1988; Laursen and Hartup, 1989; Phinney, 1986; Shantz, 1987], and maintaining play [Gottman, 1983; Howes, 1988].

In turn, these social strategies appear to be governed in part by a set of underlying social information or social-cognitive processes [Rubin and Coplan, 1992]. Dodge et al. [1986] postulated that five social-cognitive processes operate within the peer interaction context: (1) encoding (attending to) relevant social cues; (2) accurately and meaningfully interpreting cues; (3) generating potential social strategies; (4) evaluating the effectiveness and consequences of selecting a particular strategy; and (5) enacting the strategy. As Dodge et al. [1986] have demonstrated, difficulties in any one of these processes can lead to the enactment of strategies that are far less than optimal. Refinements of the model have integrated emotional regulation processes, suggesting various modes of interaction and influence between social-cognitive and emotional regulation processes [Dodge, 1991]. Others have suggested that successful outcomes require a long-term perspective of the social task in order to generate competent strategies [Asher, 1983]. In a real sense, these latter processes represent higher-order, executive-functions requiring recognition of the social task itself, monitoring activities, and sustaining attention to remain on task [see Pennington and Welsh, 1995].

For preschool-age children with developmental (cognitive) delays, even those with mild delays, substantial problems in their ability to establish relationships with their peers and to develop friendships are evident in peer group settings and in community activities involving peers.

This model has been further refined and adapted for children with developmental delays by Guralnick [1992]. As illustrated in Figure 1, social strategies (and presumably judged social competence) are governed by four interrelated processes. The first two, emotional regulation and shared understanding, are considered foundation processes. Emotional regulation consists of the child's ability to prevent emotional reactions, such as anger or anxiety, from interfering with the appropriate functioning of other processes, particularly social-cognitive ones. There is an energizing component as well to emotional regulation, but it is less well understood [Sroufe et al., 1984]. Shared understanding refers primarily to a set of mutually agreed upon social roles, social rules, and expectations that regulate social behavior in the peer context. Ownership rules and turn-taking expectations are good examples. Shared understanding also consists of the ''scripts'' [Schank and Abelson, 1977], or event structures [Nelson, 1986], that children develop that guide sequences of peer exchanges particularly in the context of pretend play. Such mutually understood scripts are associated with peer competence [Furman and Walden, 1990; Nelson and Seidman, 1984]. The third process is the set of social-cognitive processes primarily identified by Dodge and his colleagues [1986]. The final process, higher-order, represents the overarching social task recognition, monitoring, and goal maintaining (planning) features that characterize socially competent functioning.

The important interactive features of the model are depicted in Figure 1.

Because foundation and social-cognitive processes are nested within higher-order processes, should higher-order processes be adversely affected due to endogenous factors (e.g., executive function deficits) or disrupted by external sources (e.g., environmental circumstances creating difficulties in emotional regulation), less competent social strategies are likely to result. Similarly, numerous interactive possibilities exist between foundation and social-cognitive processes. For example, the absence of a shared set of play scripts (shared understanding) may reduce the child's ability to attend (encode) to the appropriate cues to ensure that a proper frame of reference exists for the peer entry social task (social-cognitive process), or emotional regulation difficulties may result in the interpretation of an objectively benign event as a provocative one [see Dodge et al., 1986]. Of note, it is the pattern of social strategies that results in the wide range of individual differences evident for peer competence, and presumably constitutes the basis for the various systems developed to rate competence or classify children in terms of social status. Finally, the model is bounded by dimensions referred to as social tasks and developmental perspective. This represents the fact that specific social strategies also will vary with and are constrained by the child's developmental level and the social task selected.

Contemporary Influences on Children's Peer-Related Social Competence

Analyses emerging from the study of otherwise typically developing children experiencing peer interaction problems suggest that a complex array of family factors and individual child characteristics contribute to difficulties with peers and, in many instances, can be related to the four processes identified above [Asher and Coie, 1990; Parke and Ladd, 1992; Rubin and Coplan, 1992]. Although only limited comparable conceptual and empirical work is available along these lines for children with developmental delays, or for children with disabilities in general [see Leffert and Siperstein, 1996], family influences and individual child characteristics relevant to children's peer-related social competence identified for typically developing children do nevertheless appear to be highly relevant to young children with developmental delays and their families [see Guralnick and Neville, 1997]. These interrelationships are discussed below.

Family Influences

Four contemporary family influences are major contributors to young children's peer-related social competence [Guralnick and Neville, 1997]. These are: (1) parental fostering of their children's peer social network; (2) parental attitudes, beliefs, and knowledge about the competence level of their child, the importance of peer relations and their malleability, and the socialization strategies to modify their child's peer interactions; (3) the quality of parent-child interactions; and (4) family risk factors. These family influences are described below and linked to possible problems they may pose for children with developmental delays.

Children's peer social networks. The peer social networks of typically developing children tend to be extensive and increase even across the preschool period, providing a context for social skills development and opportunities for establishing friendships [Feiring and Lewis, 1988; Ladd et al., 1988]. Parents attach considerable importance to their children's peer relationships and routinely discuss peer issues with their children [Bradbard et al., 1992; Mize et al., 1995]. Consistent with this perspective, parents frequently take an active role in arranging, monitoring, and facilitating peer experiences for their child [Ladd et al., 1992]. Available evidence suggests that parental activity in this regard is associated with larger peer networks for their children, and their children tend to be more socially competent [Ladd and Golter, 1988; Ladd and Hart, 1992]. Interestingly, parents of less socially skilled children also tend to monitor and even direct their children in play more often than parents of more skillful children [Ladd and Golter, 1988; Mize et al., 1995]. Correspondingly, parents facilitate children's play with peers through advice and instruction, with the quality of those interactions positively associated with children's social competence [Finnie and Russell, 1988; Russell and Finnie, 1990].

In the only available study of the peer social networks of preschool-age children with mild developmental delays, Guralnick [1997] found that children with delays and typically developing chronologically age-matched children participate in a comparable manner in many individual and group activities with peers in their neighborhoods and communities. However, children with delays appeared to have more restricted peer social networks. In particular, play with peers was less frequent overall and occurred less often in the homes of children with delays. Of perhaps most concern was that far fewer linkages were found between playmates in school or daycare settings and playmates in their neighborhoods. In addition, mothers of children with delays monitored play more closely and suggested activities for their children to a greater extent than did mothers of typically developing children. No data are available with respect to advice or instructional strategies provided by parents to their developmentally delayed child specifically tied to peer relationships.

The more limited peer social networks, particularly the relative absence of linkages with the same peers across

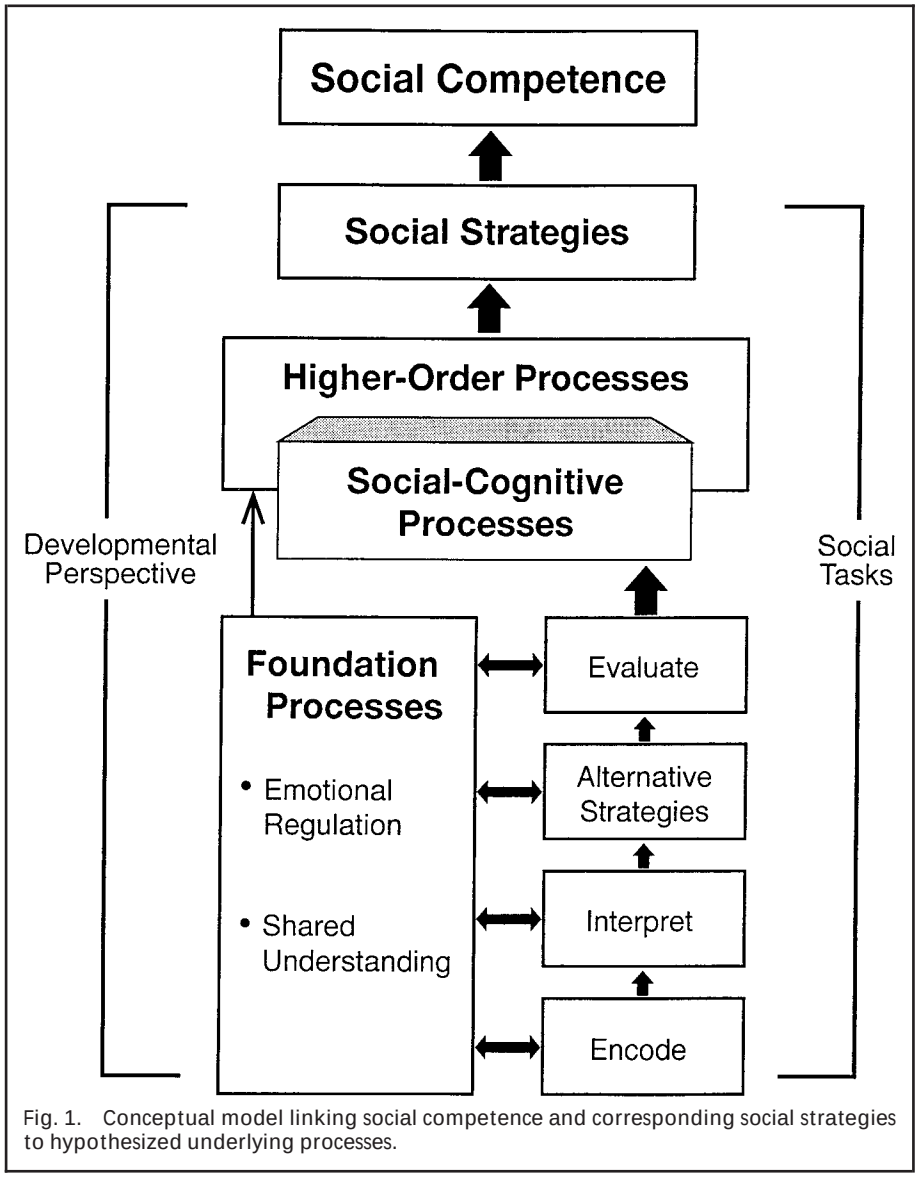

Fig. 1. Conceptual model linking social competence and corresponding social strategies to hypothesized underlying processes.

settings, place children with delays at a distinct disadvantage. Experience with peers matters [see Lieberman, 1977] and limited experience is most likely to affect a number of processes related to social competence, especially the foundation process of shared understanding. Social roles and social rules must be learned in context and play themes practiced repeatedly so that they can be expanded to incorporate an ever increasing set of cognitive and social variations.

The reasons why children with developmental delays have more limited peer social networks may reflect negative attitudes toward children with disabilities that are resistant to change [Stoneman, 1993], reactions to the peer competence difficulties of the children with delays, other demands on parents, or less time available for peers due to the delayed child's participation in special intervention programs or therapeutic services [see Guralnick, 1997].

It should be pointed out that whether the direction of influence flows from families to children or the reverse has not been completely resolved, as a reciprocal relationship is to be expected. Indeed, more competent and social children may encourage their parents to organize play activities more often [Ladd and Hart, 1992]. Nevertheless, adaptations families make to the characteristics of their children are certain to be important sources of influence on children's social competence [LaFreniere and Dumas, 1992; Rubin and Lollis, 1988], perhaps more so for children with developmental problems.

Attitudes, beliefs, and knowledge. These arranging, monitoring, and facilitating activities of parents in the domain of children's peer relations appear to have a cognitive basis [Booth, 1997; Mills and Rubin, 1990, 1992; Mize et al., 1995; Rubin and Mills, 1990]. Parental beliefs regarding the importance and modifiability (through intervention) of children's peer relationships as well as parental perceptions of their own child's competence may well serve as a motivational force (or lack thereof) for expanding their child's peer social network. Evidence does suggest that parental perceived social competence of their typically developing children is positively associated with parental beliefs of the importance and modifiability of peer relationships; that knowledge of socialization (facilitation) strategies affects actual facilitation of children's play primarily when parents believe that social skills are important and modifiable; and that overall, parents believe that their child's experience with peers, rather than innate dispositions or direct teaching by parents, is most responsible for their child's peer-related social development [Mize et al., 1995].

Non-directive strategies are endorsed by parents even when faced with hypothetical problems regarding their child's social behavior [Mills and Rubin, 1990]. However, for preschool children exhibiting actual problems (either withdrawal or aggression], more directive and even coercive strategies are endorsed, although many parents indicate that they would not use any strategies at all [Rubin and Mills, 1990]. Of particular concern is that mothers of withdrawn children attribute their child's behavior more to enduring traits rather than to transitory factors. Whatever the origin of this belief (e.g., protective factor as a consequence of failed attempts to alter their child's behavior, or an intergenerationally transmitted model of development), it is likely that less parental effort will be invested in expanding their child's peer social network. Similarly, unless parents have a knowledge base of an appropriate repertoire of socialization strategies, their ability to facilitate their child's social play with peers will be limited. Although relationships between cognition and behavior are highly complex in general [see Murphey, 1992], coherent patterns in the domain of peer competence are emerging sufficient to be incorporated within the framework presented here.

For children with disabilities, including those with mild developmental delays, only limited information is available on attitudes, beliefs, and knowledge in the domain of peer relations. However, in a recent investigation, Booth [1994, 1997] reported that mothers of children with disabilities tended to attribute the development of their child's peer social skills more to traits or enduring dispositional factors than to experiential processes. At the same time, these mothers maintained the generally held belief that social skills learning occurs primarily through their child's own experiences, not adult intervention. For children with delays, this combination of maternal attitudes and beliefs (i.e., large role of dispositional traits and small role of adult facilitation) may limit activities designed to expand their child's social network. On the positive side, the development of children's social competence with peers is highly valued by parents of children with delays [Booth, 1994; Guralnick et al., 1995].

Parent-child interactions. A now substantial body of research has established that important associations exist between aspects of parent-child interactions and children's peer-related social competence [Cohn et al., 1991]. Positive affective styles, particularly interactions in which parents respond contingently and appropriately to children's affective expressions and engage their children in ways that encourage emotional regulation have positive associations with peer competence [Carson and Parke, 1996; LaFreniere and Dumas, 1992; MacDonald, 1987; Mize and Pettit, 1997]. Similarly, indices of extensive reciprocal or synchronous interactions would be expected to and do correlate positively with peer competence [e.g., Mize and Pettit, 1997]. It appears that so many of the rules of social discourse such as turn-taking, appropriately recognizing and utilizing feedback based on social cues, and communicative and negotiating strategies [e.g., Harrist et al., 1994; Martinez, 1987] are learned in the context of parent-child interactions and are then carried over to other social situations, including those involving peers. Similarly, the child's abilities to decode and encode emotional cues, an important aspect of social-cognitive processes related to peer competence [see Field and Walden, 1982], are frequently learned through extended parent-child play sequences [Parke et al., 1992]. As such, active engagement in these forms of parent-child interaction are critical for supporting the development of children's peer-related social competence [MacDonald and Parke, 1984].

In a real sense, generalization of parent-child interactional synchrony appears to provide a foundation for building a shared understanding of social rules and social roles and constitutes an important mechanism for family-peer linkages. Evidence also suggests a particularly important role for the process of emotional regulation. Experiencing negative affect in the context for parent-child interactions can make children especially vulnerable to emotional regulation difficulties [Carson and Parke, 1996; Gottman and Katz, 1989] that can carry over and disturb peer relationships. Parke and associates [see Parke et al., 1992] have emphasized the role of parent-child physical play as a context for children to learn to regulate affect. As noted earlier, emotional regulation difficulties can affect numerous processes associated with peer competence, particularly social-cognitive ones [Dodge, 1991]. In fact, social-cognitive processes themselves can be affected by inappropriate parenting styles.

For example, a controlling parental style has been associated with lower levels of peer social competence [Howes and Stewart, 1987; Kochanska, 1992; MacDonald and Parke, 1984; Putallaz, 1987], as have harsh disciplinary styles [Hart et al., 1992; Hart et al., 1990]. Exposure of children to inadequate and even harsh parenting styles affects the child's social problem-solving approach, which appears to mediate, in part, the relationship between this experience with parents and peer competence [Pettit et al., 1988]. Other studies have confirmed the association between emotion socialization practices of parents, knowledge of appropriate socialization strategies, and peer competence [Garner et al., 1994].

For children with developmental delays, no comparable set of studies linking parent-child interactions and peer competence is available. However, certain aspects of parent-child interactions involving children with delays may not be optimal for children's peer competence. For example, engagement in parent-child play for children with delays is likely to be more limited due to the extra demands these children place on many families [see Stoneman, 1997]. Children's opportunities for developing abilities associated with shared understanding and emotional regulation may therefore be limited. Similarly, the conversations of parents of children with Down syndrome (and perhaps other groups of young children with delays as well) reveal a relative absence of inner state words referring to their child's affective states [Tingley et al., 1994]. As a consequence, children with Down syndrome may well be at greater risk for poor regulation of social-affective exchanges [Beeghly and Cicchetti, 1997]. In addition, relationship patterns related to control are indeed different for families of children with delays as parents of children with developmental delays tend to be more directive and controlling [see Marfo, 1990]. These differences appear to be best understood as appropriate parental adaptations to specific child characteristics, including lower levels of child responsiveness and less frequent social initiations [Beeghly et al., 1989; Jones, 1980; Landry et al., 1994]. However, there may well exist a substantial subgroup of parents of children with delays who appear to be focused primarily on encouraging their children to perform [Mahoney et al., 1990; Marfo, 1991]. This action-dominated agenda of parents occurs at the expense of encouraging pleasurable and sustained social exchanges revolving around play activities. In fact, in the peer situation, this subgroup of parents may well maintain a higher than necessary level of monitoring, becoming intrusive and inhibiting the development of their child's play skills. A performance focus has been particularly noted for parents of children with developmental delays and behavior problems [Crowell and Feldman, 1988], and difficulties in establishing positive reciprocity have been demonstrated for and related to older children with mental retardation [Floyd and Phillippe, 1993]. Clearly, based on family-peer models for typically developing children, the performance-oriented pattern of some parents of children with delays will not likely promote behavior that will benefit social interactions in the peer context [see Eheart, 1982].

The conceptual model and framework presented here provide clear directions for the areas that must be considered when interventions are being designed, and suggest further that any gains will require an intensive and long-term process.

Family risk. Research carried out within a developmental/ecological framework has identified a number of family characteristics that can adversely affect a child's development. The adverse effects of family risks or stressors for young children, and the mechanisms through which they operate, including the availability of social support and financial resources, the quality of marital relationships, child temperament, and maternal mental health have been well documented, primarily in the area of cognitive development [Guralnick, 1998]. However, these same types of family stressors increase the risk of peer interaction problems [Patterson et al., 1991]. For example, difficulties in children's emotional regulation have been linked to marital conflicts [Gottman and Katz, 1989; Katz and Gottman, 1993]. Similarly, limited social support may alter parent-child interactions that link to peer-related social competence [Jennings et al., 1991; Melson et al., 1993] and even influence attitudes and beliefs that lead parents to select more coercive strategies when their child is having difficulties with peers [Mills and Rubin, 1990]. Of importance, there is every reason to expect that family risk factors operate in a similar way for families of children with and without delays or disabilities [see Floyd and Phillippe, 1993; Guralnick and Neville, 1997].

Pathways of family influence on children's peer competence. Three of the constructs identified above (peer social networks; attitudes, beliefs and knowledge; and parent-child interactions) can exert their influence in a variety of ways, either directly or indirectly affecting children's peer competence. Mize and Pettit [1997] identified a number of plausible pathways to peer competence for the peer social network construct (primarily facilitation) and parent-child interactions (responsiveness and positive affect). For example, parent-child interactions could moderate the effects of facilitation or be redundant indicators of parenting effectiveness. Alternatively, facilitation could possibly mediate the effects of parent-child interactions. Despite these and other possible pathways, regression analyses in two separate studies by Mize and Pettit [1997] indicated that each construct made an independent and direct contribution to peer competence. These relationships were maintained even after controlling for children's receptive vocabulary. Unfortunately, again no similar information is available for children with developmental delays, but the suggestion that participation of children in peer social networks and parent-child interactions make independent contributions to peer competence is a reasonable working hypothesis.

Child Influences

For peer social competence, many of the processes described in Figure 1 are affected by cognitive, communicative, and behavioral problems associated with children with general developmental delays. In particular, specific cognitive problems linked with children with developmental delays include attention [Tomporowski and Tinsley, 1997], higher order processes [Kopp, 1990; Sternberg, 1984], working memory, including that related to scripts [Bray et al., 1997], and the speed required to respond in social situations involving peers. Together these and related difficulties can easily disrupt one or more of the four processes discussed above and make it less likely that competent social strategies will result within a given social task. Expressive language problems may further complicate matters [Miller, 1987]. Even rela-

tively small discrepancies from expected developmental levels for each of these processes can be compounded to produce the significant peer interaction deficit described earlier. Moreover, behavior problems, even relatively modest ones, can adversely affect the quality of the peer interactions of young children with mild developmental delays [Guralnick and Groom, 1985].

Perhaps the most well studied subgroup of young children with general developmental delays are those with Down syndrome. Numerous child characteristic difficulties have been found in the realm of information processing [Lincoln et al., 1985], in self-initiating and organizing activities [Beeghly et al., 1990], in verbal coding and decoding [Gibson, 1992], and in producing alternative strategies in related tasks [Kopp et al., 1983]. These child characteristics are likely to be especially damaging to social-cognitive and higher-order processes in the context of social tasks. Moreover, unusual problems in grammatic-syntactic development [Fowler, 1990] and emotional regulation [Cicchetti et al., 1991] contribute to difficulties in many processes both directly and indirectly. Indeed, children with Down syndrome are at substantially increased risk of social isolation from their community of peers [Byrne et al., 1988; Stoneman et al., 1988] and, as is the case for other groups of children with delays, are subject to social exclusion, particularly by typically developing children in playgroups [e.g., Sinson and Wetherick, 1981]. Although many factors (e.g., societal attitudes, limited experience with people with disabilities), certainly contribute to the level of social isolation experienced by children with Down syndrome, evidence suggests that difficulties in peer-related social competence may be of greatest significance [Guralnick, 1999].

Despite the problems associated with these child characteristics, most parents of children with delays do successfully adapt their interactive styles to accommodate their child's general cognitive and related limitations. However, the child-child context is far more demanding, unpredictable, and complex than that which exists in a parent-child context, and children's developmental difficulties are more likely to interfere with peer social interactions.

Prospects for Intervention

To date, most research designed to promote the peer-related social competence of young children with developmental delays has focused on classroom-based practices in which environmental or instructional changes have been implemented. Teacher- and peer-mediated interventions have shown some promise yet have failed to demonstrate sustained or generalized effects [see McEvoy et al., 1992 for a review]. Even general social skills curricula have not yielded substantive gains [e.g., Jenkins et al., 1989]. For otherwise typically developing children experiencing difficulties with peers, social skills intervention programs also have tended to be relatively narrowly focused (the absence of family and community components is notable) and have not produced the sustained and generalized outcomes expected [La Greca, 1993; Schneider, 1992]. A number of creative programs have in fact been developed for preschool-age children utilizing a social-cognitive process rationale as well as a skills development feature and have achieved modest success, but have not been applied to other groups of children [Mize and Ladd, 1990]. Other interventions have successfully altered children's peer-related social competence by effecting changes in parent-child interactions [LaFreniere and Capuano, 1997].

Clearly, altering the course of children's peer-related social competence is difficult to accomplish as there are many powerful developmental and ecological forces that tend to maintain the peer interaction patterns created by family influences and child characteristics. The conceptual model and framework presented here provide clear directions for the areas that must be considered when interventions are being designed, and suggest further that any gains will require an intensive and long-term process. In situations intended to encourage productive peer interactions, the social environment must be structured to foster processes of concern and capitalize on children's strengths. At minimum, every effort should be made to adapt the situation to accommodate an individualized profile characterizing these processes as well as children's more fundamental cognitive, communicative, motor, and affective domains. Concurrently, family influences must be addressed where appropriate with respect to their child's peer social network, parental attitudes, beliefs, and knowledge regarding their child's peer-related social development, and parent-child interactions.

For this to occur, clinical tools are needed that are capable of evaluating the social strategies children display within the context of social tasks. In addition, a means of determining the nature of the processes contributing to less than optimal social strategies is needed (see Fig. 1). Evaluating any of the four processes identified in particular will require a sophisticated inferential process, and the clinician must be content with a hypothesis-testing approach that contains more than the usual level of uncertainty. A similar set of clinical tools is needed that can meaningfully and nonintrusively evaluate family influences associated with children's peer-related social competence. With the information from both child and family perspectives, a corresponding array of intervention protocols will be needed consistent with the framework described. The integration of these assessment and intervention protocols within this conceptual framework into a systematic and comprehensive package may well provide a new approach for fostering the peer-related social competence of young children with developmental delays.

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