

Infant Massage: Facilitating Positive Change in Dyadic Interactions

Grace Lappin, Ph.D.

Associate Professor
Department of Special Education
Hunter College
City University of New York
110 East End Avenue #1C
New York, New York
USA
(212) 717-5477
glrags@aol.com

Introduction

A review of the research (DeWolff & van IJzendoorn, 1997; Egelund & Farber, 1984) indicates a direct relationship between caregiver sensitivity and secure attachment. Fraiberg (1994) highlights the relationship between poor parental attunement and sensitivity in the disruption of human bonds in infancy; there is a strong link between dyadic interactions and infant development. Brazelton (1990) a leader in measuring caregiver-infant interaction behaviors, stated the importance of viewing these dyadic interactions as reciprocal processes where both members sympathetically observe and adjust their own behavior to the other. It is critical for the infant's physical survival as well as emotional and psychosocial health, that the caregiver and infant establish sensitive synchronicity, mutual communication, and develop trust and intimacy (Ainsworth & Bell, 1967; Bowlby, 1996).

The interaction patterns of caregivers and infants with atypical development have been found to differ from the interactions of caregivers with typically developing infants (Clark & Seifer, 1985). Infants with atypical development are often less active, less responsive to the caregiver, initiate fewer interactions, and provide fewer communicative and affective cues. These differences may make it more difficult for the dyads to establish sensitive synchronicity (Rosenberg & Robinson, 1985). Tannock (1988) offers that infants with atypical development may benefit from caregiver interactions which are distinctly different from interactions used by caregivers of typically developing infants while Field (1995) reports the importance of exploring techniques to enhance caregiver sensitivity to the infant.

Dyadic synchronicity and caregiver communication

Numerous researchers have studied the maternal effects on attachment and identified key factors that contribute to secure or insecure attachment. These traits include attentiveness of the mother, sensitivity to such needs as hunger or crying, quality and quantity of handling, demonstrations of affection, and talking/singing to the infant. Ainsworth found that there was a consistent relationship between the type and quality of maternal behaviors and the securely attached infant. In general, better adjusted mothers seem to have more attachment patterns and behaviors and more securely attached infants. According to Crittenden (1999) the infant's and caregiver's behaviors both seem to be significant in their mutual communicative interactions. Tronick (1989) states very young infants are extremely sensitive to the emotions of their caregivers. Children look to their caregivers for cues and then respond as a function of these cues (Bruner, 1974, 1975; Recchia, 1993). However, the quality of care giving and caregiver sensitivity seems to produce different caregiver patterns of behavior, which in turn, affect the infant's interactive patterns (Crittenden, 1999; Snow & Paternite, 1986; Recchia, 1993). Thus, according to Crittenden (2002), 'attachment theory is also a developmental theory (p. 72)'. The role of motherese, attachment processes, and their subsequent effect on development, however, seems to be, in part, culturally determined. It has been noted by Hyvarinen (1988), for example, that in villages in Africa where infants with blindness are constantly carried, infants do not develop *blindisms*, monotonous self-stimulation behaviors. She interprets this to mean that we [industrialized nations] do not engage in enough appropriate touching or holding of our infants.

Dyadic synchronicity and infants with blindness

Infants with blindness cannot read facial expressions and cues. Chen (1999) states it is logical to assume infants with blindness have a very different early experience than their typically developing peers. Infants with blindness learn differently than infants who are typically developing simply because they can not rely on their vision to obtain information and the information from other senses is often inconsistent (Ferrell, 1997). Consequently, they are more dependent on caregivers to interpret situations but are less able to read the caregivers cues (Recchia, 1993). When an infant cannot make eye contact, communication may break down and bonding can be at-risk, as might attachment behavior and subsequent development (Ferrell, 1985; Recchia, 1993). Similarly, taction plays a very important role in dyadic communication and synchronicity for these infants. Recchia (1993), in her work with infants with blindness, stated that the quality, as well as the quantity, of caregiver input affects the degree to which these infants rely on the caregiver for help in interpreting ambiguous stimuli. Infants with blindness who receive positive, encouraging input were more likely to risk approaching unknown, ambiguous, or threatening stimuli. Infants with blindness who are not accustomed to receiving consistent, reliable input from the caregiver may learn not to seek it from the caregiver (Recchia, 1993), will not make use of caregiver's visual cues and attachment behaviors, and will demonstrate overall development that is dissimilar to

that of typical infants (Corn, 2002; Fazzi, Lanners, Signorini, & Luparia, 2002; Lang, 2002; Warren, 1984).

Strategy to promote changes in behavior

Bandura's (1986) concept of reciprocity in human functioning (personal factors, behavior, environmental influences) makes therapeutic efforts directed at personal, environmental, and/or behavioral factors possible. Strategies for increasing sense of well-being can be directed at improving a caregiver's emotional, cognitive, or motivational processes, increasing behavioral competencies, or altering the social conditions under which the caregiver functions. Teaching caregivers of infants with blindness infant massage techniques is one such therapeutic strategy that may work to improve caregivers' emotional states, correct faulty self beliefs, habits of thinking, and functioning. If "what people think, believe, and feel affects how they behave" (Bandura, 1986, p.25) then infant massage may be a useful tool in promoting this change in thinking, feeling, and functioning. Infant massage may promote sensitive dyadic synchronicity between caregivers and infants with blindness, thus facilitating feelings of competency (Lappin, 2003; 2005; in press; Lappin & Kretschmer, 2005).

Infant Massage

Infant massage has been a traditional practice since the beginning of humanity. The practice of this intervention is witnessed in cultures as diverse as the Eskimos of the Canadian arctic and the Ganda of East Africa; it is found in South Asia, Russia, China, Sweden, and South America. Remote South Sea island communities practice it, as well as technologically advanced societies (McClure, 2000). These traditional applications of infant massage are usually passed down from parent to child, from one generation to the next. In the early twentieth century many "folk practices," such as infant massage, were discarded in the interest of scientific advancement. Today, however, modern science is rediscovering age-old treatments and the field of medicine is incorporating these interventions into scientific protocol (Muscarella, 1996). Infant massage is one such treatment that is currently being explored by neurologists, scientists, medical doctors, physiologists, child development specialists, and educators with encouraging results. Among the benefits attributed to infant massage are improved relaxation and body awareness, strengthened circulatory, hormonal and digestive systems, as well as improvement in muscle tone and sleep patterns (Scafidi, Field, Schanberg, Bauer, Tucci, Roberts, 1990; Scafidi, Field, Schanberg, Bauer, Vega-Lahr, Garcia, 1986; Schneider, 1997).

Case Study

This discussion of caregiver self-efficacy is based upon data from a qualitative case study (Lappin, 2003; 2005; in press; Lappin & Kretschmer, 2005). The research involved a mixed methodology that employed the collection of descriptive qualitative data pre- and post intervention using massage therapy. The original design was to involve three

participating dyads and was meant to use a multiple baseline single subject design. After a lengthy search and recruitment process, six potential dyads were located, but due to various reasons for attrition the original plan could not be fully executed. As a result, only one participating dyad was available which resulted in a single subject case study. The dyad studied was an 11-month-old boy born with severe visual impairment and his primary caregiver, the child's 34-year-old biological mother. The dyad lived in an intact two parent family with three siblings; both parents were immigrants. Prior to being taught infant massage, the dynamic nature of the caregiver-infant dyad included the mother's inability to read her infant's cues, evidence of low self-efficacy, and little appropriate physical, verbal, or visual interaction with her child. Although the mother provided for the physical well being of the child, he often was left alone for long stretches of time and was referred to negatively by the mother, i.e. she called him *lazy*. The mother received in home support services from a State agency, but she did not seem to benefit from these services or support. As a result, the child did sleep a lot, was often motionless (sometimes referred to as *stilling*) and engaged in self-stimulating behavior. The mother expressed frustration in not understanding her infant's behaviors and development, and expressed frustration in her inability to actively engage him. After being taught massage techniques along with the verbal discourse strategies associated with it, engagement and the nature of the dyad relationship changed dramatically. The mother demonstrated more appropriate physical contact, positive affect, and engagement of the child by getting into her child's extremely limited field of vision, directing vocalizations and talk to him and being more aware of the infant's vocal and behavioral cues. The infant's response was reciprocal and reflected more secure attachment. In addition, the infant demonstrated greater awareness of self and space. The mother gave evidence of much more sensitive synchronicity and bonding as well as improved self-efficacy. She felt she was empowered and she communicated these feeling to the researchers.

Conclusion

It appears massage may be an appropriate intervention for children with blindness. It is being incorporated with much success in Italy at the Early Therapeutic Intervention Center for Visually Impaired Children at Fondazione Robert Hollman (Goergen, 1997) and at Blind Babies Foundation in San Francisco. Infant massage is part of the treatment protocol in the neonatal intensive care units at University of Miami's Touch Research Institute, St. Luke's Hospital in Kansas City, and the University of New Mexico's Health Sciences Center. Infant massage is used to facilitate and strengthen the affective contact between parent and child and to improve the child's overall perception of his/her body (Goergen). There are, however, no longitudinal studies to determine whether consistent, prolonged infant massage can facilitate overall development in infants with blindness at the same rate as development in children with sight. It seems based on the preliminary data, the style and quality of caregiver-infant interaction is subject to change with intervention, and with these changes, there is

evidence of improved caregiver self-efficacy. Although it was not the intent of this research to generalize results to a larger population, the study discussed here appears to have found valuable data. These results suggest the value of the ongoing investigation of infant massage as an intervention for promoting facilitating positive dyadic change and sensitive dyadic synchronicity in infants with blindness.

References

- Ainsworth, M., & Bell, S. (1967). Infant crying and maternal responsiveness: A rejoinder to Gewirtz and Boyd. *Child Development*, 48, 1208-1216.
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall.
- Bowlby, J. (1969, 1973, 1980,1982,1996). *Attachment and Loss* (Vol. 3). New York: Basic Books.
- Brazelton, T. B. (1990). Saving the bathwater. *Child Development*, 61, 1661-1671.
- Bruner, J. (1974/75) From communication to language – a psychological perspective. *Cognition*, 3, 255-287.
- Chen, D. (1999). Early intervention: Purpose and principles. In D. Chen (Ed.), *Essential elements in early intervention: Visual impairment and multiple disabilities*, 3-21. New York: AFB Press.
- Clark, G.N., & Seifer, R. (1985). Assessment of Parents' Interaction with their developmentally delayed infants. *Infant Mental Health Journal*, 6, 4, 214-227.
- Corn, A. L. (2002). *Eurosight conference*, Stresa, Italy.
- Crittenden, P. M. (1999). Danger and development: The organization of self-protective strategies. *Monographs of the Society for Research in Child Development*, 6(3), 145-171.
- Crittenden, P.M. (2002). Attachment, information processing, and psychiatric disorder. *World Psychiatry*, 1, 2, 72-76.
- DeWolff, M.S. & van IJzendoorn, M.H. (1997). Sensitivity and attachment: A metaanalysis on parental antecedents of infant attachment. *Child Development*, 68, 4, 571-591.
- Egeland, B., & Faber, E. (1984) Factors related to its development and changes over time. *Child Development*, 55(3), 753-771.
- Fazzi, E., Lanners, J., Signorini, S., & Luparia, A. (2002). *Eurosight conference*, Stresa, Italy
- Ferrell, K.A. (1997). Preface. What is it about a child with blindness or visual impairment? In P. Crane, D. Cuthbertson, K.A. Ferrell, & H. Scherb (Eds.), *Equals in partnership/ Basic rights for families of children with blindness or visual impairment*, v-vii. Watertown, MA: Perkins School for the Blind and the National Association for Parents of the Visually Impaired.
- Field, T. (1995). Massage therapy for infants and children. *Journal of Developmental and behavioral Pediatrics*, 16(2), 105-111.

- Fraiberg, S. (1994). *Assessment and therapy of disturbances in infancy*. Northvale, NJ: J. Aronson Publishers.
- Goergen, E. (1997). Italy: Early intervention with visually impaired children with additional handicaps. *Journal of Visual Impairment and Blindness*, 91(1), 89-92.
- Hyvarinen, L. (1988). *Vision in Children: Normal and abnormal*. Meaford, Ontario: The Canadian Deaf-Blind and Rubella Association.
- Lang, M.A. (2002). *Eurosight conference*, Stresa, Italy elly & Barnard (1998).
- Lappin, G. (in press). Infant massage and caregiver self-efficacy. *British Journal of Visual Impairment*.
- Lappin, G. (2005). Using infant massage following a mother's unfavorable neonatal intensive care unit experience: A case study. *Re:View*, 37, 2, 87.
- Lappin, G. (2003). *Applying infant massage practices with infants with blindness or visual impairment: A qualitative study of caregiver-infant attachment*. Unpublished Ph.D. dissertation, Columbia University, New York.
- Lappin, G., & Kretschmer, R. E. (2005). Applying Infant Massage Practices: A Qualitative Study. *Journal of Visual Impairment & Blindness*, 99, 6, 355.
- McClure, V. (2000). *Infant massage: A handbook for loving parents*, 3rd ed., New York: Bantam Books.
- Muscarella, E. (1996). Infant massage provides invaluable benefits. *PT Bulletin*, May 3, 1996.
- Recchia, S.L. (1993). How visually impaired toddlers and their mothers respond to ambiguous stimuli. Doctoral dissertation, UCLA.
- Recchia, S.L. (1997). Establishing intersubjective experience: developmental challenges for young children with congenital blindness and autism and their caregivers. In V. Lewis and G.M. Collis, *Blindness and Psychological Development in Young Children*, Leister, England: BPS Books.
- Rosenberg, SA., & Robinson, C.C. (1985). Enhancement of mothers' interactional skills in an infant education program. *Education and Training of the Mentally Retarded*, 20, 2, 163-169.
- Scafidi, F.A., Field, T.M., Schanberg, S.M., Bauer, C.R., Vega-Lahr, N., Garcia, R., Poirier, J., Nystrom, G., & Kuhn, C.M. (1986). Effects of tactile/kinesthetic stimulation on the clinical course and sleep/wake behavior of preterm neonates. *Infant Behavior and Development*, 9, 91-105.
- Scafidi, F.A., Field, T.M., Schanberg, S.M., Bauer, C.R., Tucci, K., Roberts, J., Morrow, C. & Kuhn, C.M. (1990). Massage stimulates grown in preterm infants: A replication. *Infant Behavior and Development*, 13, 167-188.
- Schneider, E. (1997). The power of touch: Massage for infants. *Infants and Young Children*, 8(3), 40-55.
- Snow, J.S. & Paternite, C.E. (1986). Individual and family therapy in the treatment of children. *Professional Psychology: Research and Practice*, 17, 3, 242-250.

Tannock, R. (1988). Mothers' directiveness in their interactions with their children with and without down's syndrome. *American Journal of Mental Retardation*, 93, 2, 154-165.

Warren, D.H. (1984). *Blindness and early childhood development*. New York: AFB.