

**Niccols, A.,** & Mohammed, S. (2000) Parent-child interaction skills training in groups: Pilot study with parents of infants with developmental delay. Journal of Early Intervention, 23, 59-69.

#### PARENT-CHILD INTERACTION SKILLS TRAINING IN GROUPS:

##### PILOT STUDY WITH PARENTS OF INFANTS WITH DEVELOPMENTAL DELAY

Infant development programs provide service for families of infants with developmental delay, or who are at risk of developmental delay, due to established deficits (e.g., genetic conditions), biological factors (e.g., extreme prematurity), and/or environmental factors (e.g., poverty, parenting concerns). Currently, the standard intervention involves home visiting and a family-centred approach incorporating parent support and education. This paper describes an innovative service for parents of infants under 2 years of age with, or at risk of, developmental delay. Using attachment theory as a framework, we developed an 8-week parent training group (“The Skill Building Group”) to enhance caregiver skills in reading infant cues and responding sensitively. The primary goal of the Skill Building Group is to improve parent-child interaction in order to foster infant attachment security. We also anticipated a positive impact of group participation and networking opportunities on parent functioning. The results of a small pilot study are included in this paper.

##### The Importance of Infant Attachment Security

The parent-infant relationship is an important focus of many early intervention programs as the development of infant attachment security is a primary issue in infancy (van IJzendoorn, Juffer, & Duyvesteyn, 1995). Attachment is defined as the affectional bond between infants and their primary caregiver (Ainsworth, Blehar, Waters, & Wall, 1978). It has been argued that secure infant attachment increases the probability of future mental health (Bowlby, 1969). Research studies have provided empirical validation of the theoretical importance of attachment

throughout life by documenting the positive influence of secure attachment on curiosity, enthusiasm, persistence, compliance, mastery motivation, cognitive development, social skills, and peer interaction (e.g., Arend, Gove, & Sroufe, 1979; Estrada, Arsenio, Hess, & Holloway, 1987; Waters, Wippman, & Sroufe, 1979). Insecure attachment has been related to later internalizing and externalizing behavior disorders (e.g., Lewis, Feiring, McGuffog, & Jaskir, 1984). Thus, secure attachment is considered a protective factor and insecure attachment is considered a risk factor (e.g., Bretherton, 1985).

#### Attachment and Parental Sensitivity

The cornerstone of attachment theory has been that infant attachment security arises from a caregiving history that involves sensitive responding to infant cues and signals. Bowlby (1969) emphasized the impact of the primary caregiver's sensitivity in perceiving, interpreting, and responding to the child's needs, and Ainsworth's detailed observations provided empirical support for this notion (Ainsworth et al., 1978). Since then, meta-analyses of studies of the prediction of infant attachment security from maternal sensitivity have confirmed that caregivers rated as sensitive are significantly more likely to have secure infants than caregivers rated as less sensitive (e.g., Atkinson et al., 1998; De Wolff & van IJzendoorn, 1997). When sensitivity is assessed with the best available measures, the effect size for the prediction of infant attachment security is consistently large (Atkinson et al., 1998).

Studies of infants with developmental, sensory, or medical needs suggest that these infants may be at elevated risk for insecure attachment (e.g., Atkinson et al., 1999; Plunkett, Meisels, Stiefel, Pasick, & Roloff, 1986). To explain the difficulties encountered by parents and these children in the development of the attachment relationship, various hypotheses have been

suggested including child characteristics that may make interaction difficult (including cognitive limitations and dampened socioemotional responsiveness; e.g., Atkinson et al., 1999; Blacher & Meyers, 1983; Serafica & Cicchetti, 1976), parental factors that may hamper sensitivity (including affective distress; e.g., Emde & Brown, 1978), and the interaction of these factors. Observational studies of parents and their infants with disabilities reveal parent-child interaction that is characterized by infants being difficult to read (e.g., Field, 1980) and parents being insensitively directive (e.g., Hanzlik & Stevenson, 1986; Mahoney, Fors, & Wood, 1990), neither of which may bode well for the attachment relationship. Very few studies have examined the relationship between caregiver sensitivity and infant attachment security in dyads with infants with developmental delay, but the existing research suggests that the risk of insecure attachment for these children may be related to caregiver responsiveness (Lederberg & Mobley, 1990; Wasserman, Lennon, Allen, & Shilansky, 1987). In a longitudinal study of children with Down syndrome, Atkinson and his colleagues found that maternal coping style and affective distress interact to influence maternal sensitivity (Atkinson et al., 1995), and that maternal sensitivity and child cognitive level interact to predict attachment security (Atkinson et al. 1999). Taken together, these findings suggest that interventions aimed at increasing a caregiver's sensitivity in perceiving, interpreting, and responding to the cues and signals of their infants with developmental delay may promote attachment security, which may then have implications for future development across a variety of domains.

### Attachment-based Interventions

In a meta-analysis of 16 clinical trials of attachment-based interventions and their effects on maternal sensitivity and infant security, van IJzendoorn and his colleagues (1995) found that

the most effective were short-term behavioral approaches rather than longer-term, intensive psychotherapeutic approaches. The meta-analysis included studies involving a variety of at-risk samples, but none involved parents of infants with developmental delay. McCollum and Hemmeter (1997) reviewed 10 studies of parent-child interaction intervention with parents of children with disabilities. Most studies provided evidence of improvement in parents' skills in perceiving, interpreting, and contingently responding to their children's cues, but many did not investigate the generalization of positive impact beyond interaction skills (e.g., parental confidence, distress). None of these interventions used a group format, and effect sizes were typically small (van IJzendoorn et al., 1995; McCollum & Hemmeter, 1997).

#### Individual- versus Group-based Interventions

Despite its potential for effective and cost efficient parent education and support, group-based parent training is infrequently used in attachment interventions and/or infant development programs. Traditionally, parent training has been used with parents of children with behavior problems, and clinical trials have shown improvements in child management skills (Barkley, Guevremont, Anastopoulos, & Fletcher, 1992), parenting stress and confidence (Pisterman et al., 1992), and child behavior (Cunningham, Bremner, & Boyle, 1995). Clinical trials of parent training with parents of children with developmental delay have shown that it is effective in improving child self care skills and behavior (e.g., Hornby & Singh, 1983; Koegel, Koegel, Kellegrew, & Mullen, 1996). What is unknown is if a group-based approach to parent training could be used to enhance attachment security in infants with developmental delay.

Group-based interventions may take advantage of some potentially powerful mechanisms that may be missing in individual interventions.

1. Opportunities for social networking with other parents: Group approaches may be particularly well suited for parents of high-risk infants as these parents may have unique experiences (i.e., high-level caregiving demands, child-rearing challenges, unpleasant social and extended family reactions, and feelings of guilt, anger, and depression) that they may share with group members (Seligman, 1993). These parents may receive empathy, acceptance, support, and practical suggestions for strategies that have worked for other parents with a degree of social comfort that may not be possible with an individual therapist (Seligman, 1993). Social support is an important contributor to family and child outcomes for high-risk infants (Crnic & Stormshak, 1997; Dunst, Trivette, & Jodry, 1997) and social isolation can adversely influence parenting (Dumas, 1986).

2. Therapeutic group processes: Individual interventions do not take advantage of group dynamics such as the power of group self regulation (e.g., intolerance of extreme deviance, group participants' motivation for conformity).

3. Parental empowerment: Individual interventions run the risk of disempowering parents (Dunst, Trivette, & Deal, 1994), whereas groups offer opportunities for parents' to build confidence through the altruistic act of helping others (Seligman, 1993).

Additional advantages of group approaches include access and cost. High risk parents (e.g., economically disadvantaged, socially isolated, depressed) are least likely to enroll in or complete traditional individual treatment programs (Kazdin, Mazurik, & Bass, 1993), whereas community-based groups may reduce psychological and logistic barriers to access. For example, Cunningham and his colleagues (1995) found that their community parent education program was accessed more readily than individual clinic-based services by high risk parents (e.g., those

with low educational levels and poor family functioning). Further, individual treatment can be at least 250% more expensive than community group-based interventions (Cunningham et al., 1995; Niccols, McFadden, & Parker, 1996), thereby potentially restricting its availability.

#### Facilitative Group-based Intervention: The Coping Modeling Problem Solving Approach

Parent training may improve skills, but many programs involve lectures and reading materials. This type of didactic approach may (a) increase knowledge but result in behavior changes that are not sustained (Gardner, 1972), (b) produce high levels of participant noncompliance thereby paradoxically increasing resistance to learning new skills (Patterson & Forgatch, 1985), (c) result in parents achieving less than optimal understanding of the complex principles involved in parent-child relationships due to the lack of exploration of the consequences of both positive and negative approaches to parent-child interaction (Cunningham, Davis, Bremner, Dunn, & Rzasa, 1993), and (d) produce little attitude change and commitment or feelings of personal competence and control (Meichenbaum & Turk, 1987).

Coping modeling (Masters, Burish, Hollon, & Rimm, 1987) represents an alternative to more didactic approaches to parent training. In contrast to traditional parent training in which correct skills are demonstrated, coping models confront difficulties, make errors, but eventually arrive at an appropriate solution (Masters et al., 1987). Coping modeling has proven more effective than didactic parent training in the management of anxiety disorders (e.g., Kazdin, 1974). A variant of coping modeling is the Coping Modeling Problem Solving approach, an active learning approach in which participants identify common parenting errors depicted by videotaped models, discuss their consequences, suggest alternatives, and formulate supporting rationales by identifying the advantages of the alternative approaches (Cunningham et al., 1995).

Clinical trials conducted on large group, community-based parent training using this approach have shown that it is more effective in terms of availability, utilization, cost, and outcome than clinic-based individual training for parents of children with disruptive behavior disorders (Cunningham et al., 1995). Although coping modeling approaches have been applied to parent training for behavior management (Cunningham et al., 1995), social skills training (e.g., Kendall & Braswell, 1985), and child anxiety disorder programs (Kendall et al., 1991), they had not been used previously in attachment-focused parent training. A group-based approach to train parents in attachment-promoting skills could take advantage of the benefits of this model in terms of its potential effectiveness as a method of parent education, and as a means of providing peer support and opportunities for social networking and parental empowerment.

#### The Skill Building Group

The Skill Building Group was developed in the Infant-Parent Program at Chedoke-McMaster Hospital to address the drawbacks of traditional parent training and group-based interventions reviewed above, and to train parents of infants at developmental risk to read and respond sensitively to their infants' cues (Niccols, Kitching, McFadden, Parker, & Harrison, 1997) using the Coping Modeling Problem Solving approach described above (cf. Cunningham et al., 1995). The content of the group sessions focused on parenting skills necessary to promote infant attachment security (i.e., perceiving, interpreting, and responding sensitively to infant signals; see Table 1 for details). The model used in the Skill Building Group, in which participants formulate and publicly state their own solutions to common parent-child interaction challenges illustrated in videotape segments, should improve parents' understanding of their impact on their infant, enhance attitude change and commitment, and increase feelings of

personal competence and control. Parents are given opportunities to practice new skills in structured homework assignments. For example, at the end of Session 4, parents are asked to observe their child during the following week and list some of their particular “I don’t like it” cues, what these cues communicate to the parent, and how their child reacted when they practiced responding to their cues sensitively. In the following session, parents have the opportunity to discuss their “homework” and get peer support for their efforts. Contact with parents facing similar difficulties provides families of high-risk infants with emotional support, encouragement, practical assistance, and potentially useful information (Seligman, 1993). Family functioning may be improved if parents generalize what they have learned to relations with other family members, as has occurred in previous parent training programs (e.g., Eyberg & Robinson, 1982).

Skill Building Group leaders are infant development specialists whose role is to lead the sessions, facilitate group work, and act as consultants for the parents. The infant development specialists have educational backgrounds in psychology, early childhood education, and/or social work, and additional training and experience in parent education and home visiting with families of infants with a variety of disabilities. Each of the 8 weekly sessions of the Skill Building Group are 2 hours in length, either in the evening or morning. Sessions are held at a convenient central location with free parking and onsite childcare, in order to minimize barriers to accessibility and to maximize participation.

### The Pilot Study

To begin evaluating the Skill Building Group, we conducted a small pilot study. The pilot study involved an evaluation of intervention efficacy as determined from a comparison of 12



intervention group parents and 5 waiting list controls on several parent-report measures. We hypothesized that Skill Building Group participants would show decreases in dysfunctional parent-child interaction, parental distress, sadness/depression, and follow-up service utilization, and increases in parenting confidence and effective family functioning.

### Method

#### Subjects

Parents of infants referred to an infant development program who were on the waiting list for individual in-home intervention were invited to participate in 8 weekly 2-hour Skill Building Group sessions. The comparison group consisted of parents who were further down the waiting list. Parents in both groups were asked to participate in a pilot study evaluating the new group-based service. Parents in the comparison group were informed that they would be eligible for another (later) offering of the Skill Building Group. Later offerings of the Skill Building Group had no control group.

In total, 63 families were invited to attend the Skill Building Group over three offerings in 1996, of which 44 (70%) agreed to participate. Of these, 22 (50%) attended the group, an attendance rate consistent with those reported by other parent training groups (e.g., Cunningham et al., 1995). Of those who attended, 12 (55%) both agreed to participate in the evaluation and completed all pre-test and post-test measures. Five (42%) of the wait list comparison group parents completed all measures. Study participants, study dropouts, and non-attendees were not significantly different in terms of parent education, socioeconomic status, marital status, family composition, or child age.

On average, pilot study participants were high school educated, low social class, and

married, with other children in the family. However, these parents appeared to be quite a mixed group in terms of age (although no teenagers participated), socioeconomic and cultural status, and psychiatric and cognitive functioning. Pilot study participants attended an average of 7.5 of the 8 sessions. Their infants were an average of one year old. One-third to one-half of the infants were described as difficult and were receiving additional services from medical and developmental specialists. In terms of primary diagnosis, 41% of the infants had developmental delay of unknown etiology, 23% had cerebral palsy, 18% had Down syndrome, 6% (one child) had an acquired brain injury, 6% had visual impairment, and 6% had prenatal drug exposure.

### Measures and Procedures

Parents in both the intervention and comparison groups were asked to complete the same set of standardized questionnaire measures before and after the 8-week Skill Building Group: The Parenting Stress Index Short Form (PSI-SF) Parent-Child Dysfunctional Interaction Scale (Abidin, 1990), the PSI-SF Parental Distress Scale, the Parenting Sense of Competence Scale (Gibaud-Wallston & Wandersman, 1978), the Centre for Epidemiological Studies Depression Scale (Devins & Orme, 1985), and the Family Assessment Device General Functioning Scale (Epstein, Baldwin, & Bishop, 1983). The intervention group completed a consumer satisfaction questionnaire (Client Satisfaction Questionnaire; Niccols, 1996). At the end of the Skill Building Group, parents were asked to choose from a menu of follow-up service options. Parents chose from non-active service options (no further involvement with the infant development program or remaining on a mailing list to receive newsletters and flyers advertising parent workshops and social gatherings) or active service options (repeating the Skill Building Group, receiving consultation services, or having regularly-scheduled individual in-home intervention).

## Results & Discussion

### Pre- and Post-Test Findings

Pre-test levels of parental distress and parent-child dysfunction. Inspection of the pre-test mean scores for each of the five standardized measures (i.e., those assessing parent-child dysfunctional interaction, parental distress, depression, parenting confidence, and family functioning) revealed that, for the intervention group, they hovered near clinical cutoff scores, indicating some distress/dysfunction. Comparison group pre-test means were at or above clinical cutoff scores for most measures, indicating a relatively high level of distress/dysfunction. Group differences could be attributed to characteristics peculiar to the small sample available for the pilot study, especially the comparison group.

Overall, parents in both the intervention and comparison groups reported high levels of distress prior to the Skill Building Group. This is consistent with studies demonstrating that parents of children with developmental delay experience high levels of stress and feelings of guilt, sorrow, pity, and depression (e.g., Beckman, 1983; Emde & Brown, 1978). Parenting an infant with special needs can be practically and emotionally challenging and this can be stressful.

Pre-post comparisons. All pre-post differences were in the predicted direction for the intervention group (i.e., showing improvement after the Skill Building Group), with three of five t-test results reaching statistical significance (i.e., those assessing decreases in parent-child dysfunctional interaction, parental distress, and depression). The intervention group showed improvement in their scores which ranged from one fifth to two thirds of a standard deviation in

size. The average standardized difference between the means ( $d$ ) for the intervention group was .40, which is considered medium/moderately strong (Cohen, 1988).

Parents in the comparison group reported an increase in depression/sadness over time that showed a trend toward statistical significance. No other comparisons approached statistical significance. Standardized effect sizes ranged from approximately three fifths of a standard deviation in the negative direction to approximately two fifths of a standard deviation in the positive direction. The average  $d$  for the comparison group was -.05.

Implications of pre-post analyses. The parents in the intervention group reported significantly lower levels of parent-child dysfunctional interaction, parental distress, and depression after participating in the Skill Building Group. This was not true for the comparison group. In fact, the comparison group showed a trend towards increasing symptoms of depression over time.

These results are consistent with previous research on parent education and support group programs which have demonstrated lower levels of perceived stress and sadness/depression in parents after completion of the group program (Seligman, 1993). These findings are important in relation to attachment security because previous studies have demonstrated a significant relationship between the insecure attachment of infants and parenting stress and sadness (Jarvis & Creasey, 1991). In fact, the Skill Building Group addressed many of the significant parental predictors of infant attachment security (cf. Ainsworth et al., 1978; Atkinson et al., 1998; De Wolff & van IJzendoorn, 1997) either directly (i.e., caregiver sensitivity, social support) or indirectly (i.e., parental depression, parenting stress). Since infants with developmental difficulties are at heightened risk for insecure attachment (e.g., Atkinson et al., 1999; Plunkett et

al., 1986) and insecure attachment in infancy has been associated with a higher risk of malfunctioning in the social, emotional, and cognitive domains (Bretherton, 1985), the significantly lower levels of dysfunctional interaction and parental distress achieved by the intervention group at post-test may have positive long term developmental consequences for their infants at developmental risk. At least, it may be possible that attachment risk may decrease if the Skill Building Group prevents escalation in parental distress and/or parent-child dysfunctional interaction.

In their meta-analysis of individual attachment-based interventions, van IJzendoorn et al. (1995) found a combined effect size ( $d = .48$ ) for short-term behavioral interventions similar to that reported here ( $d = .40$ ). Although maternal sensitivity and attachment were not assessed directly, findings from this pilot study to some extent replicate studies showing the effectiveness of individual attachment-based interventions (e.g., van IJzendoorn et al., 1995) and extend the findings to a group-based intervention.

### Client Satisfaction

In general, participants reported that they highly valued the Skill Building Group: 88-100% said that they would recommend it to others, found the content relevant, the quality good or excellent, and the logistics satisfactory (number of sessions, frequency, duration). Parent perceptions of the Skill Building Group with respect to the perceived helpfulness of the content, format, and processes were extremely positive. Effectiveness also was highly rated: More than 90% of the parents reported better interactions with their baby and other children in the family; having become better at problem solving and more confident in reading their baby's cues; and having increased their knowledge about early development, at-risk infants, their own baby, and

community resources. Many (74-89%) reported having made new friends, enjoying their baby more, and feeling less stressed after participating in the Skill Building Group.

### Follow-up Service Requests

Despite the fact that all intervention and comparison group parents were on the waiting list for individual in-home intervention prior to the Skill Building Group, the majority (75%) of parents who participated in the Skill Building Group subsequently chose consultation as their preferred follow-up service option. Consultation involves service initiated at the family's request around specific issues as identified by the family, and includes a limited number of home visits and unlimited telephone contact. This represents a lower level of service intensity than initially requested. Only 3 (25%) of the intervention group parents requested regularly scheduled individual in-home intervention following the Skill Building Group, which is significantly different from the control group, all of whom continued to request regular in-home intervention (Fisher's exact probability  $< .01$ ). Together with the client satisfaction results, these findings suggest that parents were satisfied with the group service and perhaps felt that they did not require as intense follow-up services upon completion of the Skill Building Group as initially requested. The implication of these results may be reduced costs to the social service system as the more intense and expensive follow-up services were not perceived by parents who attended the Skill Building Group as necessary to meet their needs. Incorporation of group services within early intervention service delivery models warrants further exploration and investigation, especially in these times of fiscal restraint.

### Limitations and Future Directions

This pilot study involved a cohort sample, an opportunistic wait-list control group, and

parent-report inventory measures only. Resource limitations precluded follow-up to ensure return of inventories from a larger proportion of those surveyed. The study design and analyses were limited by the small and uneven group sample sizes. This pilot study should be viewed as exploratory and interpretation of findings made cautiously. In particular, we have no objective data demonstrating that the intervention enhances parent-child attachment. The next step in this program of research involves a randomized clinical trial using observational ratings of parent-child interaction and attachment security, as well as investigation into potential factors influencing adherence, and maintenance of gains at follow-up. Clinically, the intervention remains to be integrated into an efficient, effective, multi-disciplinary service delivery model.

## References

Abidin, R. (1990). Parenting Stress Index (3rd Ed.) Professional manual. Odessa, FL: Psychological Assessment Resources.

Ainsworth, M.D.S., Blehar, M.C., Waters, E., & Wall, S. (1978). The Strange Situation: Observing patterns of attachment. Hillsdale, NJ: Erlbaum.

Arend, R., Gove, F., & Sroufe, L.A. (1979). Continuity of individual adaptation from infancy to kindergarten: A predictive study of ego resiliency and curiosity in preschoolers. Child Development, 50, 950-959.

Atkinson, L., Chisholm, V.C., Scott, B., Goldberg, S., Vaughn, B.E., Blackwell, J., Dickens, S., & Tam, F. (1999). Maternal sensitivity, child functional level, and attachment in Down syndrome. Manuscript submitted for publication.

Atkinson, L., Paglia, A., Coolbear, J., Niccols, A., Parker, K., Sitarenios, G., & Guger, S. (1998). Maternal sensitivity and attachment security: Further meta-analytic examination. Manuscript submitted for publication.

Atkinson, L., Scott, B., Chisholm, V., Blackwell, J., Dickens, S., Tam, F., & Goldberg, S. (1995). Cognitive coping, affective distress, and maternal sensitivity: Mothers of children with Down syndrome. Developmental Psychology, 31, 668-676.

Barkley, R.A., Guevremont, D.C., Anastopoulos, A.D., & Fletcher, K.F. (1992). A comparison of three family therapy programs for treating family conflicts in adolescents with ADHD. Journal of Consulting and Clinical Psychology, 60, 450-462.

Beckman, P. (1983). Influences of selected child characteristics on stress in families of handicapped infants. American Journal of Mental Deficiency, 80, 150-156.



Blacher, J., & Meyers, C.E. (1983). A review of attachment formation and disorder of handicapped children. American Journal of Mental Deficiency, 87, 359-371.

Bowlby, J. (1969). Attachment and Loss. Vol. 1. Attachment. New York: Penguin.

Bretherton, I. (1985). Attachment theory: Retrospect and prospect. In I. Bretherton & E. Waters (Eds.), Growing points of attachment theory and research. Monographs of the Society for Research in Child Development, 50 (1-2, Serial No. 209), 3-35.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences. 2<sup>nd</sup> ed. Hillsdale, NJ: Erlbaum.

Crnic, K., & Stormshak, E. (1997). The effectiveness of providing social support for families of children at risk. In M.J. Guralnick (Ed.), The Effectiveness of early intervention (pp. 209-225). Baltimore, MD: Brookes.

Cunningham, C.E., Bremner, R., & Boyle, M. (1995). Large group community-based parenting programs for families of preschoolers at risk for disruptive behaviour disorders: Utilization, cost effectiveness, and outcome. Journal of Child Psychology and Psychiatry, 35, 1141-1159.

Cunningham, C.E., Davis, J.R., Bremner, R., Dunn, K.W., & Rzasa, T. (1993). Coping modeling problem solving versus mastery modeling: Effects on adherence, in-session process, and skill acquisition in a residential parent-training program. Journal of Consulting and Clinical Psychology, 61, 871-877.

Devins, G.M., & Orme, C.M. (1985). Center for Epidemiologic Studies Depression Scale. Center for Epidemiologic Studies, Department of Health and Human Services, National Institute of Mental Health, Rockville, MD.

De Wolff, M.S., & van IJzendoorn, M.H. (1997). Sensitivity and attachment: A meta-analysis on parental antecedents of infant attachment. Child Development, 68, 571-591.

Dumas, J. (1986). Indirect influence of maternal social contacts on mother-child interactions: A setting event analysis. Journal of Abnormal Child Psychology, 14, 302-216.

Dunst, C.J., Trivette, C.M., & Deal, A.G. (Eds.) (1994). Supporting and strengthening families. Volume 1: Methods, strategies and practices. Cambridge, MA: Brookline Books.

Dunst, C.J., Trivette, C.M., & Jodry, W. (1997). Influences of social support on children with disabilities and their families. In M.J. Guralnick (Ed.), The Effectiveness of Early Intervention (pp. 499-522). Baltimore, MD: Brookes.

Emde, R.N., & Brown, C. (1978). Adaptation to the birth of a Down's syndrome infant: Grieving and maternal attachment. American Academy of Child Psychiatry, 17, 299-323.

Epstein, N.B., Baldwin, L.M., & Bishop, D.S. (1983). The McMaster Family Assessment Device. Journal of Marital and Family Therapy, 9, 171-180.

Estrada, P., Arsenio, W.F., Hess, R.D., & Holloway, S.D. (1987). Affective quality of the mother-child relationship: Longitudinal consequences for children's school-relevant cognitive functioning. Developmental Psychology, 23, 210-215.

Eyberg, S., & Robinson, E.A. (1982). Effects on family functioning. Journal of Clinical Child Psychology, 11, 130-137.

Field, T. (1980). Interactions of high-risk infants: Quantitative and qualitative differences. In S.B. Sawin, R.C. Hawkins, L.O. Walker, & J.H. Penticuff (Eds.), Exceptional infant: Psychosocial risks in infant-environment transactions, Vol. 4 (pp. 120-143). New York: Brunner/Mazel.

Gardner, J.M. (1972). Teaching behavior modification to nonprofessionals. Journal of Applied

Behavior Analysis, 5, 517-521.

Gibaud-Wallston, J., & Wandersman, L.P. (1978). Development and utility of the Parenting Sense of Competence scale. Paper presented at the meeting of the American Psychological Association, Toronto.

Hanzlik, J., & Stevenson, M. (1986). Interaction of mothers with their infants who are mentally retarded, retarded with cerebral palsy, or nonretarded. American Journal of Mental Deficiency, 90, 513-520.

Hornby, G., & Singh, N.N. (1983). Group training for parents of mentally retarded children: A review and methodological analysis of behavioural studies. Child: Care, Health and Development, 9, 199-213.

Jarvis, P.A., & Creasey, G.L. (1991). Parental stress, coping, and attachment in families with an 18-month-old infant. Infant Behavior and Development, 14, 383-395.

Kazdin, A.E. (1974). Covert modelling, model similarity, and reduction of avoidance behavior. Behavior Therapy, 5, 325-340.

Kazdin, A.E., Mazurik, J.L., & Bass, D. (1993). Risk for attrition in treatment of antisocial children and families. Journal of Clinical Child Psychology, 22, 2-16.

Kendall, P., & Braswell, L. (1985). Cognitive-behavioral therapy for impulsive children. New York: Guilford.

Kendall, P., Chansky, T.E., Friedman, M., Kim, R., Kortlander, E., Sessa, F.M., & Siqueland, L. (1991). Treating anxiety disorders in children and adolescents. In P. Kendall (Ed.), Child and adolescent therapy: Cognitive-behavioral procedures (pp. 131-164). New York: Guilford.

Koegel, L.K., Koegel, R.L., Kellegrew, D., & Mullen, K. (1996). Parent education for prevention and reduction of severe problem behaviors. In L.K. Koegel, R.L. Koegel, & G. Dunlap (Eds.), Positive behavioral support (pp. 3-30). Baltimore, MD: Brookes.

Lederberg, A.R., & Mobley, C.E. (1990). The effect of hearing impairment on the quality of attachment and mother-toddler interaction. Child Development, *61*, 1596-1604.

Lewis, M., Feiring, C., McGuffog, C., & Jaskir, J. (1984). Predicting psychopathology in six-year-olds from early social relations. Child Development, *55*, 123-136.

Mahoney, G., Fors, S., & Wood, S. (1990). Maternal directive behavior revisited. American Journal on Mental Retardation, *94*, 398-406.

Masters, J.C., Burish, T.G., Hollon, S.D., & Rimm, D.C. (1987). Behavior therapy: Techniques and empirical findings (3<sup>rd</sup> ed.). San Diego, CA: Harcourt Brace Jovanovich.

McCollum, J.A., & Hemmeter, M.L. (1997). Parent-child interaction intervention when children have disabilities. In M.J Guralnick (Ed.), The Effectiveness of early intervention (pp. 549-576). Baltimore, MD: Brookes.

Meichenbaum, D., & Turk, D.C. (1987). Facilitating treatment adherence: A practitioner's guidebook. New York: Plenum.

Niccols, A., McFadden, S., & Parker, L. (1996, December). Evaluation of an 8-week Skill Building Group for parents of infants at developmental risk. Paper presented at the Zero to Three National Training Institute and Conference, Washington, DC.

Niccols, G.A. (1996). Client Satisfaction Questionnaire. Hamilton, Ontario: Author

Niccols, A., Kitching, K., McFadden, S., Parker, L., & Harrison, R. (1997). The Skill Building Group: An attachment-based Coping Modeling Problem Solving oriented sensitivity training course

for parent of infants and toddlers. Leader Manual. Hamilton, Ontario: Author.

Patterson, G.R., & Forgatch, M.S. (1985). Therapist behaviour as a determinant for client noncompliance: A paradox for behaviour modification. Journal of Consulting and Clinical Psychology, *53*, 846-851.

Pisterman, S., McGrath, P., Goodman, J., Webster, I., Mallory, R., & Goffin, B. (1992). The effects of parent training on parenting stress and sense of competence. Canadian Journal of Behavioural Science, *24*, 41-58.

Plunkett, J.W., Meisels, S.J., Stiefel, G.S., Pasick, P.L., & Roloff, D.W. (1986). Patterns of attachment among preterm infants of varying biological risk. Journal of the American Academy of Child Psychiatry, *25*, 794-800.

Seligman, M. (1993). Group work with parents of children with disabilities. The Journal for Specialists in Group Work, *18*, 115-126.

Serafica, F.C., & Cicchetti, D. (1976). Down's syndrome children in a Strange Situation: Attachment and exploration behaviors. Merrill-Palmer Quarterly, *22*, 137-150.

Van IJzendoorn, M.H., Juffer, F., & Duyvesteyn, M.G.C. (1995). Breaking the intergenerational cycle of insecure attachment: A review of the effects of attachment-based interventions on maternal sensitivity and infant security. Journal of Child Psychology and Psychiatry, *36*, 225-248.

Wasserman, G.A., Lennon, M.C., Allen, R., & Shilansky, M. (1987). Contributors to attachment in normal and physically handicapped infants. Journal of the American Academy of Child and Adolescent Psychiatry, *26*, 9-15.

Waters, E., Wippman, J., & Sroufe, L.A. (1979). Attachment, positive affect, and competence

in the peer group: Two studies in construct validation. Child Development, 50, 821-829.

## Author Note

Alison Niccols is Clinical Service and Research Development Leader of the Infant-Parent Program, Hamilton Health Sciences Corporation, and Assistant Professor in the Department of Psychiatry and Behavioural Neurosciences, McMaster University. Shaheen Mohamed is a medical student in the Faculty of Health Sciences, McMaster University.

This study was financially supported by the Infant-Parent Program, Chedoke Child and Family Centre, Hamilton Health Sciences Corporation and McMaster University. This paper was submitted in partial fulfillment of Shaheen Mohamed's B.Sc. degree in Biopsychology at McMaster University. Portions of this research were presented at the 1996 Zero to Three National Conference, Washington, DC.

We are grateful to the staff of the Infant-Parent Program who contributed to the development of this new service, and to the parents who so generously gave of their time to participate in the pilot study evaluation. We thank Leslie Atkinson, Charles Cunningham, Joseph Ducharme, Linda Hancock, Kathleen Kitching, Mirek Lojkasek, and Helen Williamson for their helpful comments on earlier drafts of the manuscript.

Correspondence concerning this article should be addressed to Alison Niccols, Infant-Parent Program, Chedoke Child and Family Centre, Bruce Building, Hamilton Health Sciences Corporation, Box 2000, Hamilton, Ontario, Canada, L8N 3Z5; email: [niccols@exchange1.cmh.on.ca](mailto:niccols@exchange1.cmh.on.ca).

Table 1

Skill Building Group Session Content

SESSION &	
TOPIC	DESCRIPTION
1 Attachment Security: “What is it & why is it important?”	The introductory session focuses on the importance of infant attachment security and the relevance of sensitive, responsive parent-child interaction to fostering attachment. Participants view a short video clip and are asked to discuss the value and importance of providing positive attention to the child, mutually rewarding interactions, and infant attachment security, as well as the potential benefits of participating in the course.
2 Parent-child Interaction: “How do you show me you love me?”	Parents answer the question, “How do you and your baby become ‘attached’?”, and are introduced to the idea that infant attachment security arises out of parent-child interaction that is sensitive, responsive, and mutually enjoyable. Video problem solving and practice exercises provide parents with beginning level opportunities to consider how babies communicate without words, interpret the meaning of different types of infant behavior, and to formulate strategies for sensitive responding to infant cues.

(table continues)



SESSION & TOPIC	DESCRIPTION
<p>3</p> <p>Child and Parent Personality: “I am unique and so are you”</p>	<p>The third session focuses on the role of temperament, how this concept applies to infants and their parents, the match or mismatch of temperamental styles of infants and their parents, the potential impact on parent-child interaction, and short- and long-term implications. This session’s exercises are designed to introduce parents to the idea that each child has unique characteristics (i.e., reactions to events and people) that impact on their relationship with their parent, who also has unique characteristics. Parents are asked to identify characteristics in themselves and their infant that make parenting challenging, to proactively plan strategies to improve the interaction, to practice these strategies in home situations, and to evaluate the results.</p>
<p>4</p> <p>Disengage Cues: “I don’t like what you’re doing right now”</p>	<p>Parents learn skills in observing and responding to their infants’ disengage (“I don’t like it”) cues. Video problem solving and practice exercises provide parents with opportunities to identify potential cues in infant behavior indicating when they “need some space” or do not like something about the current interaction. Parents develop skills in attending to these cues and sensitively responding to them (i.e., when and how to “back off” and reduce coercive exchanges).</p>

(table continues)

---

SESSION &	TOPIC	DESCRIPTION
5	Engage/ Approach Cues: “I like what you’re doing right now” / “I need you”	Parents learn how to observe and respond to approach/engage (“I like what you’re doing”/“I need you”) cues, especially as they relate to comforting an infant in distress. Video problem solving and practice exercises provide parents with opportunities to identify infant cues indicating when they want to be attended to or approached, or when they like something about the current interaction. Parents are also given opportunities to formulate, rehearse, and apply strategies for sensitive responding to these signals. Parents are encouraged to practice reading and responding to their own child’s unique signals at home during everyday caregiving routines, during play, and when their child is in distress. Parents are also encouraged to identify factors that interfere with their ability to respond to their infant in a sensitive manner.

---

(table continues)

SESSION &	
TOPIC	DESCRIPTION
6 Following Your Child's Lead: "This is what I'm interested in right now"	Parents learn how to follow their baby's lead in play, why it is important (the message of interest it conveys to the child), the impact on the relationship, when to use this approach to interaction, and how it differs from directive or disciplinary interactions. Video and problem solving exercises provide parents with opportunities to identify potential cues indicating when an infant is alert and indicating "This is what I'm interested in right now". Parents develop skills in letting the child set the agenda for play; how to watch, wait, and listen; and how to show interest by encouraging face-to-face interaction, imitating the child's actions and sounds, interpreting and commenting on their actions and play, and taking turns (all strategies that help parents connect with their children and "share the moment" in a natural way).
7 Building a Healthy Relationship "I like being with you"	The seventh session targets ways to build a healthy relationship with an infant. Parents identify strategies to encourage interaction that would help foster parent-child attachment, as well as infant communication and play skills, and the impact of a healthy parent-child relationship on the child, the parent, and the family.

(table continues)

---

SESSION &	TOPIC	DESCRIPTION
8	Wrap Up	In the final session, the Skill Building Group is completed by reviewing the concepts and skills necessary for sensitive, responsive parent-child interaction and fostering infant attachment security. Parents are encouraged to share their thoughts and feelings about the group process and to give feedback on their experience.

---