2011

Considering Care: Infant Teachers, Reflective Function and the Care Environment in Child Care Centers

Cynthia C. Jurie

Loyola University Chicago

Recommended Citation

Jurie, Cynthia C., "Considering Care: Infant Teachers, Reflective Function and the Care Environment in Child Care Centers" (2011). Dissertations. 34.
https://ecommons.luc.edu/luc_diss/34

This Dissertation is brought to you for free and open access by the Theses and Dissertations at Loyola eCommons. It has been accepted for inclusion in Dissertations by an authorized administrator of Loyola eCommons. For more information, please contact ecommons@luc.edu.

Creative Commons License
This work is licensed under a Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 License.

Copyright © 2011 Cynthia C. Jurie
LOYOLA UNIVERSITY CHICAGO

CONSIDERING CARE:
INFANT TEACHERS, REFLECTIVE FUNCTION
AND THE CARE ENVIRONMENT IN CHILD CARE CENTERS

A DISSERTATION SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

PROGRAM IN CHILD DEVELOPMENT

BY
CYNTHIA C. JURIE
CHICAGO, ILLINOIS
MAY 2011
ACKNOWLEDGEMENTS

In a piece of work that focuses extensively on the importance of relationships, it seems appropriate to acknowledge the many relationships of support that have made this journey possible. I have been extraordinarily fortunate to have as my advisor and dissertation chair, Linda Gilkerson, Ph.D., to whom I owe many thanks for her understanding and ability to appropriately challenge and inspire me throughout my coursework and in this research effort. Her patience and insight in facilitating my professional development as a researcher are most appreciated. I am also extremely grateful to Robert Halpern, Ph.D., for his understanding of the area of early care I wished to study and his willingness to provide assistance with fellowship applications and recommendations, all which seemed to happen during his busiest times of the academic year. Kathleen Kannass, Ph.D., has my eternal gratitude for her willingness to serve on the committee that oversaw this study, her effective guidance at a critical juncture with regard to statistics, as well as the wealth of information contained in her Advanced Studies in Infancy course.

Many thanks are due to the Erikson Library staff for their assistance throughout my course of studies, most especially, Maria Lasky, who excelled at finding obscure references and forwarding them to me long-distance. The fantastic group of fellow doctoral students who were such a positive part of this experience has my appreciation, especially Sue Stolzer, Ph.D., who was one step ahead of me in this process and always
willing to share her knowledge of all things dissertation-related.

I would like to thank Arietta Slade, Ph.D. for her vision in the development of the Parent Development Interview and willingness to consider the possibility of adaptation for use with child care teachers. Olga Pozanansky, Ph.D., will forever have my gratitude for her ability to take the adapted interviews and code them to reliability standards to better inform this study's efforts as well as her additional thoughts on the adaptation itself. My thanks as well to Enid Elliott, Ph.D., for allowing me to adapt her original interview for use in this study - Dr. Elliott’s dissertation was a terrific model of what research in early care is all about.

My journey was guided by my prior graduate experience at Wheelock College. Gwen Morgan, child care guru extraordinaire, first provided me with an understanding of what quality truly means in child care at an early point in my career. Gwen’s contribution to early care has been very influential on my work for which I am truly grateful. Karen Worth and Joan Bergstrom also helped to shape my understanding of what children and families need with regard to early childhood education and for that I wish to thank them.

In undertaking this study, I must thank the infant teachers and directors who took the time to talk with me, rearrange schedules, breaks and make other necessary arrangements to better share their experiences and knowledge. Each has left a part of their spirit in the following pages and throughout the writing of this document, their voices stayed with me. I wish them all the best in their care of our littlest ones and hope that our society someday places more value on the extraordinarily important work that they do every day in providing little ones with a caring heart and hands.
I would like to thank Karen Willis, Lois Smith, Lisa Warren and Warren Grantham of the Early Learning Coalition of Orange County for their support in connecting with the early care community in Orange County. Likewise, I could literally have not done this study without the ongoing information provided by Kristen Hopper of Devereux and her team. The hard (and sometimes unpopular) work of assessment that Kristen and her team have undertaken helped to provide independent perspective of what is happening in infant classrooms in Orange County between teachers and infants. My thanks to Beverly Esposito, Ph.D. of the Florida Children's Forum; Geoff Nagel, Ph.D. and Angela Keyes, Ph.D. of Tulane University for their assistance with additional elements that were used in this study. Many thanks as well to the Graduate School of Loyola University Chicago for funding support that was essential in moving this research along in a timely manner.

As I listened to others talk of their families, I again realized how extremely fortunate I was to have my parents, Catherine and Murray Gillies, who provided the love and support that allowed me to take risks in pushing myself forward, from a very young age to the present. Their encouragement to always think for myself and not shy away from challenges created the foundation that has allowed me to sail on in my own direction. And finally, this journey would never have been possible without the love and support of my husband, Jay Jurie, Ph.D., who was willing to put up with multiple challenges throughout this process, keeping a sense of humor and understanding about the demanding nature of this voyage, all the while valuing the effort and respecting the importance of this work.
# TABLE OF CONTENTS

ACKNOWLEDGEMENTS iii

LIST OF TABLES x

ABSTRACT xii

CHAPTER I: INTRODUCTION 1

CHAPTER II: REVIEW OF THE LITERATURE 10
   The Current State of Knowledge Concerning Infants in Child Care Centers 10
      The Reality of Infant Care Settings and Availability 10
      Defining Quality in Early Care 11
      Research Findings Concerning Infants in Child Care Centers 13
      Why is Infant Care so Problematic? 15
      Teachers in Center-Based Infant Care 16
      Research Examining the Role of the Teacher in Infant Center Care 17
      The Context of Care – Influence on the Infant Teacher 18
   Attachment Theory and Relationships in Infant Care 20
      The Emergence of Attachment Theory 21
      Attachment Relationships in the Context of the Family 22
      Attachment Relationships in the Context of Infants in Non-Parental Care 24
      The Importance of Attachment Relationships 25
      Key Elements in Attachment Formation 25
   Reflective Function in Attachment Relationships 27
      The Impact of Reflective Function 29
      Does the Teacher-Infant Relationship Parallel the Parent-Child Relationship? 30
      Reflective Function in Infant-Teacher Relationships 32
      Exploring Teachers’ Perspectives on Their Work With Children 33
      Psychological Issues Inherent to Relationships of Care 36
   Factors Influencing the Context of Care 39
      The Impact of Education and Training on Teacher Practice 40
      Perception of Teacher Competencies and Knowledge Needed 41
      The Role of the Center Ecosystem 44
      The Significance of Supervision and Work Climate on Quality 45
      Teacher Turnover and Wages as Predictors of Quality Care 48
      The Role of Center Accreditation in the Provision of Quality Care 49
   Summary 50

CHAPTER III: METHODOLOGY 53
   Introduction 53
   Research Focus 54
   Research Questions 55
   Hypotheses 55
APPENDIX H: SCRIPT FOR FOLLOW-UP RECRUITMENT CALL TO CENTER DIRECTORS 224

APPENDIX I: SUPPORT LETTER FOR RECRUITMENT FROM ELCOC 227

APPENDIX J: INFORMED CONSENT FORM – INFANT TEACHER 229

APPENDIX K: INFORMED CONSENT FORM – CENTER DIRECTOR 233

APPENDIX L: INCENTIVE LETTER FOR CENTER DIRECTOR 237

APPENDIX M: LETTER OF AGREEMENT WITH ELCOC 239

REFERENCES 241

VITA 261
LIST OF TABLES

Table 1: Infant Group Size Per Center 58
Table 2: Infant Teacher Age (n=26) 60
Table 3: Parental Status 61
Table 4: Infant Teacher Ethnicity 62
Table 5: Infant Teacher Education Credentials (n=26) 64
Table 6: Infant Teacher Education/Ethnicity 65
Table 7: College Coursework 65
Table 8: Infant Toddler Training 65
Table 9: Infant Teacher Tenure at Current Center 66
Table 10: Infant Teacher Total Work Experience with Infants 67
Table 11: Director Age 68
Table 12: Director Ethnicity 68
Table 13: Director Education Credentials 69
Table 14: Director Credential Status 69
Table 15: Director College Coursework 70
Table 16: Director Tenure at Current Center 70
Table 17: Center Description 71
Table 18: Center Enrollment 71
Table 19: Percentage of Subsidized Children Served (n=23) 72
<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 20</td>
<td>Center Accreditation Status (n=24)</td>
<td>72</td>
</tr>
<tr>
<td>Table 21</td>
<td>Center Accreditation Auspices (n=13)</td>
<td>72</td>
</tr>
<tr>
<td>Table 22</td>
<td>Infant Room Characteristics (n=25)</td>
<td>73</td>
</tr>
<tr>
<td>Table 23</td>
<td>Infant Enrollment as Percentage of Total Center Enrollment (n=24)</td>
<td>74</td>
</tr>
<tr>
<td>Table 24</td>
<td>Protocol for Study</td>
<td>84</td>
</tr>
<tr>
<td>Table 25</td>
<td>Parent Development Interview Adapted for Child Care Results (n=25)</td>
<td>108</td>
</tr>
<tr>
<td>Table 26</td>
<td>Descriptive Statistics for the Parent Development Interview, Adapted Individual Questions</td>
<td>114</td>
</tr>
</tbody>
</table>
ABSTRACT

The present study sought to explore infant teachers’ understanding of the mental states of the infants in their care in child care centers. The goal of the study was to examine whether reflective function could be assessed through semi-structured interviews with infant teachers and whether the care environment of the center was influential in supporting reflective capacity. To assess the care environment provided by the child care center, director interviews, teacher and director questionnaires and subscales of the *Infant/Toddler Environmental Rating Scale, Revised* (Harms, Cryer & Clifford, 2003) were used. Participants in this study were 25 infant teachers and 24 child care center directors of community-based child care programs in Orange County, Florida.

Adaptation of the *Parent Development Interview, Revised Short Version* (Slade, Aber, Berger, Bresgi & Kaplan, 2003) for use with infant teachers in child care classrooms supplied evidence of infant teachers’ capacity for reflective function, although a correlation with observed caregiving practices, as measured by subscales of the *Infant/Toddler Environmental Rating Scale, Revised* was not found. Administrative support, training and education were not found to be correlated with higher levels of reflective capacity although staff support was. Qualitative analysis provided insight into infant teachers’ perspectives on relationships, conscious caregiving and developmental issues related to the first year in non-maternal care. As the first year of an infant’s life is an important period for the social-emotional development that forms the basis for later
learning, this exploratory study provides new insight to the subtle elements that are at work influencing the quality of care provided to infants in child care centers.
CHAPTER I
INTRODUCTION

In 1994, the Carnegie Commission’s Starting Points report noted the “quiet crisis” (p. x) facing infants and toddlers in contemporary American society, commenting that this age group was found to be “perhaps the most neglected” (p. x). Since that time, additional research studies have offered further confirmation of this - perhaps most prominently with issues related to quality of care for infants in child care centers. The focus of research attention, however, has not been on the infant teachers¹ who are influential catalysts in making quality happen in the infant’s daily experience. Our understanding of how infant teachers consider the infants in their care and their work is very limited, yet this may be one of the most important considerations in efforts to improve child care quality. As the first year of an infant’s life is an important period for the social-emotional development that forms the basis for later learning, this study seeks to provide a multifaceted approach to examining the construct of reflective function in teachers, or how infant teachers view the infant’s state of mind in their practice of care, and whether this may contribute to the provision of quality care for infants in child care centers.

¹In the research literature, the term “caregiver” is most commonly used to describe the individuals who look after infants in group settings, however, in my professional experience, the term “teacher” is more commonly used by the individuals in this role. Out of respect to the individuals who do this work, I have used the term “teachers” throughout this text, reserving the term “caregivers” for research relating to parental roles.
The first year of life may be among the most important, as development occurs at a rapid pace, typically in the context of a meaningful relationship with caregivers, whose role is to care for and support the infant’s emerging capacities. As the number of mothers of infants in the workforce doubled in size from 31% in 1976 to 59% in 1998 in the United States (Lombardi & Poppe, 2000) non-maternal care has become common for many babies. With families turning to child care centers to care for their young child (NICHD, 1997), infant teachers have become secondary care providers in supporting the infant’s development. Therefore, it is important to begin with an assessment of the existing literature regarding what is known about center-based infant care and quality, including specific research related to infant-teacher relationships in the first year of life.

An examination of the issues of early child care in relation to quality is especially important, given the past several decades of research into the question of “is day care bad for babies?” (Soper, 1982). Recent longitudinal studies have found higher quality early care to have influence on children’s later school performance (Belsky, Vandell, Burchinal, Clarke-Stewart, McCartney, & Owen, 2007; Fowler, Ogston, Roberts-Fiati, & Swenson, 1997), therefore, examination of the challenge to providing quality care to infants is essential. Of critical importance to this discussion is an understanding of role of the infant teacher, given that caring for young children has often been considered to be “unskilled” labor (Thompson, 1988, p. 280), a perception that is contrary to what more recent research has found regarding infant/toddler teacher knowledge (Wertfein, Spies-Kofler, & Becker-Stoll, 2009).
Essential to this discussion, as well, is an understanding of the specific issues that are a part of the infant child care dilemma. At the same time more families seek child care for their infants, the availability of family members to assist them in this care has decreased (Brown-Lyons, Robertson & Layzer, 2001). Thus, increasing numbers of families with infants are seeking out-of-home care, as resource and referral agencies in one Midwestern state reported queries about infant/toddler care to make up almost half of family requests for assistance (National Infant & Toddler Child Care Initiative, 2008a). The lack of infant care spaces in centers has been identified as a “long-standing trend” (Ackerman & Barnett, 2009, p. 6) as not all child care centers offer infant care as part of their services, due to the significantly greater cost and staffing required. Families with infants seeking child care for their infant face “serious competition” for the available spaces, which can be even more competitive if needing subsidized care (National Women’s Law Center, 2005, p. 46) as witnessed in Chicago, where, in 2001, 50,000 babies were born but only 438 spaces were available in child care centers (Children’s Defense Fund, 2003).

Even when families are fortunate enough to locate such care, the cost is substantial, with parents reporting compromising on quality vs. affordability (National Association of Child Care Resource and Referral Agencies, 2006). The impact of the scarcity of infant care spaces and the high costs has been described as a “double whammy” to families seeking quality care for their infant (Ackerman & Barnett, 2009, p. 7). The lack of a coordinated system of care leaves parents to face a “patchwork non-system” (Thomson, undated) that leaves at-risk children particularly vulnerable (Ehrle,
Adams, & Tout, 2001). Given that child care allows parents to work, creating financial stability for their family, the absence of quality infant care may be seen as a significant barrier to parental employment (Oser & Cohen, 2003). The availability of quality early care may therefore be seen as not just a developmental issue but as an economic issue as well (Keyser & Hartley, 2002).

The economic realities of today’s families may be seen as a significant part of the need for early care, as in today’s economy, the rise in middle-class incomes may be seen as due to women’s salary contributions (Warner, 2005), with a majority of working women reporting earning “half or more of their family income” (Women Employed, undated). While this is the reality faced by families today, social perceptions have not kept pace with changing financial circumstances, as can be seen by polls showing Americans still favoring maternal care as the most preferred type of child care (Drummond & Seid, 2001). Social perceptions regarding the importance of maternal care for young children, described as a “cultural control system” (p. 48, Epstein, 2004, p. 48), have been noted as creating guilt for working mothers, as the perception remains that the child is suffering as a result of the mother’s employment (Bianchi & Casper, 2000).

The “deep cultural ambivalence about mothers’ employment” (England, cited in Warner, 2009) is perhaps the largest impediment to greater social support for quality early care, described by one infant care researcher as pushing against a “culturally embedded stigma” (Fein, 1993, p. 389). This is further reinforced by social beliefs in the need for families to be self-sufficient, resulting in a lack of meaningful child care policy at a time when research has provided substantial evidence of the importance of the first
years of life to development (WestEd, 2002). The influence of social beliefs on early
care policy may be seen in the contrast between those countries with a social welfare
orientation, who have made significant efforts to support families with young children in
eyearly care, as contrasted to the market-based approach found in the United States, where
an overall coherent policy is lacking (Penn, 1999).

In Europe, social democracy values, such as those found in Northern European
countries, have resulted in an early care system which is both supportive of the family as
well as allowing greater gender equity in the workplace (Oser & Cohen, 2003). China
has used early care as the basis for instilling collective values as part of the
transformation of a new society (Penn, 1999). Italian infant-toddler services have
evolved to the degree that they are now seen an a “right of every working family”
(Edwards, Gandini, & Forman, 1998, p. 19), whereby a public system of early care is
considered essential to supporting both the needs of families as well as the developmental
needs of the very young child. Cultural perceptions of the need for care influence how
other countries view early care as a “public service available to all families” (Oser &
Cohen, 2003, p. 74). In the U.S., however, infant care may be seen as a graphic example
of how the lack of a national child care policy, has led to levels of care that may be the
lowest quality of care found in early childhood programs (Clarke-Stewart & Allhusen,
2005). A national survey of parents on child care reported much frustration with the lack
of leadership found among politicians regarding support for child care and with the media
for not paying sufficient attention to the issue as well (Legal Momentum, 2003).
The impact of such social valuing can also be seen in the limitations of infant child care research. A recent gathering of early childhood researchers examining quality rating improvement systems (QRIS) identified issues relating to quality of infant/toddler care, tools available to measure quality, and most notably, the lack of an infant/toddler workforce (National Infant & Toddler Child Care Initiative, 2008b). Among the research areas in need of attention includes the diversity of the present workforce, as there is evidence that increasing numbers of English language learners are present in the infant/toddler workforce to a greater degree than in the preschool workforce (Matthews, 2008). What is known about the infant/toddler workforce is that teachers are less well-educated and receive less by way of training than their preschool counterparts (Midwest Child Care Research Consortium, n.d.) while receiving less by way of compensation and having a higher turnover rate (National Infant & Toddler Child Care Initiative, 2010).

Child care work in general has been identified as one of the lowest ranked occupations, coming in 186th (out of 200 jobs), based on income, work environment, and stress among other factors (Shellenberger, 2011). Within the early childhood community, infant teachers are seen as “lower status” as their work involves more direct care, such as diaper changing (Elfer & Dearnley, 2007, p. 268). To date, the research focusing on infant teachers’ understanding of the infants in their care is limited, despite evidence from parenting research as to the importance of this to early development (Degotardi & Davis, 2008). This study seeks to address this gap in the literature by examining the issue of quality in infant care via the infant teachers’ understanding of their work with infants in child care centers. By eliciting the infant teachers’ perspective of the care environment, it
may be possible to further our understanding of what gets in the way of quality care for infants in child care.

The importance of early relationships to a child’s optimal development has been the frame through which much research in early education has been considered. Research attention to infants in child care arose from initial concerns regarding the potential for attachment disruption between the infant and the family, as well as long-term developmental consequences. Thus, an understanding of attachment theory and its relevance to infant care in the center setting is necessary. An emerging concept in recent studies in attachment theory has suggested a parent’s capacity for reflective function as a means of explaining how parental behavior influences the development of attachment behaviors in the very young child. This review of the literature includes both an assessment of the concept of reflective function as well as a consideration of how this theory may be applicable to infant-teacher relationships in child care centers. Infant teachers have been among the least studied members of the early childhood community therefore an understanding of our knowledge regarding infant teachers is included. Finally, because the infant-teacher relationship exists as part of a wider context in the child care center, the role of the center ecosystem as a potential influence on a teacher’s behavior with the infants in her care is considered, including key elements that may have particular impact on the teacher’s capacity for optimal care as identified in the research literature.

---

2As the overwhelming number (98%) of infant teachers are female (Elliott, 2007; Whitebook, Sakai, Gerber & Howes, 2001), all references to infant teachers in this paper will use the feminine pronoun.
This paper contains five chapters, the present introduction to the study, and a review of the current literature in Chapter II, which includes four sections: (1) an overview of the research examining quality of care in center-based infant programs as well as our understanding of infant teachers to date, (2) a consideration of attachment theory, first with a review of what is known regarding parent-child relationships and then what is relevant to infant-teacher relationships in child care centers, (3) an analysis of the concept of reflective function and its potential relevance to the infant-teacher relationship, and (4) a review of potential factors in the wider center ecosystem that may influence the capacity of the infant teacher to provide responsive care. A description of the methodology and demographics follows in Chapter III, where both the qualitative and quantitative elements of this study will be explored in greater depth.

The results of this study will be examined in Chapter IV, as the three research questions at the heart of this study and findings to each question are analyzed. In Chapter V, a discussion of the findings from this study in the context of early childhood research will be considered. This discussion will assess why reflective function is relevant to our understanding of infant teachers in child care centers and how this information might better inform supports for early care. The infant teacher’s knowledge of the care environment provided through her relationship with her babies and the related issues that emerged will also be explored. The limitations to this study, the implications for early childhood practice, and the areas for future research will follow. Finally, the conclusion will address the relevance of this study to the state of infant care at present in our society.
The infant teacher’s experience of infant care in the child care center, in the context of attachment theory, focusing on their reflective function or capacity to understand the infant’s state of mind has not been examined, despite the decades of attention given to the impact of non-familial care on infants in such care settings. An improved understanding of the infant teacher’s perspective of care may be seen as an essential step forward in strengthening the care environment provided to the infant in out-of-home care. As our understanding of the infant teacher’s construction of caregiving is further developed, it may be possible to identify ways in which the care offered to the young and vulnerable infant may be strengthened. Therefore, exploration of the role of reflective function as an influence on the infant teacher’s provision of care in the child care setting is a relevant subject for further research attention.
CHAPTER II

REVIEW OF THE LITERATURE

The Current State of Knowledge Concerning Infants in Child Care Centers

The first essential task in regard to the central question of this paper is to consider the present state of research knowledge of the concept of quality in early child care and what research evidence exists concerning quality care for infants in center-based programs. An examination of the issues related to the provision of quality infant care is necessary, followed by a review of research focused on the role of the infant teacher in center care. From this understanding of the present state of infant center-based care, one may then consider the teacher-infant relationship in the context of attachment theory.

The Reality of Infant Care Settings and Availability

Given the changing demographics of the American family, increased research attention has been focused on the impact of child care on the developing child, especially in the early years (Burchinal, 1999). Although child care in infancy in many countries is less common, due to more supportive parental leave policies (Hofferth, 1999), in the United States the majority of infants are in some form of non-maternal care in the first year of life (NICHD, 1996). While family child care has been the most common arrangement (Early & Burchinal, 2001), an increase in the number of babies in child care
centers has been noted, more than tripling in size from six percent in 1982\textsuperscript{1} to 19% in 1993 (Hofferth, 1999). Although there is a common belief that family child care has been the preferred choice for infants, parental selection determinants are greatly influenced by family income, ethnicity, education, values and availability (Early & Burchinal, 2001; Helburn, 1999; Hofferth, 1999; Kellogg, 1999; Morris, 1999). Furthermore, statistics reporting the percentages of families utilizing center-based care for their infant are limited by the widely acknowledged deficit of center-based infant care in many communities (General Accounting Office, 1997 cited in Children’s Defense Fund, 2003; Willer et al., 1991), most notably in poor and working class neighborhoods (Hofferth, 1999). Consequently, the assumption that center-based infant care is considered less desirable by families is open to question; although the quality of the care present in such programs has been the focus of much study.

**Defining Quality in Early Care**

Studies examining the child care that best offers a positive outcome in a child’s development have noted two dimensions that have impact on the provision of care:

1. **Structural factors**, such as adult-child ratios, group size and teacher educational requirements, relate to the features of the environment that are more subject to regulation (Helburn, 1995; Sims, Hutchins, & Taylor, 1997; Whitebook, Howes & Phillips, 1989)

2. **Process factors**, such as teacher-child interactions, are related to the child’s daily experience in care (Love, Schochet, & Meckstroth, 1996); both have been noted as being meaningful to the care experience of and outcomes for the young child (Marshall, 1982 was the first year that detailed information by age and type of care was available (Hofferth, 1999).
2004; Phillips, Mekos, Scarr, McCartney, & Abbott-Shim, 2001). While structural and process factors may operate independently of one another, they are frequently interrelated, as can be seen in studies showing that better adult-child ratios may result in more sensitive caregiving, as the teacher has more ability to be responsive when she has fewer children in her care (NICHD Early Child Care Research Network, 1996).

Some evidence from the wider early childhood literature suggests process factors may be of more critical importance to long-term child outcomes (Howes & Smith, 1995) and research efforts have increasingly focused on the specific elements of process quality that may have the greatest impact on child outcomes, most often, the quality of the teacher-child interactions (Fein, Gariboldi & Boni, 1993; Gerber, Whitebook & Weinstein, 2007; Howes et al., 1990; Jacobson & Owen, 1987; Rayna, 2004). Teacher sensitivity (Hirsh-Pasek & Burchinal, 2006; Howes, Galinsky & Kontos, 1998), teacher behaviors and involvement (Zanolli & Saudargas, 1990) teacher’s use of language (Makin, 1996) and teacher relationships with children (DeSchipper & Van IJzendoorn et al., 2004; Howes, 2000) have all been studied in an effort to understand the way in which the teacher may have influence on the child in group care. Thus, further examination of specific elements of the psychological framework influencing teachers’ care and the potential impact on teacher performance falls within the expanding scope of study relating to quality issues in early care programs.
Research Findings Concerning Infants in Child Care Centers

Infant classrooms have been included in a number of studies examining child care quality. The Cost, Quality and Outcomes (CQO) multi-state study of child care centers found that 40% of classrooms serving infants were classified as low quality and that only 8% were determined to be of high quality (Cost, Quality & Outcomes Study Team, 1995). The authors of this study noted that infant toddler groups were more likely to receive lower quality care than preschool children and this was most likely to be found in areas related to health and safety (Cost, Quality & Outcomes Study Team, 1995). Infant toddler teachers were also found to have less by way of training and experience than their counterparts in preschool classrooms. The significance of these findings were noted by researchers to be a “grave concern” as “quality in rooms caring for infants and toddlers was substantially lower than in rooms caring for older children” (Cost, Quality & Outcomes Study Team, 1995, p. 136). It should be noted that this may overestimate the actual reality of infant care quality, as Love and colleagues (1996) observe that such studies rely on centers who are volunteering to participate and there is evidence to suggest that quality may, in fact, be higher at such centers than in those who opt not to participate (Whitebook et al., 2001).

The comprehensive NICHD Study of Early Child Care found poor to fair quality care in 61% of the infant toddler care observed and documented evidence of a decline in teacher educational background and training (Vandell & Wolfe, 2000). This study also found three quarters of infant teachers providing care that was “minimally or not at all stimulating of cognitive or language development.” (quoted in Drummond & Seid, 2001,
The NICHD study also found that although teachers in centers were more likely to have had specialized training than their home-based counterparts, sensitive, positive and involved care was “least likely in child care centers” (NICHD, 1996, p. 299).

The NICHD study offers insight into the structural elements that may influence teacher behaviors. Positive caregiving was found to be higher when both group sizes and adult: child ratios were smaller, a finding consistent with earlier research (Travers, Goodson, Singer, & Connell, 1979). In the NICHD study experience, formal education and specialized training were also not found to be significant to positive caregiving. It should be noted that although frequency of positive caregiving was found to be limited in center based care, when care was provided it was not found to be either less sensitive or less positive (NICHD, 1996).

The impact of quality infant care was documented in a study of African-American infants, who achieved higher scores on the Bayley Mental Development Inventory than those infants enrolled in lower quality centers (Burchinal, Roberts, Nabors & Bryant, 1996). Higher levels of expressive language were found in classrooms with teachers with higher levels of education. It should be noted that quality was a relative term, as over half of the classrooms in this study were found to be of poor quality and none were considered to meet high quality standards, as established on the Infant Toddler Environmental Rating Scale-Revised, most commonly referred to as the ITERS-R (Harms, Cryer & Clifford, 2003). A study of child care programs in four Midwestern states, also using the ITERS-R, found similar concerns with quality, noting that “it is especially troubling that no instances of good care were observed among infant-toddler
center-based programs” (Hegland, Peterson, Jeon, & Oesterreich, 2003, p. 8). The consistently problematic nature of infant-toddler center based care found throughout the research literature, with repeated evidence pointing to factors related to teacher performance, further documents a need for more in-depth study with greater attention paid to the role of the teacher.

**Why is Infant Care so Problematic?**

The interplay between process and structural aspects of the child care experience was captured in a tri-state study by Phillips and colleagues (2001) which found compliance with state licensing standards for teacher-child ratios to be strongly related to classroom quality in infant classrooms, to the extent that the authors noted “ratios may be an especially important ingredient of quality of care for infants” (p. 492). Researchers in this study noted, however, that almost one third of infant classrooms were out of compliance with state licensing standards for teacher-child ratios, a percentage which is appallingly high, given infant dependence on teachers in the first year of life.

A study of cost and quality in Massachusetts may provide insight into the economics of why such poor quality exists in center-based infant programs as it was found that “it would cost 13% more to operate an infant classroom that meets or exceeds a 4 on the ITERS-R [the distinction between the minimal and good benchmark]” (Marshall, Creps, Burnstein, Roberts, Glantz & Robeson, 2004, p. 13). The majority of infant classrooms were found to be not meeting quality standards with infant teachers performing poorly on measures related to listening and talking, although infant teachers were more likely than toddler teachers to have age appropriate expectations and
interactions. The importance of reducing teacher turnover can be seen in that longer teacher tenure was found related to higher quality in infant classrooms.

The issues of poor quality that have been raised with regard to infant center-based care make more compelling the question of what is the teacher’s experience in such settings and how does the teacher’s understanding of her role contribute to the infant’s experience in the center classroom. It should be noted that the majority of this research is inclusive of both infants and toddlers, despite evidence that has shown some differences between infant and toddler teachers and classrooms (Marshall et al., 2004; Phillips et al., 2001). Due to this common practice, many of the studies referred to hereafter will be inclusive of teachers working with children ages zero to three years of age, unless otherwise noted.

**Teachers in Center-Based Infant Care**

Although infants in child care have been studied extensively, as Elliott (2007) observes, the same cannot be said for the attention given to the teachers of infants in out-of-home care. Elliott’s research is one of a few studies, primarily qualitative, that have examined the subject of infant/toddler teachers in child care programs. The studies that exist, however, do provide an interesting framework around the psychological issues that can arise in the provision of such care. Examining the research that has focused on infant teachers and the elements that have been noted in such studies lays a foundation for then considering how attachment theory may provide additional insight into the infant-teacher relationship.
Research Examining the Role of the Teacher in Infant Center Care

One of the most powerful studies to consider the work of the infant/toddler teacher was Leavitt’s (1994) examination of the use of power and emotion by teachers in infant-toddler child care. This study of twelve infant-toddler classrooms in a variety of child care auspices (not-for-profit, community-based, corporate and proprietary) provides a distressing picture of the interactions between infants, toddlers and their teachers, where relationships between very young children and teachers are impacted by “[teachers’] need for control and their incessant, intrusive, and extractive practice of discipline [that] suppresses the children’s emerging autonomy and empowerment” (p. 49). Although Leavitt’s focus of study is on the young child’s experience of infant-toddler center-based care, her acute depictions of teacher behaviors are consistent with other research of infant care quality, cited earlier. Leavitt recognized the absence of the teachers’ perspective in this work and later acknowledged the need to consider what their beliefs and motivation might represent with regard to the behaviors observed.

In contrast to the stressed and emotionally troubling teacher behaviors witnessed by Leavitt, Lee’s study (2006) of three infant teachers’ efforts presents a more nurturing picture of teachers actively engaged in establishing relationships with the infants in their care. It must be noted that all three of the teachers in this study were master’s level students in early education working in a university-affiliated child care center, a cohort not characteristic of the infant-toddler workforce, which is typically less educated than the overall early childhood teacher population (Cost, Quality & Outcomes Study Team, 1995; Willmott, 1994). Nonetheless, Lee’s depiction of the individual nature of teacher’s
responses to the differing temperamental needs of the infant in their care provides evidence of the “small print of the developmental process” (Hoffman, 2002, p. 17) as it occurs between an infant teacher and a baby in center care. The reciprocal, interactive dynamics of this equation were particularly evident in the formation of these relationships. Lee notes the systematic and human support elements that were influential, which included teacher preparation and training, a system of primary caregiving, and supervisory support.

A more diverse sample of infant-toddler teachers served as the focus of Elliott’s qualitative study (2007). The seven infant-toddler teachers interviewed all came from non-profit programs, albeit representing a somewhat wider assortment of program auspices, including school-based, worksite, community agency as well as college centers. Elliott notes that “relationship was a central issue” (p. 80) for the teachers, which left them juggling the different relationships (babies, parents, other staff, supervisors) with competing needs. Issues of trust were central to the establishment of relationships, both with infants and their families; teachers noted the complexity of this work as being “layered with emotions, beliefs and values” (p. 6). As noted in Lee’s study, an understanding of the individual nature of the work was central to the formation of relationships, aptly noted by one participant “we’re not robots” (p. 23).

The Context of Care – Influence on the Infant Teacher

In considering the perspectives of the seven infant-toddler teachers, Elliott observes that although the context of the center itself was not initially a focus, it soon became evident that an understanding of the individual elements of each center was
necessary to understanding the impact on the teacher’s experience. Although the centers were all of overall high quality, paying better than average wages for this work, conditions at individual centers had influence on the teacher’s ability to remain focused on her work. Thus, the context of the center setting itself was seen to be a variable in the effectiveness of the infant-toddler teacher - a meaningful consideration, given all centers were noted as meeting high quality standards. If such influences may be felt in a center operating at the higher end of the quality spectrum, one must wonder at the potential for greater disruption in the many lower quality infant classrooms found in the research and consider the significance of this to both infant teachers and babies in such settings.

The cultural context of care must also be considered as demonstrated in a study by Rayna (2004) examining the professional practices of teachers in French and Japanese child care centers serving infants. Videotaping of daily classroom experiences that were then used as an opportunity for teacher commentary, clearly demonstrates how the concept of “good practice” (p. 44) strongly relates to the larger cultural community. In France, this expression was more focused on supporting children’s autonomy through teacher observation, whereas in Japan, a more peer-oriented perspective resulted in teachers focusing their practice in a hands-on manner. Such research provides further evidence for the variations in cultural goals that are a part of the interactions between teachers and infants and which may be expressed differently, depending upon the values of the cultural community (Rogoff, 2003) as well as teachers’ conscious acknowledgement of the manner in which they respond to infants.
Given what is known about the average quality of care experienced by infants in center-based child care and the limited amount of study that has been done of the infant teacher in such a setting, the cost to the relationship of this “emotional labor” (Buchbinder, Longhofer, Barrett, Lawson & Floersch, 2006, p. 50) may be seen as teachers negotiate the relationships that are a part of this work. There is some evidence in the literature to support the establishment of boundaries by teachers surrounding the provision of care (Murray, 1998). This, in turn, may raise the question as to what impact such boundaries may have on the attachment relationship between the infant and teacher. It is therefore necessary to examine how attachment theory may provide a better understanding of the relationship between infant and teacher in child care.

**Attachment Theory and Relationships in Infant Care**

The importance of the relationships that are formed in the first year of life is significant to the development of an infant’s view of the world; attachment theory views these relationships as providing the foundation for the young infant’s understanding of social capacities and self-regulation (Fonagy, Target, Steele & Steele, 1998). John Bowlby’s groundbreaking work in conceptualizing attachment provided a theoretical way of considering the relationship between mother and child, thus an examination of the critical role of the caregiver on the developing child is important. Attachment theory has provided evidence of key elements to the development of secure relationships between child and caregiver, many of which may have relevance to an understanding of the teacher-child relationship. One of the most recent developments to emerge from attachment studies has been the concept of reflective function. The role of reflective function...
function in attachment relationship between parent and child will be reviewed, followed by an assessment as to whether reflective function might be useful in understanding the teacher-child relationship in child care.

**The Emergence of Attachment Theory**

Attachment theory originated from Bowlby’s (1951) studies, as a child psychiatrist whose belief in the importance of family experience on the child and interest in intergenerational aspects of parent-child relationships led him to study the impact of home life on children, by focusing on the parents’ experience in childhood as a means of understanding the children in his clinic (Bretherton, 1992). Bowlby’s (1951) theories led him to conclude that “the infant and young child should experience a warm, intimate, and continuous relationship with his mother (or permanent mother substitute) in which both find satisfaction and enjoyment” in order to grow up mentally healthy (p. 13, cited in Bretherton).

Mary Ainsworth, one of Bowlby’s colleagues, was to contribute further to attachment theory, through her naturalistic studies of mother-child interactions in Uganda and later with the development of the Strange Situation paradigm, an empirical tool that allowed for the objective assessment of parent-child attachment. By developing a means through which it was possible to study attachment relationships, Ainsworth’s work led to a boom in the number of studies examining these relationships, thus establishing attachment theory as a credible concept (Bowlby, 2007).

Attachment theory viewed infant crying as a signaling device necessary for capturing adult attention and engagement, in a process that became more selective as the
baby became more developmentally cognizant of familiar and unfamiliar adults in the environment. The existence of an attachment relationship to a caregiver was then used by the infant to provide a secure base as mobility allowed the infant to move further away from the caregiver, returning at times of stress or fear. The caregiver’s responsiveness to the infant’s need for comfort was seen as providing the foundation for an internal working model, which served to structure relationships with others in the child’s future, for better or worse. Initial attachment studies were primarily focused on parent-child relationships, most often centered on the maternal relationship.

Attachment theory has held a significant place in developmental psychology as it provides a coherent understanding of the importance of the relationship between the infant and the caregiver in ensuring the infant’s survival and thus the continuation of the species (Bowlby, 1969, 1973, 1980, cited in Slade, 2004). This system served to protect the young, highly vulnerable infant from danger in the early years of life when the baby was dependent upon others (Marvin & Britner, 1999). The organizational system allows for the gradual emergence of the independent child through the use of the secure base for exploration that the caregiver offers (Ainsworth, 1967, cited in Marvin & Britner, 1999).

**Attachment Relationships in the Context of the Family**

The importance of the caregiver in early relationships is seen in the capacity to assist the infant in the establishment of regulatory capacity (Shonkoff & Phillips, 2000) through predictable patterns of behavior (Bleiberg, 2002). The interaction between the infant’s initiative and the caregiving response contributes to the infant’s understanding of themselves and the world around them (Hoffman, 2002). When infants have their
distress acknowledged and actions taken accordingly by their caregivers, they are more likely to be less distressed as they move out of infancy (Bell & Ainsworth, 1972; Crockenberg, 1981). This has been found to be particularly important for infants with more temperamentally challenging behaviors (Kochanska, Aksan & Carlson, 2005).

Lieberman (2002) has described early relationships as providing a template for future relationships from childhood through adulthood, a view supported by studies showing the consequences of troubled early parent child relationships (Hill, Fonagy, Safier & Sargent, 2003; Shonkoff & Phillips, 2000). This is not an absolute, however, as early problems can be overcome (David, Gououch, & Powell, 2005). Given the research evidence that has demonstrated the neural development taking place in the brain in the early years (Fonagy, Gergeley, Jurist & Target, 2002; Siegal & Hartzell, 2003), the importance of early relationships in supporting a infant’s optimal development can clearly be seen, as what the child learns from the relationship with the parent may be then used as an influence in determining the child’s receptivity towards other relationships (Kochanska et al., 2005; Main & Weston, 1981). Neuroscience is providing support for the significance of early relationships in brain formation as the physical configuration of the infant’s developing brain is impacted by the hormones that are elicited in the context of the emotional experience of the attachment relationship in the early years when the brain is undergoing substantial increase in size (Bowlby, 2007). As science has provided greater evidence of the importance of early relationships, the question of non-parental care and the role of attachment relationships in such settings became more consequential.
Attachment Relationships in the Context of Infants in Non-Parental Care

The importance and influence of other relationships on the infant has become more prominent in recent years as increasing numbers of women in contemporary culture have returned to work in the first year of their baby’s life. Concerns have been raised regarding the care afforded very young children in such settings (Belsky, 2001; Leach, 1997). Initially, this was viewed as threatening to the formation of a secure attachment relationship of the mother and baby (Vaughn, Gove & Egeland, 1980) or as having the potential to compromise the long-term development of the child on a variety of developmental domains (Scurletis, Peters, & Robie, 1966).

Higher quality child care can, however, also serve as a protective factor which can “ameliorate the effects of problematic mother-child relationships; in fact, toddlers used the external care providers as models for their peer relationships” (Eberhard-Wright, 2002, p. 210). As there is research that indicates the years before age three are important ones in the development of the core of the affective and moral self (Emde, 1991) and many families today are described by McDonough (2000) as being “overburdened” (p. 485), the quality of early childhood programs for infants may be seen as important, contributing not just to the family’s economic well-being but also to the infant’s mental health. There is some research to support that it may be an asset for children to have a third secure attachment to a non-parental caregiver, such as a child care teacher, beyond that of the mother and father (Eberhardt-Wright, 2002; Howes, Rodning, Galluzzo & Myers, 1990).
The concerns about early nonparental care have most typically arisen from questions relating to the disruption of the attachment between mother and child. This focus reflected a more traditional and limited view of attachment relationships as being primarily between infant and mother. Examining the key elements in the formation of attachment relationships provides a basis for understanding the relevance of attachment theory to the infant-teacher relationship.

**The Importance of Attachment Relationships**

As the infant develops a secure attachment to the caregiver, a mental representation of the world is also being formed, that may serve to function as an internal working model that interprets the child’s experiences in the world around them (Richter, 2004). The significance of a secure attachment status may be seen in its relationship with later social competence and behavior (Pianta, Nimetz, & Bennett, 1997; Richer, 2004) whereas insecure attachment status has been linked to behavioral issues, peer interaction difficulties and other social-emotional challenges (Field, 1987, cited in Richter, 2004). An additive relationship has been suggested, as Fonagy (1997, cited in Fonagy, Gergeley, Jurist & Target, 2002) found that 87% of children with two secure relationships performed at higher levels on theory of mind tests, as compared to 63% of children with only one secure relationship and 50% of those with insecure relationships.

**Key Elements in Attachment Formation**

Ainsworth and colleagues (Ainsworth, Bell & Stayton, 1974) have described the manner in which secure attachment develops, beginning with the caregiver’s awareness of the infant’s cues or signals. The caregiver is able to accurately construe the infant’s
signals and is emotionally available in her response. It is important that the caregiver’s response is sufficiently prompt that the infant is able to link the caregiver’s actions with the initial effort at communication, thus establishing a sense of efficacy in the developing mind of the infant.

One component of this system that has importance to the individual child with regard to emerging capacity is the ability of the caregiver to structure responsiveness in such a manner as to support the child’s developing regulatory skills. This both enables the development of a flexible capacity for self-regulation as well as fosters the relationship with the caregiver, and later others. Maternal sensitivity has been conceptualized as the caregiver’s conscious knowledge of the infant as demonstrated through understanding of the infant’s individual ways of behaving and signaling whereas responsiveness was viewed as the caregiver’s ability to acknowledge the infant’s cues by acting in a contingent and relevant manner (Richter, 2004). Meta-analysis of parenting prevention initiatives has validated the role of sensitivity in supporting attachment security (Bakermans-Kranenburg, Van IJzendoorn, & Juffer, 2003). Maternal sensitivity, as shown through acceptance, contingent responses and positive affect to the child’s distress was long considered to be the vehicle through which attachment developed, and has been documented in cross-cultural research (Posada, Jacobs, Richmond, Carbonell, Alzate, Bustamonte, & Quiceno, 2002; Richter, 2004).

A “transmission gap” has been noted, however, with regard to attachment status that is not accounted for by maternal sensitivity (Van IJzendoorn, 1995). One hypothesis is the ability of the caregiver to provide a secure base at times when the child is distressed
or fearful supports the infant’s developing regulatory capacities as well as the sense of attachment to the caregiver (Grienenberger, Slade & Kelly, 2005). Meins and colleagues (2001) found greater mind-related comments on the part of mothers to be associated with secure attachment in their infants at 12 months of age. Infants develop this capacity for self-regulation through their interactions with their caregiver. The caregiver’s ability to recognize the mental state of the infant in distress and respond to it in a manner that provides to the infant a sense of security that allows the infant to develop an understanding of the concept of regulation (Fonagy et al., 1998).

**Reflective Function in Attachment Relationships**

Reflective function, or the capacity to consider both one’s own and another’s state of mind, has been studied by Fonagy and colleagues (1998) in an effort to better understand the mechanisms by which attachment can develop and where it may go awry. Reflective function is understood to be both self-reflective in nature, as one is able to understand one’s own mental states, as well as interpersonal, in the ability to consider the mental states of others (Fonagy et al, 1998). The significance of reflective function may be seen in the parent’s ability to perceive their own mental state and their child’s mental states in daily interactions and use this information to inform their behavior in response to the developing child’s behaviors and actions. As this occurs, the infant is able to establish and advance a sense of being understood and supported by the caregiver (Sharp, Fonagy, & Goodyer, 2006). In doing so, during times of emotional distress or fear (perhaps the most powerful emotional experience of the young infant), the parent’s responsiveness provides an opportunity for closeness and intimacy while also providing
to the infant a model of coping, which supports autonomy and separateness (Fonagy et al., 1998). From such experiences, the infant’s own sense of self-concept and agency may develop, as well as a sense of individuality (Hill, Fonagy, Safier & Sargeant, 2003).

Reflective function may be seen as assisting the infant in the development of affect regulation by the caregiver’s appropriate, sensitive responses to the infant’s distress. Over time, such a response provides the infant with a sense of security in the capacity of the caregiver to support their emerging efforts at self-soothing. From this sense of security, the infant is able to use the caregiver as a secure base to explore the environment, while maintaining connection in times of uncertainty or arousal (Fonagy et al., 2002). Gergeley and Watson’s (1996, 1999, cited in Hill et al., 2003) theory of affect-mirroring has suggested that by providing the infant with affective communication that mirrors the child’s experience of distress, a symbolic representation of the infant’s internal experience is demonstrated. In this manner, the infant is able to gradually build a cognitive awareness of one’s own affective state, from which an increased ability to self-regulate may be developed (Nichols, Gergel, & Fonagy, 2001).

Reflective function as a construct exists as a continuum, that may be seen from low to high function (Slade, 2006) in parenting, whereby some parents are less able to consider either their own or their child’s mental states whereas other parents can provide a fluid and coherent consideration of their child’s mental functioning. Current theory has described reflective function as a skill (Fonagy et al., 1998), which can be developed to further the infant-parent relationship and thus support the greater likelihood of secure attachment as an outcome (Slade, 2007).
The Impact of Reflective Function

Research studies on reflective function to date have been conducted primarily in the context of parent-child relationships. Results have indicated reflective function to be predictive of secure attachment status of the child to the mother, most notably with mothers who reported significant social deprivation in their own childhood (Fonagy et al., 1998) that might otherwise place them at greater risk of having a non-secure attachment with their child. The consequence of the mother’s reflective function may be seen in studies which show a greater performance on cognitive-emotion tasks (Harris, Johnson, Hutton, Andrews & Cooke, 1989, cited in Fonagy et al., 1998) when both the child and mother’s verbal ability was controlled for. Thus, there is reason to believe that the mother’s reflective function may impact the child’s development, not only through influence on attachment status, but more directly in the impact on a wider level of interactions between child and parent, including conversation, pretend play and guidance, which have positive impact on the child’s theory of mind competence (Dunn, 1996 & Fonagy, 1997, cited in Fonagy et al., 1998).

The mother’s ability to engage at her child’s mental level has been linked to psychosocial adjustment, through the elementary school years. Sharp and colleagues found, in a large community sample (N= 354), that maternal ability to accurately predict the responses of their child was predictive of child psychosocial outcomes, even when IQ and gender were taken into account. The significance of this finding was further supported by the inclusion of a self-report measure from the child that mitigated the influence of potential maternal report bias. Findings from this study further suggested
that a high level of maternal accuracy was not necessary, documenting Winnicott’s (1987) “good enough” mother as “modest maternal accuracy (about 50%) is all that is required for healthy development” (Sharp et al., 2006, p. 209). It is thought that parental provision of support via effective mentalization may foster in children a better ability to cope with adversity, which may further aid psychological adjustment (Fonagy et al., 1994). This may be understood as emerging from the parent’s ability to take multiple perspectives, as the parent is able to perceive diverse points of view, or multiple ways of responding in difficult circumstances, thus providing to the child a model of adaptive behavior (Schoppe-Sullivan, Mangelsdorf, Haight, Black, Sokolowski, Giorgio, & Tata, 2007).

A mother’s ability to acknowledge multiple perspectives has been found to be one of the variables linked to positive behaviors with children in a study of mothers whose children were in foster care (Schoppe-Sullivan et al., 2007). This study found that a pattern of consistent coherence on the part of the mother to be related to engagement with their child, more verbally affectionate and more supportive of their child upon separation.

**Does the Teacher-Infant Relationship Parallel the Parent-Child Relationship?**

Considering the teacher-infant relationship in context of an attachment relationship may be seen as both paralleling and differing from that of the mother-child relationship, particularly with regard to socialization of children’s emotional and social behaviors (White, 1998). The maternal relationship with the child may be seen as sharing a strong, at times irrational, emotional bond that cannot be replicated to the same degree of depth in the infant child care center classroom. The infant teacher, on the other hand,
must provide a sense of emotional security to the infant while being able to offer similarly to the other infants in her care and may, as noted earlier, set boundaries on the extent of her emotional involvement with the children in her care. As research evidence has emerged to support the differing attachment relationships formed by infants to those around them (Goosens & van IJzendoorn, 1990; Howes et al., 1990; Main & Weston, 1981), it is worth considering the quality of the attachment relationships formed between the infant and the teacher in the child care classroom.

While some of the aforementioned research presents evidence that is not favorable to center-based infant care, there is data that supports the positive impact of infant-toddler teachers on young children, with regard to attachment formation. Two studies examined concordant and nonconcordant attachment relationships with mothers and teachers in community-based child care (Howes et al., 1990). Researchers found that young children were able to not only form separate secure attachments with their teacher but when the children possessed an insecure attachment with their mothers, their ability to form a secure attachment with their teacher offered positive benefits seen in their social competence (Howes et al., 1990). Children who were securely attached to their mothers were more able to cope with lesser quality child care arrangements, although it must be noted that parents with insecure attachments to their children were more likely to select child care settings which were not conducive to supporting secure attachments with teachers, i.e., with higher adult: child ratios or less sensitive teacher behaviors. Children engaging in the lowest levels of play interaction with teachers were found to be those with insecure attachments to both mother and teacher. Howes and colleagues concluded
that evidence existed to support the role of alternative attachment relationships acting in a compensatory manner for young children.

Thus, the question of how to maximize the likelihood of secure attachments between infant teachers and the children in their care is relevant to the question of quality in infant center-based child care and what factors might best support the optimal development of secure attachment relationships in such settings. The answer to why secure relationships between teacher and infants develop (or don’t) may be the result of a “complex set of relations between infant dispositions and caregiver reactions” (Fein, 1995, p. 274). The role of reflective function in this equation has yet to be fully or explicitly studied, however, research has examined other related areas that may be useful to consider.

**Reflective Function in Infant-Teacher Relationships**

To date, no research study has examined reflective function in teachers in child care centers. A glimpse of evidence that may be seen as supportive to the notion that higher reflective function may have influence on the provision of quality care may be discerned through close study of existing research. In addition, interventions addressing the psychological issues inherent to teacher-infant relationships may also be informative. Given the recent emergence of the concept of reflective function, in light of the studies referenced earlier which have examined the teacher-child interaction in child care, it is a logical question to consider whether or not the infant teacher’s capacity for reflective function may influence the quality of care offered to infants in center-based child care.
The significance and application of attachment theory to early child care has been studied for many years, first to determine whether or not attachment occurred with non-familial teachers (Anderson, Nagle, Roberts & Smith, 1981), then to assess the independence of teacher attachment from parental attachment (Goosens & van IJzendoorn, 1990). While the need for infant teachers to understand the implications of attachment theory has been discussed in the early childhood literature (Mardell, 1992), greater attention has been given to the need for stability with regard to teacher child relationships (Cummings, 1980; de Schipper, van IJzendoorn, & Tavecchio, 2004) as a means of ensuring more positive child outcomes. A recent meta-analysis of 40 studies examining attachment between child care teachers and children, using either the Strange Situation or Attachment Q-Set, found that secure child-teacher attachment was less likely in center-based care than family child care, although group related sensitivity on the part of the teacher emerged as a reliable predictor of secure child-caregiver attachment (Ahnert, Pinquart, & Lamb, 2006).

**Exploring Teachers’ Perspectives on Their Work With Children**

The importance of teachers’ understanding of the impact of their actions and the manner in which the teacher must have an understanding of the individual child’s subjective experience affect, motives and meaning has been noted as being relevant to providing a framework for the teacher’s reflection on their relationships with children (Stott & Bowman, 1996). The affective dimension of the teacher-child relationship is important to the child’s learning experience, even with very young children (Berthelsen & Brownlee, 2007). The ability of the teacher to understand the unique aspects of each
individual child is seen as an important element of quality child care (Kellogg, 1999). Noddings (1984, 1993, cited in Einarsdottir, 2003) observes that the role of “carer” involves an ability to step out of one’s own perspective and into that of the other. One meta-analysis of the impact of training in early education advocated that “inclusion of instruction related to teacher-child interaction” (Fukkink & Lont, 2007, p. 294) was warranted in vocational training; a finding that may suggest the need for training that facilitates the teacher’s ability to consider the child’s state of mind in their actions.

Examining the teacher’s experience in early care via the use of teacher narratives, with the potential to tap into reflective function, has been done primarily in preschool and elementary school settings. Sumsion (2004) explored teachers’ perceptions of their own resilience in an early care setting, in light of the staffing crisis. Kremenitzer (2005) studied the ability of teachers to reflect on their own emotional experience as viewed through the lens of emotional intelligence. One study of early childhood teachers found that those teachers who engaged in more reflective practice were more likely to have implemented developmentally appropriate practice in their work with children (Hao, 2000).

Stuhlman and Pianta’s (2001) work with kindergarten and first grade teachers comes the closest to capturing the reflective function of the teacher in their work with children. Stuhlman and Pianta used structured interviews to assess seven constructs relating to compliance, achievement, secure base, negative emotion and positive and negative affect. More experienced teachers who expressed greater negative affect in their narratives were found to exhibit less sensitive behavior toward the children in their
classrooms. To date, however, the use of narrative with infant teachers has been extremely limited; Brownlee and colleagues’ study (2000) using video and interview discussion found that teachers’ rationalizations of their care practice were more often restricted in their use of theoretical or conceptual grounding and reflected naïve beliefs.

Jacobsen and Owen (1987) also found that while positive interactions were typical between teachers and babies, the actual content of the interactions was low in stimulation and variety, a finding that suggests a limited insight on the part of the teachers as to the individual child’s needs. This finding might provide some qualified support to the idea that under such circumstances, the teachers’ limited reflective function may conceivably not allow them to consider the developmental and individual needs of the infant in their efforts to interact with the baby.

Although not explicitly addressed as such, Elliott’s study (2007) of infant-toddler teachers makes repeated reference to the struggle of competent, experienced teachers into making sense of the individual infant’s state of mind. The ability of the teacher to intuit the needs of the pre-verbal child is seen as being dependent upon “the [teacher’s] history, beliefs, and understanding of herself” (p. 24). Such an ability is acknowledged as a skill in being able to interpret the infant’s cues and provide an appropriate response, comparable to what the philosopher Philip Hallie (cited in Elliott, 2007) has called “the yes ethic – the immediate, caring response to the needs of another human being” (p. 47). Teachers acknowledged the importance of understanding each of the different perspectives of those with whom they are interacting – the infant, the family and their coworkers. In the case of the infants who are not yet able to verbally express their needs,
the observant teacher must pay “attention to baby’s signals or cues and [learn] to understand the messages takes time, careful observation, and being fully focused in the present moment” (Elliott, 2007, p. 96) by which “through understanding a child’s point of view, a [teacher] can carry awareness into action” (p. 97), all of which speak to an implicit recognition of the infant as possessing an independent and at times opaque state of mind. Thus, further exploration of the role of reflective function in guiding teachers’ interactions with infants would be useful to informing our understanding of quality early care.

**Psychological Issues Inherent to Relationships of Care**

Although not explicitly addressing the issue of reflective function in the early care workforce, several studies provide evidence supporting attachment needs and psychological nature of early care work. Bain and Barnett’s intervention study (1986) in a London nursery had as one of its central features an emphasis on the psychological needs of children in nurseries for attachment relationships. This report was not overly supportive of the need for out-of-home care, particularly for children under age 3, however, the extremely small sample size (n=12) and the fact that virtually all children were coming from homes with multiple risk factors, limits the usefulness of their position concerning non-parental care. This study’s greater contribution to the literature is the focus on the young child’s need for attachment figures in nonparental care and the impact on the staff when program policies interfere with the provision of appropriate and supportive caregiving practices.
The relationships between infants and nurses in British day nurseries was the focus of Hopkins’ study (1988) exploring the fragmented care that left both infants and nurses struggling with attachment relationships. Poor adult-child ratios, high staff absenteeism and limited adult-child interactions were reinforced by staff fears of the consequences of closer relationships with the infants in their care, which they worried would result in more emotional displays of behavior on the part of the children and fears of undermining the child’s attachment to the parent. Under the supervision of intervention staff, through weekly group discussions, the nurses explored the infants’ needs for attachment and individual care as well as their importance in providing an intimate relationship with the child.

Hopkins’ results support the findings of Bain and Barnett (1986) that the type of impersonal care found initially in this program was the unintentional response of the nurses to the distress exhibited by the babies in an inadequately designed environment not conducive to infants’ attachment needs. The intervention strategy of providing an opportunity for peer support along with the recognition of the group leader’s of the nurses’ knowledge and experience that provided a parallel process to the work that was taking place in the classrooms. This was validated by the improved interactions between nurses and infants as well as the request for ongoing consultation to each of the participating nurseries. Hopkins’ study provides both insights into the non-parental attachment relationship as well as further evidence relating to the impact of the larger ecosystem on care.
The utilization of psychoanalytical theory to understand responsibilities and relationships in the early care setting has been the focus of Elfer’s research (2007) examining how teachers’ work setting influences their relationships with young children. Elfer suggests that the emotional closeness necessary in caregiving work must be supported through the provision of an “emotionally containing” (p. 120) environment for staff. This is consistent with recent research which has shown that teacher sensitivity is greater in settings that are more supportive and the quality of the care they provide is more likely to be responsive and nurturing (Gerber et al., 2007), while other research which has indicated greater job satisfaction among child care teachers in a work setting that is more supportive of their effectiveness as a teacher (Stremmel & Powell, 1990). Thus consideration of how the child care ecosystem acts to influence the teacher’s interactions with the infant is a question worthy of further consideration.

Elfer (2007) has argued that the ability to understand our capacity to hear what infants have to communicate regarding their experiences in group care is essential as that this allows the baby to experience the ability of the teacher “to receive her distress and transform it in soothing, reassuring words” (p. 115) thus providing the containment necessary for the infant. Elfer acknowledges this need for containment goes beyond the infant-teacher relationship to the need for the adult to “talk through with a more experienced and trusted colleague some of her concerns and difficulties with the work” (p. 115). Such a system of support lends itself to furthering teachers’ consideration of the children in their care, paralleling the experience in family therapy where what changes is most is the parents’ reflective function (Slade, 2007). In such a manner it is possible for
the child care system to avoid an organizational culture in which practices are adopted that provide distance from the emotional needs of the child, more akin to an attachment model of avoidance.

The above studies provide, in addition to their focus on attachment relationships, evidence to support the need for a deeper examination of environmental factors influencing teachers’ responsive caregiving. Not only does the individual teacher’s knowledge and skill prove relevant but also the organizational climate where the relationship occurs as this may provide a better understanding of the context of care. The context of care may support or hinder optimal capacity for a teacher’s reflective function to engage with the children in her care. Consequently, it is useful to consider some of the known elements that have been found to impact teachers’ ability to provide responsive care.

**Factors Influencing the Context of Care**

The early childhood research literature has identified two areas as being particularly relevant to the provision of quality care for young children. The first, education and training, has been extensively studied while the second, the environmental culture of the center, has been examined in a number of different respects. Both of these areas are considered as structural variables, however, they have a strong influence on the process quality of the care offered to young children. Thus, it is important to examine both of these factors in greater detail.
The Impact of Education and Training on Teacher Practice

The impact of education and training on teacher behaviors toward children has been the focus of much study, albeit not as extensively with infant care teachers. Although the lack of consistency in definitions of these two terms has been noted, education may be seen as activities happening within a formal system of education, whereas training more often refers to educational experiences happening outside of such formal structures (Maxwell, Feild, & Clifford, 2006). In studies conducted with teachers of preschool children, Howes’ (1997) examination of the structural dimensions in the preschool setting of adult: child ratio and teacher education found that teacher education was indicative of more effective teaching behaviors related to quality, a finding that was further supported by the NICHD study of Early Child Care (2002). In a study of teacher behaviors with preschool-aged children (3-5 years of age), Berk (1985) found teachers’ level of education to be significantly related to their behaviors with children, particularly with regard to their use of responsive encouragement and indirect guidance, although an orientation toward “caretaking” (vs. “educational”) behaviors was noted. Teachers with college education were more likely to exhibit behavior that has been found to support children’s development. This study included a diverse representation of child care centers, albeit primarily serving middle-class Caucasian families.

Cassidy and Lawrence (2000) found in their study of teacher beliefs that teachers with higher levels of educational preparation were more likely to have cognitively oriented rationales for their actions with children; however, the majority of influences on teachers’ actions stemmed from personal/professional experience rather than educational
knowledge. In a study of toddler teachers in child care, the level of sophistication of teachers’ belief systems, particularly with regard to reflective practice, has also been found to be linked to higher education qualifications (Berthelsen & Brownlee, 2007). This is in line with Fukkink and Lott’s analysis (2007) that a distinction needs to be made between skills, attitude and knowledge when looking at teacher competency, as a teacher’s belief system may promote or impede the implementation of acquired skills to practice. It may be that teachers with a higher capacity for reflective function are more able to incorporate knowledge obtained from educational experiences in a meaningful and appropriate manner.

**Perception of Teacher Competencies and Knowledge Needed**

One particular obstacle to wider acknowledgement of the need for higher levels of education and training in child care, particularly with infants, has been a perception that child care work can be done by anyone (Whitebook, 1999), a bias that has influenced public policies towards licensing requirements, resulting in a “weakness of staff training requirements [that] is both puzzling and unfortunate” (Gormley, 1999, p. 122). The significant findings of the past two decades of research regarding the extensive development of the brain in the first three years of life has only begun to make inroads on this perception (Gopnik, Meltzoff & Kuhl, 2001; Shonkoff & Phillips, 2000).

This knowledge may be reaching wider circulation in contemporary society as evidence from one study of parents using child care found that the second most desired characteristic (after teacher’s “ability to speak English”) was “a teacher who has special training in taking care of children” (Early & Burchinal, 2001, p. 486), a finding that was
true of both parents of infants and toddlers as well as preschoolers. This study also found that the higher a value parents placed on specialized training, the greater their likelihood of using center-based care for their child.

Davis, Thornburg and Ispa (1995) found a relationship between increased levels of training in infant teachers and higher scores on some dimensions of quality such as personal care and learning. There is also evidence that training can influence infant teacher behaviors, including responsiveness (Ota, DiCarlo, Burts, Laird, & Gioe, 2006). In a study of community infant care center teachers, however, Jacobsen and Owen’s (1987) analysis of infant-teacher interactions did not show a positive relationship between higher levels of teacher interaction and level of teacher involvement, which led them to question whether or not training was effective in impacting teacher behaviors with infants. They hypothesized that much of education may be more geared toward children preschool age and older, a theory which may have some validity (Early & Winton, 2001; Whitebook, Bellm, Lee, & Sakai, 2005). In an analysis of structural quality and process quality as related to state licensing standards, Phillips and colleagues (2001) found that teacher training was a significant predictor of classroom quality in infant rooms and remained significant even when other variables related to quality were examined.

Certainly training should include information on the crucial role of interactions between infants and their teacher in ensuring quality (Fein, 1995); this has been more recently supported by Fukkink and Lott (2007), who observed that more attention should be given in training to a sharper focus of expanding teachers’ understanding of the
importance of teacher-child interactions. Fukkink and Lott’s meta-analysis examining 25 years worth of research on the impact of specialized training on early childhood teachers’ competency noted that “training seems to matter” (p. 305) as “workers become better [teachers] through specialized training” (p. 307). The authors did also note the need to adequately sort out the interplay between teacher education and socioeconomic status in studies of training and education, as these two variables may influence one another. This raises an important consideration - that of how the individual teacher fits into the wider child care ecosystem and how that ecosystem may serve to support – or complicate – the teacher’s work.

Working from an bio-ecological model (Brofenbrenner & Evans, 2000), consideration should be given to examining the complex interactions between infant and teacher in the wider context of the child care center, that can either support the child’s emerging competencies or inflict dysfunction on the infant’s capacities during a critical stage of development. The impact of the setting on the teacher’s ability to provide care has become a recent addition to the study of quality care for young children as it considers the impact of systems issues on the care provided to the child (Gerber et al., 2007; McCartney, Scarr, Rocheleau, Phillips, Abbott-Shim, Eisenberg, Keefe, Rosenthal, & Ruh, 1997; Whitebook et al., 2007; Whitebook, Sakai, Gerber & Howes, 2001). Further reviews of recent studies provide evidence of the important influence of the context of care in the child care setting.
The Role of the Center Ecosystem

As child care research moved beyond the “how much damage is done to infants and young children by working mothers” question (Scarr & Eisenberg, 1993, p. 614) into a more nuanced examination of quality, the question arose as to the “what else?” effects (Phillips et al., 2001, p. 476) that impacted classroom process quality. The observation that “good things go together in child care” (p. 486) reflects many years of child care research linking structural, regulatory and process factors in a complex exchange. The research literature provides evidence to support the theory that child care classrooms exist in a larger ecosystem and the functioning of that ecosystem may have influence on the classrooms nested within it (Elfer, 2007; Phillipsen et al., 1997). This ecological influence was noted by Elliott (2007) as having impact with regard to conditions that influenced the teachers’ experiences of caregiving as well as “how influential the setting is to the [teachers’] ability to focus on her job” (p. 138).

The quality of the center ecosystem may be viewed as having a number of dimensions with influence. The impact of leadership, through the quality of the supervision provided to the classroom teacher may be seen as one element. The ability of the center to provide a salary structure that supports teacher commitment may be seen as another element of quality. The commitment to accreditation standards on the part of the center leadership reflects a third element of quality. The interaction between these elements may create the presence of what Elfer (2007) has described as a “holding” environment, in which the infant teacher is supported both within her classroom as well as within the center program. The absence of such a positive ecosystem may account for
some of the more chronic issues in the early childhood field, such as teacher turnover. Although each of these elements may influence quality directly, their combined presence is more likely to provide teachers with an overall context of quality. This, in turn, may have significant influence on the individual teacher’s ability to effectively do her work and respond to the needs of the infants in her care.

**The Significance of Supervision and Work Climate on Quality**

The role of the supervisor has become a more recent addition to the literature examining quality in early care settings. Considering the role of support to the early childhood teacher may be seen as paralleling what is known from the attachment literature – that “responsive caregiving by one person is frequently dependent on the caregiver’s supportive relationships with other people in the caregiver’s intimate social group” (Richter, 2004, p. 6). One study of process quality in infant/toddler classrooms found the key elements of quality more likely to occur in classrooms with “more experienced directors” (Phillipsen, 1997, p. 300).

Recent research has confirmed the direct importance of the work climate to the provision of sensitive care to children as smaller center size and accreditation status were found related to greater teacher sensitivity with children in their care (Gerber et al., 2007), although a relationship with social support was not found. The perceived organizational health of the center was found to be predictive of more attuned teacher behaviors (Gerber et al., 2007).
The Cost, Quality and Outcomes study found teacher perspectives on their relationships with their directors to be positively related to quality in center classrooms (Morris, 1999).

The relevance of administrative support to the teacher’s ability to function well within the classroom may be seen as linked to the supervisor’s ability to provide support in a job that has “both intellectual and emotional demands” (Elliott, 2007, p. 59). Given the complexity of this work, the ability to reflect on their work and consider how teachers balance and negotiate such demands (Noddings, 2005; Stott & Bowman, 1996) the need for a strong and supportive supervisory relationship may be seen (Ackerman, 2004). The “platinum rule”—“do unto others as you would have others do unto others” (Pawl & St. John, 1998, p. 7)—is one expression of this dynamic whereby directors provide support for teachers in a manner that they would hope to see mirrored in teachers’ practice with the children and families in their care.

Mills and Romano-White (1999) found that director support had a direct impact on both the staff morale in the program and on the affective quality of preschool classrooms. Specifically, they found that teachers with greater levels of director support, leadership and staff morale were more likely to be more affectionate and responsive with children; while teachers with less supportive directors and lower morale were found to exhibit more anger and hostility to children. It has also been found that programs with poor organizational climates and less collegial support tend to employ teachers who are more depressed (Whitebook & Sakai, 2004) and have increased levels of emotional
exhaustion (Manlove & Guzell, 1997), which in turn, impacts their abilities to be responsive to children’s needs and to develop positive relationships.

The role of the supervisor may be seen as particularly relevant, given the staffing issues in child care, where teacher turnover rates have been reported to be between 20-60% per year (Ackerman, 2004). Viewed from an attachment perspective, the chronic workforce instability found in early care, described as being “alarmingly unstable” (Whitebook, Sakai, Gerber, Howes, 2001, p. v) may be seen as having serious impacts on the formation of secure relationships between children and teachers. Increased levels of teacher turnover have been linked to greater likelihood of negative social outcomes for children (Muijs, Aubrey, Harris, & Briggs, 2004), including increased peer conflict (Howes, Matheson & Hamilton, 1993), which appears to be related to children’s inability to form secure attachment relationships with teachers (Howes et. al., 1998; Mardell, 1992). Higher turnover increases the likelihood of teachers shifting from relationship-based care to custodial-based care (Rosenfeld, cited in Schwarz, et al., 2003) and child care centers with low rates of teacher turnover are more often found to have teachers who are more responsive and less detached, than centers with a more unstable teaching staff (Cost, Quality & Outcomes Study Team, 1995; Muijs et al., 2004; Whitebook & Sakai, 2004). Additionally, Whitebook and Sakai (2003) noted the consequences of director turnover, with its disruption of teacher morale and program operations, as teachers in these classrooms showed more harsh behaviors to children than those centers that had not experienced administrative turnover.
The contribution of the supervisor to the healthy functioning of the center ecosystem and, by consequence, the relationships between teacher and infants is thus substantial enough to be further examined. Related to supervisor support and the center ecosystem, the role of teacher turnover and wages are also important to consider.

**Teacher Turnover and Wages as Predictors of Quality Care**

Teacher turnover places an additional burden on the teachers that remain in the classroom; at best, a hardship as they train their new colleagues (Whitebook, 1999; Whitebook & Sakai, 2003) while at worst, a danger, as understaffing places teachers in situations whereby they are simply unable to provide emotionally responsive or individual attention to children (Kellogg, 1999). Kellogg’s description of “four walls and a teacher,” (p. 63) may appear as an extreme, until one remembers that Phillips and colleagues (2001) found almost one-third of the infant rooms in their study to be out of ratio with licensing requirements.

Teacher wages have been found consistently to be a unique predictor of child care quality. Higher teacher wages were found to be predictive of more positive teacher-child interactions while lower wages were predictive of more permissive, detached and negative teacher behaviors (Howes, Phillips & Whitebook, 1992). The Cost, Quality and Child Outcomes Study (1995) found similar results that indicated that higher teacher wages were related to more responsive adult involvement in infant and toddler classrooms, comparable to findings from a later Canadian study of child care (Goelman, Doherty, Lero, LaGrange, & Tougas, 2000). Lower teacher wages have also been found
to be predictive of more teacher-expressed anger toward children in the classroom (Mills & Romano-White, 1999).

Teacher wages have been consistently identified as one of the strongest predictors of quality in the literature, including studies of infant/toddler classrooms (Phillipsen et al., 1997)—a finding that has relevance to the issue of turnover, as higher paid teachers are more likely to remain in their positions (Whitebook & Sakai, 2003). Longitudinal research examining the National Association for the Education of Young Children’s accreditation system identified teacher wages as being predictive of quality care beyond that which would have been expected by accreditation status alone (Whitebook, Sakai & Howes, 1997, cited in Phillips et al., 2001).

Consideration of teacher turnover rates along with teacher salaries may provide more understanding of the complexity of issues within the center ecosystem having influence on the teacher-infant relationship. Finally, the role of center accreditation as a representation of quality care should be considered in examining the center ecosystem.

The Role of Center Accreditation in the Provision of Quality Care

The National Association for Young Children’s program accreditation system was developed as a means of recognizing centers meeting national standards of excellence (NAEYC, 2005). The Cost, Quality and Outcomes research found accredited centers to offer higher quality to the children in their care (Cost, Quality & Outcomes Study Team, 1995). A Massachusetts study found that classrooms in NAEYC accredited programs were more likely to achieve a rating of “good” than those in non-accredited centers (using ECERS standards) with almost one third of infant classrooms studied found to be in
NAEYC-accredited programs (Marshall et al., 2004). Evaluation of the organizational climate in accredited and non-accredited centers has shown significant differences in all ten measures of organizational climate that were assessed (Bloom, 1996).

A recent study of teacher sensitivity in child care found center accreditation status to be associated with greater teacher sensitivity in the classroom (Gerber et al., 2007). Specifically, center accreditation status predicted teacher behaviors that were more attuned to children and less harsh in nature (Gerber et al., 2007). Thus, an association between the accreditation status of the center and the teacher’s interactions with her children may be worthy of further study as it may provide additional evidence to support the role of the center ecosystem as a factor in the provision of appropriate care to young children.

**Summary**

Consideration of the need for quality in the provision of care to young children in child care is not a recent development, as Prochner’s (1996) study of mid-nineteenth century child care nurseries illustrates. In this study of day nurseries, concerns identified by staff, parents and managers, such as staff turnover and treatment of children, have relevance to issues found in the contemporary research literature examining child care quality. Prochner’s discussion of staff coping strategies and the manner in which such strategies may compromise or enhance the “construction of caregiving” (p. 16) are salient to the experience of the infant teacher in today’s child care center, as is further consideration of how such early relationships are supported.
Given the research findings that support a need for great improvement in the quality of care offered to babies in child care centers, further analysis is warranted to determine whether or not reflective function may be a useful concept which may be linked to the quality of the care provided in such settings. Attachment theory provides evidence as to importance of early relationships in infancy, both with parents and significant others. Emerging evidence in support of the important role of reflective function in attachment relationships provides a new prism for examining the relationships formed in child care centers between infant teachers and the babies in their care. As infancy has been viewed as a period of both significant development as well as vulnerability (Scarr & Eisenberg, 1993; Thompson, 1988), the impact of the infant teacher may be seen as being influential to the child’s early development. Assessment of the infant teacher’s ability to consider an individual child’s state of mind, in the absence of the infant’s ability to explicitly communicate intent or concerns, and respond appropriately may be useful in determining whether or not the capacity for reflective function is a more subtle element of quality care in the early childhood setting.

While consideration of the infant teacher’s reflective capacity is worthy of further study, such an inquiry must be done in a manner does not isolate reflective function from the broader experience of the infant teacher and the environment of care. The infant teacher’s experience and understanding of the construction of caregiving may provide additional insights into a greater knowledge of center-based infant care. The relationship between infant and infant teacher, in the context of the care environment, is what may facilitate a climate that supports optimal development.
The infant teacher’s contribution to an infant’s optimal experience of a quality early childhood setting may be found in the interactions that occur between them (Graue, 2005), and further research may indeed find that the teacher’s capacity for reflective function may lay at the heart of quality interactions between infant and teacher.
CHAPTER III

METHODOLOGY

Introduction

The purpose of this study was to examine teachers’ understanding and experience providing care to infants in child care centers, viewed through the construct of reflective function. An interview protocol that includes an adaptation of the Parent Development Interview, Revised, Short Version (PDI-R2-S) (Slade, Aber, Berger, Bresgi, & Kaplan, 2003) was used to assess the ability of the infant teacher to consider the infant’s state of mind in her work. Semi-structured interviews provided a more extensive understanding of the teachers’ experience of the care environment.

This research draws upon studies examining the concept of reflective function by Fonagy and Slade, as well as expanding Elliot’s (2007, 2002) study of infant teachers to a more diverse group of child care teachers. As infant teachers have been identified as an understudied population (Davis, Thornburg & Ispa, 1995) within the early childhood literature, this study provided a deeper understanding of how infant teachers view both the children in their care as well as their own experience in the provision of care. Understanding what infant teachers think about their experience of caring and the children in their care may allow for consideration of ways in which the quality of such care might be enhanced.
Since it is important to consider not just what infant teachers say, but also what they do in actual practice, this study also included a measure of classroom practice, as assessed by relevant subscales of the *Infant/Toddler Environmental Rating Scales, Revised* (ITERS-R) (Harms, Cryer & Clifford, 2003). The influence of the wider ecosystem of the child care center was also examined for its potential impact on the infant teacher and her ability to respond to the infants in her care.

This chapter begins with a statement of the research questions, hypotheses and assumptions that frame this work. The participant sample, in relationship to the population, will then be defined after which will come a review of the instruments used to gather the data. The protocol for the study will then be given, followed by a description of data analysis. The final section of this chapter will discuss the ethical considerations to this study as well as the limitations to this research.

**Research Focus**

Attachment research has offered support to the theory that parents with greater capacity for reflective function are more likely to provide experiences that are conducive to the establishment of a secure relationship with their infant, through their ability to consider the infant’s state of mind and respond in a sensitive and contingent manner. Early childhood education research has provided corroboration to the use of attachment theory as having relevance to the early care setting and relationships between early care teachers and the children in their care. The early childhood education literature has more recently begun to build evidence supporting the role of the center ecosystem as an influence on teacher quality in the provision of care. This study builds upon existing
research to expand our understanding of infant teachers in child care and the way in which they view their work.

**Research Questions**

Therefore, the research questions for this study were:

1. Can reflective function be measured in infant teachers? How does the capacity for reflective function relate to observed caregiving as measured by specific ITERS-R subscales?

2. What is the infant teacher’s experience of providing care to infants in child care centers? How may infant teachers’ perceptions of their work be useful in understanding their observed caregiving?

3. What factors, such as training, education, and administrative support, may have influence on the infant teacher: her reflective function and her ability to provide quality care and responsive infant-teacher relationships?

**Hypotheses**

It was hypothesized that:

1. The questions contained in the PDI, Short Version, adapted for child care, would be able to elicit the infant teacher’s experience of care in the child care setting in a manner sufficient to allow coding for reflective function, per the standards established by Fonagy et al. (1998) and Slade et al. (2003).

2. Higher evidence of reflective function, as measured on the PDI, Short Version, would be correlated with provision of higher quality care to infants in the child care setting, as measured by three subscales of the ITERS-R.
3. Infant teachers would be able to reflect on and share their perspectives about their work through interviews in a manner that provides a greater understanding of the care environment offered to infants in child care.

4. External factors in the child care setting, as measured by teacher and director interviews as well as the Staff subscale of the ITERS-R, would be related to higher capacity of reflective functioning, as measured on the adapted PDI, and/or higher quality care to infants, as measured by subscales of the ITERS-R.

Assumptions

This study was based on assumptions constructed from the research literature in psychology and education. First, that the provision of sensitive, responsive care to infants is important, whether provided by parental or non-parental caregivers, and is a key component in the development of a secure attachment relationship. Second, that sensitive, responsive care evolves from a caregiver’s ability to consider the infant’s state of mind and respond accordingly. Finally, while the individual infant teacher is important to the construction of quality in the early childhood classroom, environmental influences that act upon both the teacher and the child may be assessed by measures that examine specific elements that are known as indicators of quality in early care.

Research Setting

The focus of this research is on infant teachers in licensed and/or license-exempt child care centers. The study took place in Orange County, Florida. In Florida, child care licensing is done through the State of Florida’s Department of Children and Families (DCF). Child care funding and supports, such as quality initiatives, are overseen by
individual county-level early learning coalitions, which disperse federal and state child care funds.

**Population**

Orange County, Florida was chosen as the community for this study, in order to utilize the ITERS-R scores that could be used to provide independent data with regard to participant practice in their classrooms. Orange County is the most populated county in the central Florida area, including within its boundaries the city of Orlando, as well as the smaller towns of Winter Park, Eatonville, Maitland, Apopka and Winter Garden. An economically as well as culturally diverse community, Orange County had, at the beginning of this study, a large number of child care centers offering infant care. Further supporting the efforts of this investigation, the Early Learning Coalition of Orange County has been engaged in a variety of child care center quality rating improvement system (QRIS) efforts, which include the use of the Early Childhood Environmental Rating Scale (ECERS) and the Infant/Toddler Environmental Rating Scale, Revised (ITERS-R) as a part of this work.

The state of Florida, at present, mandates a 1:4 teacher/child ratio with infants younger than one year of age. As this research study began, 1,428 spaces were available for infants under one year of age in center-based care in Orange County, which would represent an average group size of just less than 8 infants per center. Table 1 shows the distribution of group size in child care centers offering infant care in Orange County. The larger size groups (over 20) may be representative of centers that have more than one
infant classroom, as the largest number of spaces was 40 in one program serving the theme park community.

Table 1 Infant Group Size per Center

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 4</td>
<td>91</td>
<td>49%</td>
</tr>
<tr>
<td>5 to 8</td>
<td>51</td>
<td>28%</td>
</tr>
<tr>
<td>9 to 12</td>
<td>23</td>
<td>13%</td>
</tr>
<tr>
<td>13 to 16</td>
<td>9</td>
<td>5%</td>
</tr>
<tr>
<td>17 to 20</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>21 to 24</td>
<td>7</td>
<td>4%</td>
</tr>
<tr>
<td>25 and higher</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Total # Centers With Infant Classrooms in Orange County</td>
<td>184</td>
<td></td>
</tr>
</tbody>
</table>

This distribution is relevant to the population as it may indicate, from the number of centers where only four or fewer infants are served, that given the state of Florida 1:4 teacher/child licensing ratio, almost half of infant teachers may be working by themselves caring for babies in a classroom. Overall, using the 1:4 ratio it would be anticipated that approximately 357 infant teachers would be required for the 1,428 infants in care, assuming that due to the reality of center fiscal concerns, the majority of the infant spaces are filled. This did not turn out to be the case, as a result of the economic recession that began in 2008.

Sample Demographics

Over the course of the ten months that recruitment into this study was active, 70 centers were invited to participate. Twenty-five centers, 26 infant teachers and 25 directors chose to participate, a participation rate of 49%. Twenty-six center directors
chose not to participate in this study, a refusal rate of 51%, while seven center directors never responded to repeated contacts with either a “yes” or “no.” The most common reasons given for not participating were time involved, owner not wanting to participate and corporate policy. Six centers where the director had expressed interest in this study were unable to take part, as the infant teacher was a monolingual Spanish-speaker. An additional five directors contacted were unable to participate as the infant room in their center had closed due to low enrollment as a result of the recession.

Florida’s public records law allows for the release of publicly funded information (with the exception of personnel records and children’s records protected by confidentiality standards); this allowed for analysis to determine whether or not there was a significant difference in infant classroom quality between those centers that chose to participate and those who declined. An independent t-test was conducted comparing the \textit{ITERS-R} scores for infant rooms in participant and non-participant centers. This analysis revealed no difference in \textit{ITERS-R} quality, $t(49)=.690, p=.493$; participating centers ($M=3.17, SE=.15$) and non-participating centers ($M=3.02, SE=.16$) were comparable in \textit{ITERS-R} classroom assessed quality. It must be noted here that the majority of infant classrooms in the center recruitment sample were low overall, in the 2-3 categories, considered to be offering low-mediocre care to infants.

Demographic information was collected from infant teachers and center directors and provides descriptive statistics concerning the participants and programs in this study. Infant teachers completed one written survey that gathered information on themselves, their education/training and current work environment. Directors completed two written
surveys; the first focused on the center and specific aspects of center operation while the second gathered information both on the director as well as her teaching staff.

Demographic information was obtained from all infant teachers participating in this study (n=26) and from all but one of the directors participating in this study (n=24).

**Infant Teachers**

**Age.** The most striking feature of the participant demographics in this study may be the fact that infant teachers participating in this study were distinctly older than teachers at their centers or in the wider workforce. Almost three-quarters (73%) of the infant teachers were over the age of 40, making them significantly older than their center colleagues (see Table 2). Only nine percent (9%) of the infant teachers in this study were under the age of 20, with an equal number (9%) being in their twenties. The overall center teacher age distribution was found to be comparable to the overall Orange County early childhood workforce, with the greatest number of teachers in their twenties (Robertson Consulting Group, 2007). Although there is limited information specific to the infant workforce available (Matthews, 2008), infant teachers were noted in at least one prior study as being somewhat older (Aguillard et al., 2005).

Table 2 Infant Teacher Age (n=26)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20</td>
<td>2</td>
<td>7.7%</td>
</tr>
<tr>
<td>20-29</td>
<td>2</td>
<td>7.7%</td>
</tr>
<tr>
<td>30-39</td>
<td>3</td>
<td>11.5%</td>
</tr>
<tr>
<td>40-49</td>
<td>11</td>
<td>42%</td>
</tr>
<tr>
<td>50-59</td>
<td>7</td>
<td>27%</td>
</tr>
<tr>
<td>60+ years</td>
<td>1</td>
<td>4%</td>
</tr>
</tbody>
</table>
**Parental Status.** As many of the infant teacher participants were mature women, it is not surprising to find that a sizeable majority were also parents (84.6%), as women who have reached their forties (and older) would be more likely to have made their decisions concerning childbearing (see Table 3). It is also possible that directors and parents may perceive infant teachers who are parents to be more competent in their role (Wilgus, 2005), thus resulting in such a high percentage of infant teachers who are also parents.

Table 3 Parental Status

<table>
<thead>
<tr>
<th>Status</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent</td>
<td>22 (84.6%)</td>
</tr>
<tr>
<td>Non-parent</td>
<td>2 (7.7%)</td>
</tr>
<tr>
<td>No Response</td>
<td>2 (7.7%)</td>
</tr>
</tbody>
</table>

**Gender.** This sample of infant teachers was also comprised exclusively of female teachers, as anticipated, given the limited role of male teachers within early childhood settings. Although the wider center sample and Orange County workforce sample showed a very small male teaching population of approximately 1.9%, no male teachers were found within this sample.

**Ethnic Diversity.** The infant teachers represented in this study illustrate the diversity that is found within the early childhood community (see Table 4). Over three-quarters (77%) of the sample were from the minority community, with African-American women representing the largest ethnic group (54%), followed by Caucasian (23%) and Latina women (23%) in equal numbers. The strong representation of African-American
infant teachers was not found as clearly among the center teachers in this study, where Latina teachers were the largest ethnic group represented (39.2%), followed by African-American teachers (29.8%) and then Caucasian teachers (26.3%).

Table 4 Infant Teacher Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Infant Teachers</th>
<th>Center Teachers</th>
<th>Orange Co. ECE Workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>14 (54%)</td>
<td>29.8%</td>
<td>28.1%</td>
</tr>
<tr>
<td>Caucasian</td>
<td>6 (23%)</td>
<td>26.3%</td>
<td>37.3%</td>
</tr>
<tr>
<td>Latino/Hispanic</td>
<td>6 (23%)</td>
<td>39.2%</td>
<td>28.1%</td>
</tr>
</tbody>
</table>

It should be noted that these numbers regarding teachers are not consistent with the larger Orange County workforce study (Robertson, 2007), where European-American teachers were the largest ethnic group represented (37.3%), although not representing a majority of the teachers studied. The Orange County early childhood workforce study found Caucasian, African-American and Latina teachers to comprise the overall majority of the teaching population in early childhood programs (93.5%). Although Orange County does have an Asian-American community, this ethnic group was not represented among the infant teachers in this study and was a very small subset of the center teachers in the participating centers (1.9%).

It should also be noted that the category of African-American is a complex categorization, being inclusive of both individuals born within the African American community in the United States as well as individuals who immigrated to the United States from a number of countries, including the Caribbean. Thus, this category may represent both individuals for whom English is the first language as well as those
individuals for whom English is a second language. The infant teacher questionnaire was based on previous workforce study questionnaires used within the child care community. Given the diversity of the ethnic communities represented in early childhood settings, a more nuanced approach to gathering such demographic information may be of more use in future research.

**Education and Training.** The infant teachers in this study were also a diverse group with regard to educational achievement (see Table 5). Not quite half (46.5%) had completed high school/GED or less. Almost a third (31%) had their Child Development Associate credential (or the Florida equivalent), while only 15% had completed a two-year associate’s degree, although not in child development or early childhood education. There were no infant teachers who had completed a bachelor’s degree. In the Orange County workforce study (2007), more infant teachers held their CDA or equivalency (50%) with a much smaller number (6.3%) having completed an associate’s degree although not quite ten percent (9.4%) were found to have completed a bachelor’s degree. This diversity of education may be reflective of research findings that show infant teachers to be less educated than their preschool colleagues in the early childhood workforce (Helburn, 1995; Willmott, 1994).
The complexity of the issue of educational attainment may also be seen when contrasting infant teachers with their center colleagues. Infant teachers were significantly more likely to not have completed high school (11.2% vs. 2.1%). Some divergence of educational achievement may also be seen within ethnic groups within this sample (see Table 6). African American teachers represented the largest proportion of infant teachers holding just a high school diploma (or GED) but also an associate's degree. Caucasian infant teachers were more evenly divided between levels of educational achievement whereas Latina infant teachers were most likely to have completed their CDA or equivalency.

Table 5 Infant Teacher Education Credentials (n=26)

<table>
<thead>
<tr>
<th></th>
<th>Infant Teachers</th>
<th>Center Teachers</th>
<th>Orange County Infant ECE Workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than HS/GED</td>
<td>3 (11.5%)</td>
<td>2.1%</td>
<td>NR</td>
</tr>
<tr>
<td>HS/GED diploma</td>
<td>8 (30.7%)</td>
<td>32.6%</td>
<td>78.1%</td>
</tr>
<tr>
<td>CDA/CDA EQ</td>
<td>9 (34.6%)</td>
<td>32%</td>
<td>50%</td>
</tr>
<tr>
<td>Some College</td>
<td>2 (8%)</td>
<td>15%</td>
<td>NR</td>
</tr>
<tr>
<td>AA/AS degree</td>
<td>4 (15%)</td>
<td>6%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>0</td>
<td>10.6%</td>
<td>9.4%</td>
</tr>
</tbody>
</table>
Table 6 Infant Teacher Education/Ethnicity

<table>
<thead>
<tr>
<th></th>
<th>African American</th>
<th>Caucasian</th>
<th>Latino</th>
<th>Orange Co. ECE Workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than HS</td>
<td>2 (14%)</td>
<td>0</td>
<td>1 (17%)</td>
<td>NR</td>
</tr>
<tr>
<td>HS/GED</td>
<td>6 (43%)</td>
<td>2 (33%)</td>
<td>0</td>
<td>92%</td>
</tr>
<tr>
<td>CDA</td>
<td>2 (14%)</td>
<td>2 (33%)</td>
<td>4 (80%)</td>
<td>58.5</td>
</tr>
<tr>
<td>Some College</td>
<td>1 (7%)</td>
<td>1 (17%)</td>
<td>0</td>
<td>NR</td>
</tr>
<tr>
<td>AA/AS degree</td>
<td>3 (21%)</td>
<td>1 (17%)</td>
<td>0</td>
<td>23.9%</td>
</tr>
</tbody>
</table>

It is not surprising that infant teachers were not working towards a college degree, as only 11.5% of the teachers in this sample had taken a college course within the previous 12 months (see Table 7).

Table 7 College Coursework

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>3 (11.5%)</td>
</tr>
<tr>
<td>No</td>
<td>23 (88.5%)</td>
</tr>
</tbody>
</table>

Infant teachers were much more likely to have taken advantage of specific infant/toddler training (57.7%) within the past 12 months (see Table 8); however it is notable that over 40% of the infant teachers had not participated in any infant/toddler specific training within the past year.

Table 8 Infant/Toddler Training

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>15 (57.7%)</td>
</tr>
<tr>
<td>No</td>
<td>11 (42.3%)</td>
</tr>
</tbody>
</table>
Child Care Experience. Infant teachers participating in this sample were diverse in terms of their tenure at the present center (see Table 9). While just over a quarter had only been working at this center for a year or less (26.5%), an equal number had been employed at their current center for over five years. It should be noted that tenure at the current center did not always translate into equal time working with infants, as several teachers noted their experience with different ages at their current center.

Table 9 Infant Teacher Tenure at Current Center

<table>
<thead>
<tr>
<th>Tenure</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 6 months</td>
<td>4</td>
<td>15%</td>
</tr>
<tr>
<td>6-12 months</td>
<td>3</td>
<td>11.5%</td>
</tr>
<tr>
<td>1-2 years</td>
<td>8</td>
<td>31%</td>
</tr>
<tr>
<td>2-3 years</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>3-5 years</td>
<td>3</td>
<td>11.5%</td>
</tr>
<tr>
<td>5-10 years</td>
<td>4</td>
<td>15%</td>
</tr>
<tr>
<td>10+ years</td>
<td>3</td>
<td>11.5%</td>
</tr>
</tbody>
</table>

Although staff turnover proved to be a complication in this study, most participants were not novices to working with infants, with 73% having over three years experience working with infants and 37% having over five years experience working with infants (see Table 10). Almost a quarter of the participants (24%) had worked with infants for over ten years in child care, with a slightly smaller number (20%) having worked at least five years with infants in child care. Thus, this particular sample of teachers possessed a substantial depth of experience with infants in the child care setting.
Table 10 Infant Teacher Total Work Experience with Infants

<table>
<thead>
<tr>
<th>Experience</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 6 months</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>6-12 months</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>1-2 years</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>2-3 years</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>3-5 years</td>
<td>5</td>
<td>20%</td>
</tr>
<tr>
<td>5-10 years</td>
<td>5</td>
<td>20%</td>
</tr>
<tr>
<td>10+ years</td>
<td>6</td>
<td>24%</td>
</tr>
</tbody>
</table>

**Director Information**

The directors participating in this study were a somewhat younger group than their infant teacher counterparts (see Table 11), with the largest percentage of directors being in their thirties (58.3%), followed by a much smaller group of directors in their forties (25%) and older (16.6%). No directors in this study were in their twenties. The Orange County ECE workforce study (Robertson, 2007) found directors as a whole to be slightly older, with the largest group of directors in their forties (38.7%), followed by directors over the age of 50 (30.6%) and then directors in their thirties (24.3%). A small group of directors in their twenties was found in this larger study (6.3%). Although the Orange County workforce study found a small number of male directors of early childhood programs (5.6%), this was not replicated in this study, where all of the directors participating were women.
Table 11 Director Age

<table>
<thead>
<tr>
<th>Center Directors</th>
<th>Orange Co. ECE Directors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20</td>
<td>NR</td>
</tr>
<tr>
<td>20-29</td>
<td>NR</td>
</tr>
<tr>
<td>30-39</td>
<td>14 (58.3%)</td>
</tr>
<tr>
<td>40-49</td>
<td>6 (25%)</td>
</tr>
<tr>
<td>50-59</td>
<td>2 (8.3%)</td>
</tr>
<tr>
<td>60 + years</td>
<td>2 (8.3%)</td>
</tr>
</tbody>
</table>

Director ethnicity in this study was spread primarily across the three largest ethnic groups in the greater Orange County community (see Table 12), with 45.8% of directors being Caucasian, 29.1% African-American, and 20.8% Latina. The ethnic diversity in this group of directors was actually much closer to the most recent Orange County demographics than the Orange County workforce study (Kunerth & Ramos, 2009).

Table 12 Director Ethnicity

<table>
<thead>
<tr>
<th>Center Directors</th>
<th>Orange Co. ECE Directors</th>
<th>Orange County 2000 Census Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>7 (29.1%)</td>
<td>37.4%</td>
</tr>
<tr>
<td>Caucasian/White</td>
<td>11 (45.8%)</td>
<td>43%</td>
</tr>
<tr>
<td>Asian-American</td>
<td>1 (4%)</td>
<td>NR</td>
</tr>
<tr>
<td>Latino/Hispanic</td>
<td>5 (20.8%)</td>
<td>15%</td>
</tr>
<tr>
<td>Other</td>
<td>NR</td>
<td>4.7%</td>
</tr>
</tbody>
</table>

Directors in this study did not possess the same levels of educational achievement as in the Orange County workforce study (see Table 13), with the most common credential being the CDA or equivalent (33.3%), although it should be noted that the
percentage of directors having completed a master’s degree was larger in this study (16.6%) than in the workforce study (9.1%).

Table 13 Director Education Credentials

<table>
<thead>
<tr>
<th>Study</th>
<th>Orange County ECE Directors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than HS/GED</td>
<td>0</td>
</tr>
<tr>
<td>HS/GED diploma</td>
<td>0</td>
</tr>
<tr>
<td>CDA/CDA EQ</td>
<td>8 (33.3%)</td>
</tr>
<tr>
<td>Some College</td>
<td>4 (16.6%)</td>
</tr>
<tr>
<td>AA/AS degree</td>
<td>4 (16.6%)</td>
</tr>
<tr>
<td>BA/BS degree</td>
<td>3 (12.5%)</td>
</tr>
<tr>
<td>Graduate credits</td>
<td>1 (4.2%)</td>
</tr>
<tr>
<td>Masters degree</td>
<td>4 (16.6%)</td>
</tr>
</tbody>
</table>

As directors are required to possess a current Director’s Credential, it is not surprising to find that the overwhelming majority of directors held this credential (the one director who did not was in a multi-director site and was working on it) (see Table 14). It is notable that the majority of directors (58.3%) possessed the higher level of the credential, requiring more coursework.

Table 14 Director Credential Status

<table>
<thead>
<tr>
<th>Level I</th>
<th>9 (37.5%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level II</td>
<td>14 (58.3%)</td>
</tr>
<tr>
<td>Do not have</td>
<td>1 (4.2%)</td>
</tr>
</tbody>
</table>
It may be because of the director credential requirements that a majority of directors (58.3%) had taken a college credit course within the previous year (see Table 15).

Table 15 Director College Coursework

<table>
<thead>
<tr>
<th>Yes</th>
<th>14 (58.3%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>10 (41.6%)</td>
</tr>
</tbody>
</table>

Directors in this study were a seasoned group of administrators as the majority had worked in their center more than five years (62.5%) with less than ten percent (8.4%) having been in their current position for less than a year (see Table 16).

Table 16 Director Tenure at Current Center

<table>
<thead>
<tr>
<th>Directors</th>
<th>Orange County ECE Directors</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 6 months</td>
<td>1 (4.2%)</td>
</tr>
<tr>
<td>6-12 months</td>
<td>1 (4.2%)</td>
</tr>
<tr>
<td>1-2 years</td>
<td>3 (12.5%)</td>
</tr>
<tr>
<td>2-3 years</td>
<td>1 (4.2%)</td>
</tr>
<tr>
<td>3-5 years</td>
<td>3 (12.5%)</td>
</tr>
<tr>
<td>5-10 years</td>
<td>12 (50%)</td>
</tr>
<tr>
<td>10+ years</td>
<td>3 (12.5%)</td>
</tr>
</tbody>
</table>

Center Information

As the context of the child care ecosystem is the center, it was important to gather information on the centers represented in this study as well. The child care centers represented in this sample reflect the composition of the early childhood community in
the central Florida area, with the largest majority being proprietary centers (76%) followed by faith-based programs (12%) and independent not-for-profit centers (8%) (see Table 17).

Table 17 Center Description

<table>
<thead>
<tr>
<th>Center Description</th>
<th>Participating Centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent for-profit</td>
<td>19 (76%)</td>
</tr>
<tr>
<td>Independent non-profit</td>
<td>2 (8%)</td>
</tr>
<tr>
<td>Religious sponsored</td>
<td>3 (12%)</td>
</tr>
<tr>
<td>Corporate</td>
<td>1 (4%)</td>
</tr>
</tbody>
</table>

Center size was somewhat equally represented (see Table 18) with the largest percentage of centers (31.8%) serving over 122 children. As economy of scale may be important to economic viability in child care, this is not unexpected.

Table 18 Center Enrollment

<table>
<thead>
<tr>
<th># Children Enrolled</th>
<th>Study Centers</th>
<th>Orange Co. Workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-30</td>
<td>5 (22.7%)</td>
<td>24.9%</td>
</tr>
<tr>
<td>31-60</td>
<td>4 (18.2%)</td>
<td>25.1%</td>
</tr>
<tr>
<td>61-121</td>
<td>6 (27.2%)</td>
<td>25.1%</td>
</tr>
<tr>
<td>122 +</td>
<td>7 (31.8%)</td>
<td>249%</td>
</tr>
</tbody>
</table>

Although there was a diversity of representation, the greatest number of centers (43.5%) reported serving over three-quarters of their children through subsidized funds (see Table 19).
Accreditation status showed almost equal representation, between centers presently accredited (29.2%) and centers in the process of seeking accreditation (25%) (see Table 20). A sizeable number of centers (45.8%) were not seeking accreditation.

Table 20 Center Accreditation Status (n=24)

<table>
<thead>
<tr>
<th></th>
<th>Currently Accredited</th>
<th>Seeking Accreditation</th>
<th>Not Seeking Accreditation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently Accredited</td>
<td>7 (29.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeking Accreditation</td>
<td>6 (25%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Seeking Accreditation</td>
<td>11 (45.8%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For both centers that were accredited as well as those seeking accreditation, APPLE accreditation was most common (see Table 21). Only one center held NAEYC accreditation. NAC accreditation and religious-sponsored accreditation programs were also reported.

Table 21 Center Accreditation Auspices (n=13)

<table>
<thead>
<tr>
<th></th>
<th>Currently Accredited</th>
<th>Seeking Accreditation</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLE</td>
<td>5 (71%)</td>
<td>4 (66.7%)</td>
</tr>
<tr>
<td>NAEYC</td>
<td>1 (14.3%)</td>
<td>0</td>
</tr>
<tr>
<td>NAC</td>
<td>0</td>
<td>1 (16.7%)</td>
</tr>
<tr>
<td>Other</td>
<td>1 (14.3%)</td>
<td>1 (16.7%)</td>
</tr>
</tbody>
</table>
Infant Room Characteristics

As this study is focused on the infant teacher’s experience, it is necessary to examine the settings in which the infant teachers work (see Table 22). Just slightly more than half (52%) of the infant teachers in this study worked in an infant room that served only four babies. This is consistent with the overall demographics provided previously by the local resource and referral agency that showed slightly less than half (49%) of infant rooms of similar size. One impact of the economic recession may have been a reduction in the group size of the infant rooms represented, as 28% of these classrooms had previously served a larger group size of babies. The average group size of all infant rooms in this study was seven infants.

Table 22 Infant Room Characteristics (n=25)

<table>
<thead>
<tr>
<th>Category</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Room w/ 4 babies</td>
<td>13 (52%)</td>
</tr>
<tr>
<td>1 Room &gt; 4 babies</td>
<td>12 (48%)</td>
</tr>
<tr>
<td>Previously served larger group of infants</td>
<td>7 (28%)</td>
</tr>
<tr>
<td>Multi-age room</td>
<td>3 (12%)</td>
</tr>
<tr>
<td>More than 1 baby room</td>
<td>5 (20%)</td>
</tr>
<tr>
<td>Transition before 1 year of age</td>
<td>4 (16%)</td>
</tr>
<tr>
<td>Average infant group size</td>
<td>7</td>
</tr>
<tr>
<td>Infant enrollment Percentage of Total Center Enrollment</td>
<td>9%</td>
</tr>
</tbody>
</table>

Despite national best practices for child care programs that recommend leaving infants with teachers for as long a period as possible (Copple & Bredekamp, 2009; Lally, Griffin, Fenichel, Segal, Szanton, & Weisbourd, 2003), 16% of centers opted to have
infants transition before their first birthday, typically transitioning the babies as they became mobile, around eight months of age. A smaller set of centers (12%) opted to have multi-age infant/toddler rooms; however, it appeared the driving force in this decision was economics. Having a multi-age infant/toddler room allowed these centers to continue to serve infants as the recession lowered the overall number of infants enrolled in their programs.

As the provision of quality infant care is economically challenging to centers (Marshall, Creps, Burnstein, Roberts, Glantz & Robeson, 2004), the fact that few centers served a large number of infants was to be expected. Infant enrollment averaged nine percent of overall center enrollment (see Table 23), with a range from 1.7% to 32% of overall center enrollment. Three-quarters of centers serving infants in this study had infants as less than ten percent of their total enrollment.

Table 24 Infant Enrollment as Percentage of Total Center Enrollment (n=24)

<table>
<thead>
<tr>
<th>0-5%</th>
<th>9 (37.5%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-10%</td>
<td>10 (41.7%)</td>
</tr>
<tr>
<td>11-15%</td>
<td>1 (4.2%)</td>
</tr>
<tr>
<td>16-20%</td>
<td>3 (12.5%)</td>
</tr>
<tr>
<td>21%+</td>
<td>1 (4.2%)</td>
</tr>
</tbody>
</table>
Data Collection and Instruments

Five instruments were selected to provide a multilayered approach to data collection. Each of the instruments is described below.

**Parent Development Interview, Revised, Short Version (PDI-R2-S)** (Slade, Aber, Berger, Bresgi, & Kaplan, 2003) (see Appendix A)

This is a semi-structured interview designed to solicit responses that allow analysis of the parent’s perspective regarding the mental states of herself and her child. The PDI was developed from Peter Fonagy’s study of reflective function as assessed via responses on the Adult Attachment Interview (AAI) (George, Kaplan & Main, 1984, 1996). While the AAI focus is on the “adult’s representation of their childhood relationship with their parents” (Slade et al., 2005, p. 2), the PDI focus is on the parent’s ability to think about their child, themselves and their relationship with the child.

Adaptation of the PDI for use with infant teachers may provide greater insight into the capacity of the infant teacher ability to consider the infant’s state of mind in her work.

The PDI-R2-S is an interview of 34 questions that takes approximately 90 minutes to complete. Six sections focus on the parent’s View of the Child, their View of the [parent-child] Relationship, perspective on the Affective Experience of Parenting, the parent’s Family History, Separation/Loss, and Looking Behind, Looking Ahead. Scoring the PDI-R2-S is done with the *Addendum to Reflective Functioning Scoring Manual* (Slade et al., 2005) that was developed specifically for the PDI as a supplement to the *Reflective Function Manual* (Fonagy, Steele, Steele & Target, 1998). Responses are scored from a verbatim transcript of the interview using a coding scale with an 11 point
range from -1 (negative parent reflective function) to 9 (full/exceptional reflective function), using four categories: awareness of the nature of mental states, explicit effort to tease out mental state(s) underlying behavior, recognizing the developmental aspects of mental states, and mental states in relation to the interviewer.

To ensure reliability in the scoring of the PDI, researchers using the PDI must be trained to reliability to ensure accuracy. Coders are considered to be reliable when they have achieved a minimum of 80% agreement, within one point, on interview reliability sets. As the PDI has not been used with nonparental caregivers beyond foster parents, some adaptation to the questions was necessary.

**Adapting the Parent Development Interview for Child Care**

Modifications made to the PDI-R2-S were limited, primarily to adapt to the context of the infant care setting, keeping the focus on an individual child in care. The additional questions (12 in all) added were designed to assess whether the infant teacher is able to consider reflective capacity further in the context of the group care setting. Although the researcher was trained to reliability on the PDI, to better ensure independence of the data an independent coder was used for all PDI coding.

**Infant Teacher Semi-Structured Interview** (see Appendix B)

The purpose of the interview was to gain a better understanding of each individual infant teacher’s experience in working with infants in a child care center. The interview format combined both a traditional semi-structured interview as well as a participants’ representation of their work, designed to encourage participant reflection on their experience as an infant teacher in a child care center.
Semi-structured interviews provided an opportunity to explore “what can these teachers tell one another and the world about teaching and about children?” (Ayers, 1992, p. 266). As infant teachers in typical community child care centers have not been frequently studied, their voices and perspectives are important ones to solicit, given the challenging lack of quality in center-based infant care.

The infant teacher interview protocol has been adapted and extended from Elliot’s (2002, 2007) prior study of infant/toddler teachers in an effort to further explore infant teachers’ perception of their work in the care environment. Elliot’s interviews with infant/toddler teachers provided insight into teachers’ perceptions of the care environment in a manner that elicited comments showing evidence of reflective capacity. Inclusion of an adapted protocol (used with Dr. Elliot’s permission) allowed the ability to see how responses might interrelate with reflective function as well as providing a better understanding of the broader context of the care environment in a more diverse community sample.

Participants were asked about their experience and education, as well as participants’ definition and understanding of good practice in an infant room. This was then followed by a series of questions focusing on the experience of working with infants and the emotional component of this work. The closing questions then examined participants’ personal reflections on work as an infant teacher and the elements of the work setting that influence their practice. Changes to the Elliot interview were primarily in two areas. This first was deletion of an extended section on participants’ educational program; this was removed as it was specific to the higher educational requirements for
child care teachers in Canada. The second was the addition of a series of questions at the end of the interview focusing on the work setting, designed to elicit participants’ thoughts concerning the broader care environment in the center.


This instrument was used to assess the quality of care being provided in the infant classrooms participating in this study. The ITERS-R is an observational instrument that can be used to assess infant or toddler classrooms in seven key areas in which a rating may be given. The thirty nine items in this instrument are divided across seven areas: *Spaces and Furnishings, Personal Care Routines, Listening & Talking, Activities, Interaction, Program Structure, and Parents and Staff*. Each item is evaluated on a 1 to 7 scale, where 1 is the lowest score, indicating lowest quality, and 7 is the highest, indicating best quality. Higher scores on these items have been linked to better child development outcomes (Harms, Cryer & Clifford, 2003). The ITERS-R (and the preschool companion, the *Early Childhood Environmental Rating Scales*, or ECERS) has been used extensively in many research studies examining child care quality (Burchinal, Cryer, Clifford, & Howes, 2002; Cost, Quality, and Child Outcomes Study, 1995; Deynoot-Schaub & Riksen-Walraven, 2005; Phillips, Mekos, Scarr, McCartney, & Abbott-Shim, 2000; Whitebook, Howes, & Phillips, 1989).

Although the ITERS-R has been used extensively in early childhood research, the overall focus of this instrument is the classroom environment (Schaack, 2008). Given research evidence that 50% of child care centers are located in renovated space not
initially designed for child care use (Staes, Balk, Ford, Passatino, & Torrice, 1994, cited in Churchill & Pickering, 2000), this may influence the ability of a teacher to score highly if they are making do in space not designed for infant use, with the specific health and sanitation needs required for this age group. Therefore, to avoid the undue influence of the environment on assessment of the infant teacher’s ability to interact well with the infants in her care, this study used a subset of the scales for purpose of capturing the infant teachers’ interaction with the infants in her care. Researchers at Tulane University, in collaboration with the State of Louisiana, have been using the ITERS-R subscales of Listening and Talking, Interaction and Program Structure as a part of their Social-Emotional Quality Rating System for child care centers (Keyes, 2008; Nagel, 2007). These three subscales relate most directly to the infant teachers’ interactions and work with their children and are less focused on the materials and environments as the other subscales in the ITERS-R.

As this study was also interested in determining whether there is any relationship between an infant teacher’s capacity for reflective function and the quality of the care that is provided to the infants in her classroom, an examination of teacher adapted PDI scores with Infant-Toddler Environmental Rating Scales, Revised (ITERS-R) scores was planned. At present, the Early Learning Coalition of Orange County does not conduct ITERS-R assessments on all infant classrooms in Orange County, only those centers who serve families receiving subsidized funding for their child’s care. Devereux is the agency contracted by the Early Learning Coalition of Orange County to conduct the ITERS-R (as well as ECERS evaluations on preschool classrooms). The exact number of infant
classrooms that have been assessed using the ITERS-R in Orange County is unknown at present, thus making the true population of infant center classrooms to sample from unclear.

As of July 1, 2008, Devereux staff had completed an annual assessment on all participating centers. Devereux staff provided technical assistance and follow-up assessments to centers scoring lower than a 3. Devereux center assessment staff complete reliability checks on their ECERS/ITERS-R assessments every six assessments, once they have achieved a 90% reliability rating.

In an effort to ensure independence of the data, Devereux was requested to withhold the actual scores for the infant classrooms involved in this research until after all PDI interviews were completed and coded, in an effort to ensure that knowledge of classroom assessment scores did not have impact on the coding of the infant teacher interview scores.

**Director Semi-Structured Interview** (see Appendix C)

A semi-structured shorter interview was used with the director of the child care center to gain their thoughts regarding infant child care and the center practices that may support staff in their care of young children. The Director Questionnaire was developed from the Elliot interview, adapting the questions to assess the director’s perspective on infant care and the role of the director in supporting teachers in the provision of such care.
Infant/Toddler Environmental Rating Scale-Revised Subscale (Harms, Cryer & Clifford, 2003) (see Appendix E)

The authors of the ITERS-R note that the subscale of Parents/Staff may be left out in research or quality initiative efforts (Harms, Cryer & Clifford, 2003); this is presently the case in Orange County, where the Early Learning Coalition does not contract with Devereux to include this subscale in its assessment activities. As this subscale is not presently being used in Orange County, but provides understanding into the administrative practices that support best classroom practices with young children (Phillips, Howes, & Whitebook, 1991), the staff items from this subscale (see Table 3) were included as a part of the infant teacher interviews.

The six questions on the Staff portion of the subscale provide an ordinal number that can be used in quantitative analysis as a measure of the center’s staff support. As the “parents” piece of this subscale only includes one item (“Provisions for parents”), it was omitted from this study. This subscale represents elements of center operation that have been found linked to higher quality in centers and used to validate subsequent measures of administrative quality (Harms, Cryer & Clifford, 2003; Talan & Bloom, 2004).

Hansen (2006) found a statistically significant relationship between the “Parents & Staff” subscale and the more comprehensive Program Administration Scale (PAS) (Talan & Bloom, 2004), thus providing support for use of the subscale in research activities.

In addition to the above instruments, demographic information for the infant teacher, director and center was obtained via questionnaires adapted from the Seminole
County (FL) *Early Child Care Center Workforce Study* (Esposito & Kalifeh, 2006; see Appendix E, used with permission).

**Protocol**

This study sought to include 25 infant teachers as a sample from the larger population. This represented approximately 5-7% of the infant teachers in Orange County and 11% of the lead teachers in centers serving infants. It should be noted that the distinction between “lead teacher” and “teacher” is relatively moot in a classroom with four infants and one teacher; the Orange County Workforce Study found that many directors simply used the job title “teacher’ (Robertson, 2008).

**Sample Specifics**

The sample size was determined by two factors. The first was that the primary focus of the study, the interviews with infant teachers and the Parent Development Interview adaptation, would be sufficiently served as this number will provide enough qualitative data for both pieces of the research questions. While it would have been ideal to recruit a greater number of participants to run more elaborate statistical procedures, the unknown element of the true population size of infant teachers with extant ITERS-R-scores made setting a higher number extremely problematic. The best estimate that could be provided by Devereux regarding ITERS-R assessments was approximately 93 assessments. This number was inclusive, however, of both infant and toddler classrooms. As there are typically more centers offering toddler care than infant care, and that a certain percentage of centers will typically opt out of participation in research efforts, the decision was made to work with a lower number. The second factor was financial—
given the cost inherent to each participant—interview transcription, reliability checks, time and travel—the feasible option was working with a smaller number of participants.

The sample was chosen via a systematic sample selection, using the Devereux list of child care centers with ITERS-R assessments completed within the past six months, starting with the fifth center listed and drawing every tenth center name to be contacted regarding participation. If a center director chose not to participate, then the center immediately following that center in the listing would be contacted.

The infant teacher selected to participate was the individual responsible for the classroom, considered the “lead teacher”. All classrooms served infants less than 12 months of age. This individual would be the staff member most responsible for the activities that take place in the infant classroom. It is helpful to remember, however, that in almost half of infant classrooms, only one individual works in the infant room at a time. In such instances, the individual teacher who spends the greatest amount of time in the classroom each day was the individual recruited.

The following protocol was developed to provide an overview of the study implementation (see Table 24).
Table 24 Protocol for Study

<table>
<thead>
<tr>
<th>Research Stage</th>
<th>Phase/Purpose</th>
<th>Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Pilot test adaptation of PDI-R2-S</td>
<td>Pilot sites identified through initial community letters of support given by directors. Two pilot interviews conducted using the PDI-R2-S, Adapted.</td>
</tr>
<tr>
<td>Two</td>
<td>Recruitment of additional child care center staff.</td>
<td>Letters sent to potential child care centers describing study. Follow-up telephone contacts with directors Center visits to gather informed consents, demographic information and schedule interviews.</td>
</tr>
<tr>
<td>Three</td>
<td>Conduct Interviews</td>
<td>Conduct interviews with infant teachers and center directors. Have interviews transcribed for coding. Code PDI interviews</td>
</tr>
<tr>
<td>Four</td>
<td>Data review, analysis &amp; write-up</td>
<td>Match PDI scores with ITERS-R scores. Data analysis of interviews and data.</td>
</tr>
</tbody>
</table>

**Stage One: Field Test**

As a key element of this study is centered on the adaptation of the Parent Development Interview (PDI-R2-S) for use with child care teachers, the most critical stage occurred with the initial pilot test of the proposed PDI adaptation, infant teacher and director interview questions. Two of the centers providing community letters of support for this project were used. Review of the pilot materials provided an understanding of the need for any further adaptations to the interview materials or the protocol to best ensure a successful project. The pilot test of instruments was conducted in February 2009.
Stage Two: Recruitment

Once the pilot stage was completed, a wider recruitment of centers was begun. Using systematic sampling, described previously, of center names from a list of centers, provided by Devereux, in Orange County, target center directors and infant teachers were contacted initially by mail (see Appendices F & G) then by telephone to determine their interest in participating in this study (see Appendix H). The Early Learning Coalition of Orange County sent a letter of support to centers prior to the researcher’s recruitment letter (see Appendix I) to encourage center participation. Once a center director and infant teacher were briefed on the study requirements, a center visit was scheduled. At the initial center visit, demographic questionnaires were given out to the infant teacher and director after the informed consent forms (see Appendices J & K) were reviewed and signed.

Interview dates for the infant teacher and director were then scheduled. Interviews were conducted in a manner that was specific to each center’s needs, which varied considerably with regard to staffing, space available for the interviews (which were not held in the classroom to prevent distractions and ensure confidentiality) or off-site, as necessary. The key determinant for interview times and locations was the collaborative agreement between the center director, the infant teacher and the researcher. At the first visit, the infant teacher and director were given multiple contact information for the researcher so that they were able to call and reschedule should the need arise. All interviews were audio-taped for transcription, coding and review.
Stage Three: Data Collection and Interviews

The first infant teacher interview consisted of the adapted Elliot interview. This was to ensure a greater level of comfort with the teacher, by beginning with more introductory questions in the first interview, which then resulted in the infant teacher feeling more at ease for the more in-depth second interview, the PDI.

At the start of both interviews, the infant teacher was reminded of her right not to answer questions if she should so choose and that all information shared in the interview was confidential. Both the adapted Elliot interview as well as the questions for the PDI-R2-S are specific to the infant teacher’s work; because most infant teachers are not commonly asked for their thoughts about their work, teacher enthusiasm for participation proved to be an asset. The first interview took between 30-45 minutes on average, whereas the second interview took a bit longer, between 50-70 minutes, depending upon the extent of the infant teacher’s verbal responses and the need for additional probes.

The director interview was typically scheduled last, in an effort to ensure that both sections of the infant teacher’s interviews were completed. The director interview took an average of 30 minutes.

Incentives. Funding from a Loyola University of Chicago Graduate Student Alliance award allowed the offering of incentives to infant teachers participating in this study. Twenty dollar Target gift cards were given to infant teachers participating in this research. For directors who participated, a letter thanking them for their participation and certificate acknowledging their participation was provided (see Appendix L). As child care center directors in Florida are required to offer documentation of their professional
activities, which can include participating in research activities, as part of director credential renewal, this incentive was of practical use to directors.

**Stage Four: Data Analysis, Review and Interpretation**

Transcription of completed interviews was done as interviews were taking place at new centers. All interviews were sent out for transcription after which transcripts were checked in their entirety for accuracy and corrections made. After all of the interviews were completed and coded, the most current ITERS-R scores was requested from Devereux so that relevant subscales may be matched to each infant teacher for further data assessment.

Grounded analysis of teacher interviews was undertaken both on the PDI interviews and the initial infant teacher interviews. The infant teacher interviews examined the infant teachers’ perspectives on their work, the infants in their care, and issues found in the care environment. Prior research (Elliott, 2007; Leavitt, 1994) has indicated the complexity of infant teachers’ experiences is best viewed through nuanced study of the issues that influence their work with babies, thus the multilayered approach used in this study.

**Criteria for Exclusion**

The one criterion for exclusion in the study was due to the researcher’s own limitations as a monolingual English speaker, participants needed to be comfortable discussing their work experiences in English. If an infant teacher was a monolingual Spanish speaker, for example, it was necessary to exclude her from this study, as funding did not permit either the interpretation or translation of the interview materials. Although
Orange County has a diverse cultural community, this criterion excluded 8% of the potential participants; this remains as a limitation to this study.

**Data Analysis**

The following section describes the manner in which both qualitative and quantitative data were studied and the methods of analysis used to identify critical elements of this research. As a mixed methods study, with a significant exploratory component, the data analysis provides new insights into our understanding of infant teachers in center-based care. After each interview, the digital tape was transcribed into text verbatim for analysis. The demographic information provided was then compiled into an overview with descriptive statistics relevant to this sample, as obtained from both demographic materials and interviews. The descriptive statistics offer a greater knowledge of the individuals participating in this research and the centers where they are employed. Given the small size of this sample, limits exist as to the extent of the appropriate statistical analysis options available for use.

1. Can reflective function be measured in infant teachers? How does the capacity for reflective function related to observed caregiving as measured by specific ITERS-R subscales?

    The first research question has two parts. This first part of the question was determined through the analysis of the adapted PDI interviews via coding, according to the Fonagy and Slade manuals. This analysis provided an ordinal number that was used in the quantitative section of the research; the process of coding also supplied information
that is rich in qualitative material evidencing the infant teachers’ capacity for reflective function.

The second part of this research question concerns the reflective capacity of infant teachers to understand mental states—their own and the infant’s—in daily interactions and use this information to inform their caregiving behaviors. To answer this part of the question, quantitative analysis was used with statistical software (SPSS) to determine whether a correlation existed between the dependent variable, the infant teacher’s reflective function score, and the independent variable, the ITERS-R subscales for teacher interaction. Pearson product moment correlation coefficient (PPMCC) analysis was used to determine whether a relationship exists between the infant teacher’s capacity for reflective function and the variable of teacher interaction in her classroom.

2. What is the infant teacher’s experience of providing care to infants in child care centers? How may infant teachers’ perceptions of their work be useful in understanding their observed caregiving?

The second research question asks how the infant teacher’s experience of providing care to infants in child care centers and how their perspectives on their work may be useful in understanding the care environment established with infants in such a setting. Qualitative data from the two infant teacher interviews provided the material for this analysis. The nature of qualitative research requires a different approach to the concepts of validity and reliability (Richards, 2005). As there is an ongoing and extensive debate as to the best practices in qualitative research (Eisenhart & Howe, 1992;
Patton, 1990; Rolfe, 2006), a review of the literature provided support to the analytic course that was followed in gathering and review of the data.

**Coding**

Analysis of the adapted Elliot interviews using open coding was used, whereby the transcript was reviewed for thematic elements (Ryan & Bernard, 2003b). The concept of “grounded theory” seeks to identify themes that emerge from data in a manner that connects these with existing research and theory (Ryan & Bernard, 2003a). Grounded theory was used as the process by which the information shared in the course of the interviews is assessed.

Open coding allowed for the identification of emerging themes from the participants’ comments rather than classification using predetermined codes (Ryan & Bernard, 2003). Coding was first done with the PDI interviews as a set then followed by the Elliot interviews, which were coded using extent codes from the PDI as well as themes that further emerged specific to that interview. Individual participant interviews were then jointly assessed (i.e., PDI & Elliot combined) to determine their overall coherence and consistency.

In this phenomenological study, interviews were used to explore the “themes of meaning” (Rossman & Rallis, 2003, p. 276) in the infant teachers’ experience. Grounded theory was used in the analysis of the data that was elicited via the interviews. Miles and Huberman (1994) have noted grounded theory’s appropriateness for exploration of new areas and hypotheses. Interviews were coded using open coding through the constant
comparative method (Taylor & Bogdan, 1998) whereby emerging concepts were considered in light of their relationship to one another.

Coding was done initially on all interviews in paper form, per Siedman (1998) and in subsequent reviews using TAMS Analyzer software (Weinstein, 2009). After multiple reviews of the interviews, matrices were developed both to document individual participant findings as well as frequency of emerging codes. Codes were then further reviewed and clustered into relevant categories after which the themes most relevant to infant teacher reflective function and her experience in the care environment were examined.

As a further analysis, the transcripts were also paired by subject to determine if there were parallels present in the infant teachers coded as high or low in reflective function. The ability to utilize the parallel interviews, one with the focus on the infant’s state of mind, the other with the focus on the infant teacher and her experience of the care environment, offered a new means of considering the relationships in infant care and the care environment.

**Documentation.** Throughout the recruitment, interview and data analysis periods, a notebook was kept of questions that arose, themes that appeared (and occasionally disappeared) and other relevant topics. In this study, efforts to ensure greater reliability include having one interviewer for all interviews to ensure consistency with the interview protocol.
Reliability. Reliability, or dependability per Lincoln and Guba’s (1985) definition, is typically understood to refer to the likelihood that a study could be replicated (Merrick, 1999). While reliability is viewed as an important element of research integrity in quantitative studies, a focus on reliability in qualitative research has only recently been raised as worthy of attention (Knox & Miller, 1986).

Protection Against Researcher Bias. Lewis and Ritchie (2003) describe the questions that are critical to qualitative research throughout a study to better assess reliability. The first question is whether the sample design and selection were free of researcher bias. In this study, random selection of potential participants was used to try to reduce the likelihood of bias that would have been possible through other forms of participant recruitment such as purposeful selection. As I was familiar with the Orange County child care community, random selection of participants reduced any potential selection bias that might stem from my prior knowledge of individual centers and thus skew the resultant data. An experienced, out-of-state PDI reliability coder unfamiliar with the research questions or the individual teachers or centers in this study completed the PDI coding.

Consistent and Full Exploration by Participants. The second question posed by Lewis and Ritchie is whether fieldwork was carried out in a uniform manner and in a way that enables participants to fully explore and explain their experiences. As the sole interviewer, I was familiar with both sets of interview questions and followed an established routine to ensure no question was omitted from the interviews. This resulted in complete interviews for all participants. I also attempted to allow time between when
the participant stopped speaking after each response to ensure that I was not cutting off any further thoughts the teachers might add to their comments. I also tried to be consistent in response with follow-up questions. An example of this may be seen when infant teachers referred to “spoiling.” When this occurred, my follow-up question was to ask them to define what spoiling meant to them. Participants were also free, within the time parameters established in negotiation with the center, to answer questions in as much or little detail as they chose, so that some questions might generate a lengthy response whereas other questions would elicit a more concise answer.

Systematic and Comprehensive Analysis. The third question Lewis and Ritchie view as necessary to ensuring reliability is whether analysis is conducted in a systematic and comprehensive manner, as shown by multiple assessments. As described above, repeated assessment was done in a systematic manner in an attempt to provide a nuanced view of the information shared by the infant teachers. Repeated transcript reviews, in conjunction with data matrices, allowed for a more detailed ability to understand the experiences teachers shared and to consider aspects of these experiences that were not readily accessible at a micro level.

One example of this may be seen with the discussion of special relationships. Although this was not an experience identified by all teachers, a meaningful number of teachers shared having had such an experience. When this information was included in a matrix examining other specifics of the individual teachers, it became possible to see that such relationships were more common with male children and in classrooms that served children up until the age of one. Thus, although one researcher reviewed the data,
through multiple assessments an intriguing point regarding gender emerged from the data.

**Sufficient Evidence.** The fourth question to be considered is whether the evidence provided supports the interpretation put forth by the researcher. I have included multiple examples of infant teacher verbatim comments throughout the results and findings chapters to better illustrate the ways in which different teachers made similar points in support of my findings. The use of extensive verbatim quotations by infant teachers may also be seen as a way of providing interpretive validity of a “window into the minds of the people being studied” (Johnson, 1997, p. 285), thus allowing others to determine the accuracy of the analysis.

**Consider All Perspectives.** Lastly, Lewis and Ritchie ask whether the research was inclusive of all possible perspectives or did flaws in the research via selective or missing data limit the study’s findings. A sense of authenticity, thought to be a unique feature of qualitative research (Schwandt, 2001, cited in Tobin & Begley, 2004), may be seen in the different perspectives found among the infant teachers and in the discussion of such differing views.

**Validity.** Perfect validity entails perfect reliability but not the converse; perfect validity is theoretically impossible. Herein lies the paradox of the qualitative tradition. (Kirk & Miller, 1986, p. 71)

As with reliability, validity has been considered within the qualitative research community as a concept in need of adaptation to better make sense of qualitative data (Lewis & Ritchie, 2003; Merrick, 1999), especially with regard to the quality of the
evidence (McGrath & Johnson, 2003). In this discussion of validity, I have included both the more common terms used within contemporary qualitative research, such as “trustworthiness,” as well as some established terms of validity, such as “descriptive validity,” to fully describe my efforts in this study. As the “delicate links between reliability and validity issues” (Kirk & Miller, 1986, p. 42) will be found in areas of overlap between reliability and validity in qualitative research, I have noted this where it occurs.

**Trustworthiness.** Lincoln and Guba (1985) put forward the concept of trustworthiness as the qualitative equivalent of validity, which they defined simply as “how can an inquirer persuade his or her audiences (including self) that the findings of an inquiry are worth paying attention to, worth taking account of? “ (p. 290). Trustworthiness, documented through “good practice” (Merrick, 1999, p. 30), should be evident in the truth value, applicability, consistency (comparable to reliability) and neutrality of the research and the researcher (Eisenhart & Howe, 1992).

**Credibility.** Credibility has been seen as being comparable to “[addressing] the issue of ‘fit’ between respondents’ views and the researcher’s representation of them” (Schwandt, 2001, cited in Tobin & Begley, 2004, p. 391). By presenting verbatim comments from infant teachers, as discussed previously, I hoped to make clear the linkage between the teachers’ thoughts and the concepts to which I was associating them. Credibility is also to be found when experienced participants with insight into the subject being studied speak candidly (Rubin & Rubin, 1995). In this study, the infant teachers who participated were both experienced and typically spoke at length in response to the
questions they were asked. As noted in the section on reliability, I made every effort to avoid interrupting the infant teachers when they were talking and save my follow-up questions for when it was clear that they had finished a thought or topic. Credibility is sometimes viewed as a parallel to the quantitative notion of internal validity (Merrick, 1999).

**Transferability, Generalization and Applicability.** Transferability is more commonly referenced in qualitative studies (in lieu of external validity) as it shows how well (if at all) the research findings may apply to a wider population. Provision of details related to the participants and setting help to support a reader’s ability to generalize, or consider whether or not the research presented is relevant to other settings (Bailey, 2007). Qualitative research has been considered weak with regard to the ability to generalize to a wider population from the sample represented (Johnson, 1997). Applicability may be seen as the practical value of the findings, whether “the findings offer new explanations or insights” (Corbin & Strauss, 2008, p. 305).

**Triangulation of Data.** Triangulation, or “the combination of methodologies in the study of the same phenomenon” (Patton, 1980, p.108), is another strategy to support validation in the research process. A greater sense of validity may be seen when convergence of evidence from multiple sources offers support to findings or theory. Triangulation of the data gathered was used to provide as complete a picture as possible of the infant teachers’ experience.

*Methods triangulation* was used via the two distinct interview protocols (the adapted PDI and the Elliot interview) with all infant teachers. This was further extended
through the additional interview with the center director and the supporting questionnaires for infant teachers, directors and center information. *Triangulation of sources* was also a part of the analysis, in an effort to determine the consistency of what infant teachers shared between the first and second interview. Time between participant interviews was used as a means of ensuring that participant focus was stable; with most infant teachers there was at least a week between the two interviews (Seidman, 1998). This allowed for analysis of the internal consistency of teacher comments between interviews one and two, which proved to be remarkably stable.

An example of this consistency may be seen with two of the teachers in this study. Although team issues related to classroom coworkers were only occasionally mentioned, two infant teachers brought this topic up as an issue in both their interviews. With the first infant teacher (with a PDI score of 5), her references to team issues were made in a more oblique manner. The second teacher (with a PDI score of 3) was much more explicit in her statements regarding team concerns in the course of both interviews. Yet the fact that in both instances, the issue of “team” was present in each interview from interview one to interview two, provided a sense that this was a stable concern, as opposed to being a matter that may have had relevance for one interview, to go unmentioned in the next. As there was typically at least a week’s time between the first and second interview, participant cohesion of topics provided evidence of consistency. A matrix of codes identified in both interviews for each participant also helped to provide a greater sense of the internal consistency of the infant teachers’ remarks.
Although qualitative research has developed alternative means of considering validity, beyond the 12 factors identified by Campbell and Stanley (1963), there are more traditional forms of validity that were a part of this research.

**Descriptive Validity.** Descriptive validity concerns the accuracy of the data that is being shared (Johnson, 1997). In this study, all interviews were digitally recorded and then transcribed by an experienced transcription service out-of-state (to better ensure confidentiality, although a confidentiality statement was signed by the service representative). I reviewed all transcripts in full with the original interview recordings to ensure that the transcript was fully accurate, noting, where appropriate, nonverbal events (such as a teacher reaching for a tissue box when she started to cry) or pauses before or while a teacher spoke.

**Interpretive Validity.** Interpretive validity, as previously referenced in the discussion of reliability, may be seen in the extensive use of verbatim comments from participants throughout the results and findings chapters. This is also relevant to communicability, as “the richness of detail, abundance of evidence, and vividness of the text” (Rubin & Rubin, 1995, p. 91) further assists readers in understanding the experience of the infant teacher in a child care center.

**Theoretical Validity.** Existing research, relevant to the specific results discussed, was also included in an effort to provide greater theoretical validity. For example, as infant teachers discussed the difficulties of losing the attachment relationships they had created with the infants in their care, I referred to previous research that explored how early childhood caregivers set boundaries (Murray, 1998) to further consider this issue.
**Saturation.** Saturation of the data becomes evident when new ideas fail to emerge from the data and additional interviews continue to reinforce the concepts previously identified (Richards, 2005). The number of participants in this study was established in an effort to support the quantitative questions; however, this provided evidence of saturation as I noticed toward the last third of the interviews that certain themes, such as that of family, continued to be echoed by the later participants. Morse et al. (2002) note that it is better to use additional participants to reach saturation data, as this increases “the scope, adequacy and appropriateness of the data” (p. 16).

**Reflexivity.** In qualitative research, it is important for the researcher to be mindful of their own perspective throughout the process, from considering the research question to interpretations and findings. Hesse-Biber and Leavy (2006) define reflexivity as “the process through which a researcher recognizes, examines, and understands how his or her own social background and assumptions can intervene in the research process” (p. 146). My role as a researcher was enhanced by my past experiences working with young children and teachers in early child care programs. I have worked as an infant/toddler teacher, director of an infant/toddler program, a early childhood college instructor and an early childhood mental health consultant. This experience allowed me to relate to the infant teachers and the experiences that they shared in the interviews, although I had to be consistent in asking teachers to elaborate in their own words when they would make comments such as “well, you know....” to be sure that the experience was fully captured in their words and with their perspective. Although at times teachers would solicit my opinion concerning situations, I made a conscious practice of not providing advice or
making suggestions, as my role was to listen to the teachers’ experiences. When both interviews were complete, I would debrief with the infant teacher if she had further questions or if there were comments she had made where I might provide information.

My understanding of infant/toddler recommended practices allowed me to recognize an emerging theme in the teachers’ comments regarding developmental issues as children were nearing their first birthday. As continuity of care has been suggested as a recommended practice to extend children’s relationships with their teachers for as long as possible, my understanding of how the teachers’ challenges with children’s emerging toddler behaviors helped me to identify a potential barrier in implementation of this practice. Understanding the reasons for infant teachers’ resistance to this element of best practices in their classroom may have significance for understanding why such practices are not more fully implemented.

As this was very much an exploratory study, throughout the research process, I attempted to consider both the present stage of the research that I was in as well as the next step that was to be undertaken. Throughout this process, I kept in mind that it would be important to acknowledge the many views that emerged while examining the experiences of infant teachers and their work with infants.

Qualitative data will tend to make the most sense to people who are comfortable with the idea of generating multiple perspectives rather than absolute truth. (Patton, 1990, p. 483)

3. What factors, such as training, education, and administrative support, may have influence on the infant teacher: her reflective function
and her ability to provide quality care and responsive infant-teacher relationships?

To analyze the elements of this question, statistical software (SPSS) was used to determine if a correlation existed between the dependent variable, the infant teacher’s reflective function score, and the independent variables, the ITERS-R subscales for teacher interaction, the ITERS-R staff score, and teacher education. Pearson product moment correlation coefficient (PPMCC) analysis was used to determine whether a relationship exists between the infant teacher’s capacity for reflective function and the variables of teacher interaction, staff support, and teacher’s level of education.

The director interviews were also transcribed and analyzed for elements of supervisory support that indicated knowledge of specific infant care issues, which might support or stress the infant teacher in the care environment. Examination of the director interview, along with the ITERS-R Staff subscale, provided additional information as to the climate of support that exists within the child care center.

Consideration of director intentionality in the establishment of infant program practices, as elaborated in the director interview, may also provide greater understanding of how administrative support, as demonstrated by director knowledge of infant practice issues and concerns, may contribute to infant teacher understanding and implementation of appropriate practices in the infant room, as demonstrated by infant teacher interview responses and ITERS-R interaction scores. Put more simply, directors who understand what constitutes good practice with infants may be able to share this information and
support infant teachers, the net effect of which is a greater understanding and implementation on the part of the infant teacher in her actions with infants.

**Case Examples.** Included in the study findings are two case examples to better illustrate the experience of infant teachers, with high and lower reflective function, infant teacher understanding and how this translates into actual classroom practice with infants in child care centers. Providing such examples, with identifying information appropriately masked, is useful in demonstrating the complexities at work in the child care ecosystem as well as capturing the difficulty of “one-size-fits-all” answers in child care improvement efforts.

**Ethical Considerations**

In asking teachers to share their experiences from their professional work, there is a need for extreme sensitivity with regard to maintaining confidentiality. All information was recorded in such a manner as to not give names or identifying information. As part of the informed consent process, participants were given assurance of confidentiality in any future sharing of this data to ensure that it will not be possible to identify the participants or centers from any comments that might be used. Teacher, director and center data were assigned codes as part of the data development process to further protect confidentiality. The signed Letter of Agreement between the ELCOC and myself specifically stipulated the researcher’s responsibilities to ensure confidentiality (see Appendix M). In addition, the researcher signed the ELCOC Confidentiality Agreement required of their staff. The transcriptionists also signed confidentiality agreements prior to beginning their work. As a final effort to protect participants, transcripts were
reviewed and any possible identifying information (such as street or town names) was deleted. All names of both teachers and children used in the transcripts were changed to further ensure confidentiality.

As part of the informed consent process, infant teachers and directors were advised that as a mandated reporter, any incidents of child abuse/neglect that they might disclose in the course of an interview must be reported. No such incidents occurred during the course of the interviews.

Summary

Early child care research and practice has long drawn from attachment research (Ahnert, et al., 2006; Farran & Ramey, 1977; Fein et al., 1993; Howes et al., 1990; Mardell, 1992) in an effort to better understand elements of quality care for young children. Recent research into parental relationships has identified reflective function as a critical element in the provision of the type of responsive care likely to support the development of a secure attachment relationship (Fonagy et al., 1998). Therefore, the question of whether reflective function may be a useful construct in considering how infant teachers understand and respond to the infants in their care may be seen as an extension of the adaptation of parental attachment research into early childhood research. The infant teacher is responsible for looking after several infants at the same time. The manner in which she is able to utilize her understanding of the individual infant’s state of mind and respond accordingly may be an undiscovered element of quality care for young children in group settings.
This study, through exploratory in nature and small in size, provides a better picture of the infant teacher’s experience in center-based child care and her understanding of mental states, both her own and the infants in her care. By recruiting infant teachers from community child care centers, a more realistic understanding of the issues involved in improving child care quality for the youngest children is possible. By building on existing research in both the psychological and education literature, a better appreciation for the infant teacher’s view of her work with infants can be seen as well as opportunities for new directions in research that address the long-standing conundrum of poor quality too often found in infant child care centers.
CHAPTER IV
RESULTS

Whether reflective function is a construct that has relevance to the quality of early center-based care is an important question, as it may provide answers as to why the quality of care in infant classrooms is so often found to be poor. Understanding the mental state of the infant and acting in an empathic, contingent manner would appear to be at the heart of an infant teacher’s ability to provide responsive caregiving. In this chapter, both qualitative and quantitative data supplies new insights into infant teachers’ work in center-based child care.

This chapter begins with the first research question exploring whether reflective function can be measured in infant teachers. A specific adaptation of the Parent Development Interview (PDI) for infant teachers was used to gather this information and was independently coded per the PDI protocol (Slade, Aber, Berger, Bresgi, & Kaplan, 2003). The first research question also examined whether capacity for reflective function was related to observed caregiving in the classroom, as measured by subsections of the Infant Toddler Environmental Rating Scale, Revised (ITERS-R). Co-relational analysis of the PDI scores of individual participants in conjunction with independently assessed ITERS-R subscales relating to teacher behavior with infants was conducted to answer this question. A review of the adapted PDI was also conducted to determine which interview
questions provided measurable data that could be appropriately coded and if there were questions which did not effectively elicit examples of reflective function from teachers.

The second section of this chapter examines the infant teacher’s experience of caregiving drawn from a qualitative review of infant teachers’ interviews. The qualitative dimension provides insight into the experience of the infant teacher in center-based child care, made more significant by the diverse group of participants in this study. Three separate qualitative analyses were conducted. The first examined the information shared by infant teachers in the PDI. A second qualitative analysis then further extended the individual interviews through inclusion of the responses to the Elliott interview in conjunction with the PDI interviews.

In the final section, the third research question examines what additional factors, in the form of administrative support, might be associated with the infant teacher’s reflective function. Co-relational assessment with the individual PDI scores and the Staff subscale of the ITERS-R was utilized to examine whether a relationship existed between staff support and infant teachers’ reflective capacity. Additionally, further correlations analysis of administrative support, using information from director interviews, was conducted to determine if director support was linked to greater infant teacher reflective capacity.

**Research Question One**

Can reflective function be measured in infant teachers? How does the capacity for reflective function relate to observed caregiving as measured by specific ITERS-R subscales?
Analysis of the two questions that make up the first research question will be explored separately, to allow for a more in-depth analysis of the results obtained. First, an analysis of the PDI adaptation results will be examined in detail. A review of the PDI adaptation and the measure of observed caregiving, the subscales of the ITERS-R, will then follow.

**Analysis of the PDI Adaptation for Child Care**

Twenty-six PDI interviews were conducted over the course of this study. Upon review of the transcripts, one interview, with an infant teacher who was not fully fluent in English, was omitted from coding. Although this infant teacher was an experienced teacher, in trying to rephrase questions to assist her understanding of the questions, the interview was modified beyond the PDI standard. For this reason, as well as the ethical issue of coding an interview with a subject who may not fully understand the questions, the decision was made to omit this interview from coding and inclusion in the analysis.

An experienced coder, with extensive experience serving as a validator for the PDI, coded 25 adapted PDI transcripts for this study. The coder was out of state and had no information concerning the research questions or the participants in this study. The adapted PDI was coded in adherence to the standards for coding established for the PDI (Slade et al., 2003). As the individual coding the interviews in this study is a psychotherapist and serves as the reliability validator for Arietta Slade, Ph.D., the lead author of the PDI, it was determined by Dr. Slade that the interviews in this study would not require further reliability checks.
PDI Adaptation for Child Care Overall Results

The results of the coding, as shown in Table 25, revealed that just under half (48%) of infant teachers participating showed evidence of definite reflective function, as documented by a PDI score of 5 (40%) or 6 (8%). The remaining infant teachers clustered toward the higher end of the lower range, primarily in rudimentary/inexplicit mentalization, score of 4, (28%) or questionable/low reflective function, score of 3, (20%). Only one infant teacher (4%) scored below this, a 2.5, indicative of vague or inexplicit referencing of mental states. While no infant teachers scored in the higher categories of the PDI – either 7 (marked reflective function) or 9 (exceptional reflective function), neither did any score in the lowest categories of 1 (absent/non-repudiated), 0 (disorganized disavowal) or -1 (negative reflective function). Three infant teachers’ interviews were coded as 5B, an indication of a “somewhat inconsistent level of understanding” (Fonagy et al., 1998, p. 46); for purpose of the qualitative analysis, they were included in the “5” category.

Table 25 Parent Development Interview, Adapted for Child Care Results (n=25)

<table>
<thead>
<tr>
<th>Score</th>
<th># Infant Teachers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>40%</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>28%</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>20%</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>4%</td>
</tr>
</tbody>
</table>

As previously noted, examples of extreme reflective function (or the lack thereof) in higher (“7”, “8”, “9”) or lower (“-1”, “0”, “1”) scores were not seen. In responses to
specific questions, however, some higher (“7”) and lower (“1”) scores were seen. While individuals may achieve a higher score in their answer to a specific question, their collective score may be either lower or higher, based upon the collective scores of the overall interview.

Examples of PDI Coding

To provide a clearer understanding of the coding, three examples are included. In response to the question “Tell me about a time in the last week or two when you felt angry as an infant teacher,” the following are examples of how different teachers responded:

Response coded as a “7”

Well, I think everyone would get frustrated when, um, all the children are not going to be every day, perfectly on schedule, wake up, go to sleep, wanna eat at the same time. So you know, there was a day where morning naps on some didn’t get there, and then, you know, they’re ready to eat, and you’re trying to feed this one, and Tyra* was, you know, teething, and she just was not feeling well. The other one – both girls have the cold, they seem to, um, at the same time. And the other ones wanted to eat, and you’re trying to fix it, and they’re screaming and crying. You’re trying to console them, and make them happy, at the same time, trying to get everything prepared, so you can get to each one of them. (rushed voice) So you’re gonna have those kinds of, um, issues maybe, and uh, you know, like I say, I did have a day of that. And you’ll find yourself at first, you – you – you’re rushing, and you’re just trying to stir the – make the cereal, and getting everything together, and you’re trying to be there, and then you have to stop and think. (voice slows down) Okay, they feel that, take a breath, so while I’m over at this side, you know, okay, you know, breathe, finish stirring, they know you’re coming, they, you know, and then make sure that that’s washed out of you, and you walk out, and then you continue on. I mean, and that’s just human nature, I think. Everybody’s gonna – we’re trying to hurry, but the – to a child, that hurried could be stimulating to shaky like this instead of you’re – you’re actually trying to hurry for them, but that’s not what they’re gonna get.

*All names, both of children and teachers, have been changed.
So you have to be careful on that. (1102, PDI 6)

In the above response, the infant teacher is able to differentiate between her responsibilities to the overall group, the individual child’s (Tyra) needs and what is going on with both her own mental state and actions, and then clearly is able to identify how she needs to modify what she is doing in relationship to the impact on the children.

Response coded as a “4”:

when the teacher’s in there and let them all cry.....I feel angry... ‘Cause I think they should know what I know. If they’ve gone to school and they’ve done their 40 hours. And they’ve gotten the training like I’ve gotten. Ya know, they should – common sense. Ya know. You don’t let one cry. The longer they cry, the harder it is to get ‘em back from crying, ya know. That’s what upsets me, ya know. Like they’ll come in. And they’ll be holdin’ the ones that are not cryin’ or that are happy, while the other ones need you more. The ones that are cryin’ that need you more. And that’s what we’re here. To take care of the children. So, ya know, like they may not wanna take care of that. Oh, that one cries all day. Well, then ya need another job ‘cause this is...So it gets me frustrated, ya know – sometimes with the girls, more than the kids. Kids are fine. (1112, PDI 4)

In this response, while the infant teacher is acknowledging her own mental state (angry), her response in relation to the children is more collective and non-specific. She is unhappy with the other staff member’s inability to be responsive in a manner that she believes to be appropriate but her own understanding of an individual child’s mental state and what is behind the infant crying, is limited.

Response coded as a “2.5”:

I told you that incident. That parent and Shania. I could have whooped her butt. I could have whooped her butt. Ghetto, just ghetto bound, no respect for nobody, just she think – she always short with them and she don’t, she’s on 4C, she take her children out, the daycare gonna close, one of them type of parents. You understand what I mean? Okay, so that’s exactly what I’m talking about. I try not – I don’t show my feelings in front of the kids. I don’t show my feelings in front of the kids. That’s something
that I don’t do. No, I don’t show my feelings like – when I’m like in that point, you know, heat of the moment, that’s something I don’t do. I don’t do – you never would have – you know what I did, sometimes I get overwhelming, and sometime I can think about stuff, and I’ll just get – I’ll just cry. I can think about something whether it be good, or whether it be bad. It can be good, something good, sometimes it’s just so overwhelming. You understand? (1192, PDI 3)

This infant teacher’s response shows signs of dysregulation, both in response to the situation with the parent and to other circumstances (unnamed) in general. She also does not see the impact of her mental state on her children, although from the intensity of her response it seems quite probable that the infants in her care do feel this.

These three examples provide a sense of how reflective capacity in an infant teacher may influence not just their attitude toward their work, as seen in their mental state, but also their ability to be responsive to individual children’s needs, as evidenced through an understanding of that child’s mental state. The first infant teacher, 1102, is keeping in mind her group of infants as a whole, the individual children’s needs within this group and her own mental state and behaviors. She adapts her own behavior in response to her assessment of the classroom dynamics relating to the mental states of the children and her actions as they may contribute to this dynamic. The second infant teacher, 1112, is aware of the general mental state of her group (unhappy, crying) but is focused on the other teacher and her own mental state in response to the other’s actions. And the third infant teacher, 1192, is so caught up in her own mental dysregulation that the needs of the children do not even appear to factor into her consideration of what is happening.
Analysis of the PDI Adaptation

This adaptation of the PDI represents an original area of exploration in the study of reflective function and child development research, in that the participants are infant teachers rather than parents. It is useful to review the results of the PDI adaptation itself in more detail to assess whether or not the questions may have fully “worked” in eliciting evidence of reflective function from infant teachers in center-based care. It was apparent, as the research was being conducted, that infant teachers more readily answered some questions while other questions did not prompt as quick a response or were more likely to bring forth dismissive reactions. Thus a review of the individual questions that make up the PDI adaptation is useful in furthering our understanding of the adaptation of this tool as a means of eliciting reflective function in infant teachers.

It must be understood, in such a review, that the intent is not to see the questions that obtained the highest scores as “best” or those that received the lowest scores as “worst.” Rather questions receiving lower scores may have less by way of relevance to the specific role of infant teacher. Consideration of such questions is important as it may provide further insight into the infant teacher’s experience while also providing a practical contribution to further modification of this instrument for use in child care with child care teachers.

Adapted PDI Questions

To assess the individual questions on the adapted PDI, descriptive statistics were run on SPSS (see Table 26), that included the mean for each of the questions asked, as each question is coded independently before a final score is assigned to the overall
interview. Thus it is possible to assess, from the mean of each question, whether the question itself called forth sufficient response from the infant teacher to be useful in providing codeable information. The higher the mean for a question, the greater the amount of reflective capacity found in the teachers’ answers. Conversely, the questions that have a lower mean response require a more in-depth review to determine whether this was a function of the individual teacher’s response or indicative of a question that might have less by way of meaningfulness to an infant teacher (as opposed to a parent).

Questions That Worked in the PDI Adaptation

Questions that worked well to elicit infant teacher statements providing evidence of reflective function were those that focused on the infant teacher and her relationship with the baby at a time when strong emotions on the part of the child were present. This is most evident in the question with the highest mean (5.06), where infant teachers were asked to share a recent experience where they “clicked” with the specific infant who was the focus of the questions. This question calls forth from teachers an opportunity to share a specific positive experience of their relationship with the baby. Such a question allows the infant teacher to reflect on a positive experience to such a degree that eleven of the thirteen infant teachers who scored overall lower (<5) on the PDI were still able to offer evidence of reflective function (“5” or higher) in their answers to this question. As further evidence of the power of this question, it should be noted that no disavowals (“1”) occurred in response to this question, which provides credibility as to the usefulness of this question in calling forth the infant teacher’s reflective capacity.
Table 26 Descriptive Statistics for Parent Development Interview, Adapted Individual Questions

<table>
<thead>
<tr>
<th>Question</th>
<th>N</th>
<th>Mean</th>
<th>Range</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clicked</td>
<td>25</td>
<td>5.0200</td>
<td>3.00</td>
<td>6.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Not Clicked</td>
<td>25</td>
<td>4.6800</td>
<td>5.00</td>
<td>6.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Joy</td>
<td>25</td>
<td>3.9200</td>
<td>4.00</td>
<td>6.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Pain/Difficulty</td>
<td>25</td>
<td>3.7600</td>
<td>4.00</td>
<td>6.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Being Infant Teacher Changed You</td>
<td>25</td>
<td>3.1600</td>
<td>5.00</td>
<td>6.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Needy</td>
<td>25</td>
<td>3.2800</td>
<td>5.00</td>
<td>6.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Angry</td>
<td>25</td>
<td>4.0200</td>
<td>6.00</td>
<td>7.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Guilty</td>
<td>25</td>
<td>3.9600</td>
<td>6.00</td>
<td>7.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Child Upset</td>
<td>25</td>
<td>4.1200</td>
<td>5.00</td>
<td>7.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Rejected</td>
<td>25</td>
<td>2.8400</td>
<td>5.50</td>
<td>6.50</td>
<td>1.00</td>
</tr>
<tr>
<td>Parents</td>
<td>25</td>
<td>3.9200</td>
<td>4.00</td>
<td>6.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Child Separation Teacher Separation</td>
<td>25</td>
<td>3.8800</td>
<td>3.00</td>
<td>6.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Losing Child</td>
<td>25</td>
<td>2.3800</td>
<td>4.50</td>
<td>5.50</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Interestingly enough, the second highest individual question mean (4.65) was in response to the follow-up question that asked infant teachers to describe a recent experience where they did “not click” with the baby. If the first question allows the infant teacher to consider a happy moment in her relationship with the baby, the second
question requires reflection on a less happy time and consideration of what was occurring at that point, both for the teacher and the baby. This question necessitates the infant teacher to be able to acknowledge a difference of mental state between herself and the infant in a specific situation within the classroom. It is telling that of the thirteen infant teachers with lower RF scores, eight were scored lower than a “5” on this question, capturing their challenge in understanding the mental state of the infant in such a situation. Of the twelve infant teachers with higher overall PDI scores (“5” or greater), only two scored below a five on this question.

The third highest mean (4.17) was elicited in response to the question concerning what the infant does when upset and how the infant teachers feel and responds in such a situation. Again, this question is intended to extract from the infant teacher their understanding of both the infant and her own mental states as well as provide an opportunity for the infant teacher to describe her actions in response to the child’s mental state.

This question is notable for its ability to show how even teachers with higher overall reflective function could not fully assess mental state in response to this question, as seven of the twelve higher-PDI infant teachers’ response did not show evidence of reflective function in response. The lower-scoring infant teachers had an even more difficult time in considering this question, as eleven of the thirteen were unable to provide a response that showed evidence of reflective function. No instances of dismissal were found in response to this question.
As the response to the three PDI questions above illustrates, the distinction between infant teachers with definite evidence of reflective function and those with less distinct understanding of mental states is fairly clear. It is useful, however, to also review the questions that were less distinct in the responses gathered, as these may be the questions that point to areas where additional revision may be necessary to fully explore the infant teacher’s capacity for reflective function.

**Questions That Were Problematic in the PDI Adaptation**

In examining the PDI questions with the lowest means, it is necessary to pay particular attention to the questions that had higher levels of disavowal, as such questions may be indicative of areas that have less meaning to the infant teacher (as opposed to the parent).

This is evident in the lowest scoring question on the PDI adaptation (with a mean of 2.27) that asks infant teachers if they have ever experienced a time when they felt they were “losing” the specific baby in their care. This question, when asked of parents, can be very evocative, as parents may grapple with the emerging independence of the infant in the transition to toddlerhood. In an infant room, however, where teachers know that babies will eventually leave into another’s care; this question did not elicit as powerful a response.

This can be seen clearly as fully 15 of the 25 infant teachers responded in a dismissive manner of this question. Ten of the thirteen low-PDI scoring teachers and five of the twelve higher-scoring teachers responded in a manner that was coded as a “1.” A clear divide was evident in that while fifteen of the infant teachers scored a “1,” six
teachers scored a “5” with an additional four teachers scoring somewhere in between (2 teachers scored a “4” while two scored a “3”). No other question had such a sharp and distinct difference in the teachers’ responses. If infant teachers had an understanding of mental states, they were more likely to “get” this question; however virtually no low-scoring PDI teacher received a score higher than “4” on this question (and, as noted above, the much larger majority scored a “1”).

Somewhat less compelling were the infant teacher responses to the question of whether the infant had ever felt rejected, a question that again requires the infant teacher to recognize the infant’s experience in care and acknowledge a negative mental state on the part of the child. Nine of the twenty-five responses (36%) to this item were dismissive and thus scored a “1.” Lower-scoring infant teachers all scored less than a “5” on this question, however, higher-scoring teachers scored low in response to this question as well, with eight of the twelve higher-scoring teachers (67%) responding in a such a manner to be coded as a “4” or less.

It may be that infant teachers, particularly in the current economic times where child care centers were laying off staff or reducing hours, were unwilling to volunteer information that might reflect poorly on their provision of care. This question may, however, capture a distinct area of practice that is uncomfortable for infant teachers to consider - that despite their best efforts at times infants in their care may feel rejected.

The third lowest-scoring mean (3.19) to an individual question came in response to the question as to how being an infant teacher had changed the teacher. Again, in parents, this is a powerful question as it frequently elicits parental commentary on the
strength of the bond between (typically) the mother and baby and the accompanying 

mind-shift that may occur on the mother’s part as this happens. This was not, however, 

reflected in the infant teachers as only three infant teachers scored a “5” or higher on this 

question. Ten of the 12 higher-scoring PDI teachers scored less than a five on this 

question. 

Additional Elements to Consider Further 

In reviewing the individual questions that received “1” scores, considered 

dismissive of reflective function, a clear difference emerged between the two groups of 

teachers, those with reflective function (PDI scores of “5” or higher) and those found to 

have lower reflective capacity (PDI scores of “4” or less). Teachers in the high scoring 

group were far more likely to have no scores of “1”, indicating dismissive statements. 

This was true of five of the 12 infant teachers in this group, while only one of the 13 

teachers in the low reflective function group had no instances of dismissive statements. 

In reviewing the individual questions that received higher scores (“5” or higher), 

among the low reflective function group, 12 of the 13 (92%) teachers were able to show 

evidence of reflective function at least once. Four of the infant teachers in the low 

reflective function group were able to give a response to a question that was coded as a 

“6”. This is significant, as it provides evidence of the infant teachers’ potential for 

greater reflective capacity, perhaps if given more support through training or reflective 

supervision.
Anger and Infants

As the interviews were taking place, it appeared that the question about anger ("tell me about a time in the last week or two where you felt really angry") was not registering with infant teachers. It may be that for some infant teachers, the question exploring a time when they were feeling anger as an infant teacher was extremely uncomfortable, as it may have crossed social constructs of appropriate care in their minds. In response to this observed discomfort, a follow-up question was used asking whether the teacher might have felt “really frustrated,” a sentiment that might be considered more acceptable to acknowledge feeling. Despite the discomfort that this question may have brought on, 10 of the 25 infant teachers were able to answer this question in a manner showing reflective function (score of “5” or higher). Only three dismissals, with a score of 1, were found. Teachers in the high reflective function group were more able to consider this question, as eight of the ten teachers scoring a “5” or higher belonged to this group.

Elliott (2007) noted in her study of infant teachers, “there was little mention of anger as an emotion” (p. 239). Mill and Romano-White (1996) commented on the lack of empirical research into the early childhood emotional climate, “despite its being considered a hallmark of center quality” (p. 157). As mothers’ levels of anger have been found to increase as their sons enter toddlerhood (Aber, Belsky, Slade & Crnic, 1999), so it is plausible that infant teachers may experience increases in anger as the children in their care begin to show emerging toddler behaviors but yet feel social constraints about expressing such emotions.
PDI/ITERS-R Analysis

The second part of the first research question considered whether the infant teacher’s PDI score had any relationship to her observed caregiving practices with infants in the early care classroom. In an effort to assess this, independently obtained ITERS-R subscale scores were used, specifically the *Listening and Talking, Interaction* and *Program Structure* subscales, as these have the most direct focus on actual teacher practices with children in the classroom (rather than on the infant/toddler classroom environment).

**Turnover takes a Toll.** In gathering the ITERS-R scores, the names of the infant teacher(s) who had been in the classroom for the assessment were obtained from Devereux, the agency that conducts the ITERS-R assessments. These teacher/classroom lists were the basis for the recruitment into this study. It became apparent, however, as the recruitment effort progressed, that teacher turnover was having an impact on the ability to obtain matched pairs of ITERS-R scores with infant teachers to participate in this study. In the end, 17 of the 25 adapted PDIs that were completed had a matched ITERS-R classroom observation.

In an effort to determine if recruitment delays between the time of the ITERS-R assessment and the time of the first interview had impact, post hoc analysis was done. There was a two-week difference (4.04 months vs. 4.5 months) between the infant teachers who were a match to the ITERS-R score and the teachers where turnover had occurred. What is notable—and reason for concern—is that within not even a half-year period, 32% of infant teachers were no longer working in the same classroom. Given the
important developmental needs of infants to form secure relationships with their caregivers, this figure is more than a little troubling.

**PDI and Observed Caregiving per ITERS-R Subscales.** The second part of question one was assessed through correlational analysis, examining the relationship between reflective function, as measured by the adapted PDI, and observed caregiving, as measured by three subscales of the *ITERS-R*. The correlations between infant teacher adapted PDI scores and their observed caregiving, as seen in *ITERS-R* scores, was not found to be significant, \( r(17) = .126, ns \). It did not appear that infant teachers’ reflective capacity evidenced itself in observed caregiving, at least as captured in the *ITERS-R* classroom assessment.

Additional analysis was then conducted to determine if individual subscales might have a relationship with the adapted PDI that was not found in the overall *ITERS-R* subscale analysis. Independent correlational analysis was conducted between the infant teachers’ adapted PDI scores and the *ITERS-R* subscales of *Listening and Talking*, *Interaction*, and *Program Structure*. No significant relations were found between the adapted PDI and *Listening and Talking*, \( r(17) = .45, ns \), *Interaction*, \( r(17) = -.16, ns \), and *Program Structure*, \( r(17) = .21, ns \). Thus, reflective function did not appear to be related to infant teachers’ observed caregiving skills as measured in the *ITERS-R Listening and Talking*, *Interaction* and *Program Structure* subscales.

Thus, the second hypothesis that higher evidence of reflective function, as measured on the PDI, Short Version, would be correlated with provision of higher quality
care to infants in the child care setting, as measured by three subscales of the ITERS-R, was not present and the hypothesis could not be supported.

**Further Analysis of ITERS-R Observed Caregiving.** As the correlations analysis failed to find a link between the reflective function of the infant teachers and the observed caregiving in the classroom, as captured by the ITERS-R subscales, further analysis was done. In exploring the ITERS-R subscales, it was found that overall scores were fairly low; this is not a surprise, given past research that has indicated poor quality of care offered to infants (Cost, Quality, and Outcomes Study Team 1995; Hegland et al., 2003; Marshall et al., 2004; Vandell & Wolfe, 2000). What was dismaying was to find, in a closer examination of the individual ITERS-R assessments, how frequently environmental factors impeded on what would appear to be interactional elements.

One of the infant teachers with a PDI score of 5.5 had ITERS-R subscale scores of 3.33 for **Listening and Talking**, 3.75 for **Interaction**, and 2.00 for **Program Structure**. In examining her **Listening and Talking** items, the item “**Using books**” was rated as a 2, in large part because of the number of books available to the babies and the accessibility of them to infants “**much of the day.**” “**Much of the day**” refers to any period when children are awake but do not have access to materials, as in this case when several instances of children being placed in cribs awake were noted. A total of 88 minutes of children being “confined” was noted, for the entire group of seven, which amounts to 13 minutes of confinement per child. The “**much of the day**” standard, however, then impacted four separate items on the ITERS-R subscales used, bringing the scores on those items down in each case to a 2, which, in turn, brought down the entire subscale score as well as in
the overall ITERS-R score where “much of the day” was cited an additional five times on other items, that consequently scored a 2. Even though this infant teacher received a score of 7 on the “Staff-child interaction” item, the impact of the “much of the day” standard left her classroom with an overall score of under 3.

Given this information, the reasons for the lowered ITERS-R scores overall became apparent. Recent research (Bisceglia et al., 2009) has noted that the “majority of the scale’s content pertains to the physical aspects of the classroom” while “fewer items capture process variables such as the quality of child-to-child and child-to-adult interactions” (p. 130). While the intent of using the ITERS-R subscales was to better capture the observed caregiving of the infant teacher, it appears that environmental influence is still felt, even in the areas most directly classified as process-related. A review of a randomly selected subset of five ITERS-R assessments found this to be the case in four of the five assessments.

**Hypothesis One**

The hypothesis that the questions contained in the PDI, Short Version, adapted for child care, would be able to elicit the infant teacher’s experience of care in the child care setting in a manner sufficient to allow coding for reflective function, per the standards established by Fonagy et al. (1998) and Slade et al. (2003). As all interviews submitted for coding were found to contain sufficient material for coding to the PDI standard, analysis supported the hypothesis. The second part of this hypothesis that higher reflective function would correlate with provision of higher quality care was not confirmed.
Additional Analyses

Age. Two of the proposed analyses of the data were not possible to complete due to small numbers. The first, an analysis of age, to see if younger age respondents were less likely to have higher levels of reflective function, was compromised by the fact that only two participants under the age of 21 participated in this sample. Of the two participants, one had definite reflective function (5) and the other did not (3.5). Analysis was conducted to assess whether infant teacher age overall had any correlation to reflective capacity; this was not found.

Parental Status and Reflective Function. The second analysis that had initially been planned examined whether or not parental status influenced an infant teacher’s reflective function. Again, only two participants indicated that they were not parents, one with a PDI score of “6”, the other with a PDI score of “4”. There was thus a lack of sufficient numbers to conduct a meaningful analysis.

Reflective Function and Ethnicity. As approaches to parenting and child care are influenced by cultural considerations (Rogoff, 2003), I examined the effects of ethnicity on reflective function, as measured by the PDI adaptation. The PDI scores were entered into an Analysis of Variance (ANOVA) with Ethnicity as a between-subjects factor. The analysis revealed a main effect of Ethnicity, $F(2, 22)=7.276$, $p<.004$. Thus, a difference between PDI scores among the infant teachers of different ethnicities was observed. An additional Bonferroni post hoc test examining multiple comparisons revealed the main effect to be the difference between the Caucasian and Latina infant teachers’ PDI scores, $p=.005$. 
To determine if education might be partially responsible for the differences noted in this analysis, a two-factor Analysis of Variance was conducted, with the two independent variables, Ethnicity and Education, to allow for assessment of not only the main effects of race and education as well as the interaction between them. Because of the small number of infant teachers within the different education levels, the infant teachers were assigned to one of two groups. The Higher Education group consisted of infant teachers who had completed their Child Development Associate credential (or equivalent), some college or a two-year college degree. The Lower Education group consisted of infant teachers who had either not completed high school or had just completed their high school diploma/GED. Given that infant teachers in the Higher Education group had more exposure to child development specific information, it was anticipated that this might influence the PDI scores across all ethnic groups. The analysis revealed again a main effect of Ethnicity, $F(2,19)=4.310, p=.029$, but not of Education Group, $F(1,19)=.442, p=.514$, or Ethnicity x Education Group interaction, $F(2, 19)=.612, p=.533$.

As the small Latina sample of infant teachers in this study scored lower overall than their African-American and Caucasian counterparts, with no Latina infant teachers scoring in the definite reflective function category with a “5” or higher, this confirmed the significance of this difference among the infant teachers. It must be noted that in the Education category, all but one of the Latina infant teachers possessed a CDA credential, thus the influence of education was not seen on PDI scores for this group. Given the
extremely small size of this sample (n=5), caution must be taken in further consideration of these results.

In considering the results of these analyses, several points must first be made. The small size of this sample can be seen in that two of the ethnic groups represented in this study, Caucasian and Latina, were very small subgroups of six and five infant teachers respectively. Thus, it is possible, that with a smaller subgroup size, the representativeness may have been unduly constrained. Secondly, all PDI assessments were coded blind, in that the coder did not have identifying information on the infant teachers and references to places (such as country of origin) were removed from the transcripts prior to being sent to the coder.

It is particularly significant that none of the Latina infant teachers, who were very experienced, had PDI scores above a 4.5. Several possible explanations for this may be considered. First, Peter Fonagy found in validation studies of his original reflective function scale relatively low relationships between vocabulary skills and reflective function scores (Fonagy et al., 1998). Given that the Latina teachers may not have English as their first language, it is possible that the narrative given by these teachers, which is the foundation for the transcripts used in PDI analysis and coding, may have been influenced as a consequence. In a recent study, Crumbley (2009) used vocabulary scores from the Weschler Abbreviated Scale of Intelligence (WASI) to identify participants whose verbal skills might act as a confounding factor. It is also possible that the Latina infant teachers may have had found some of the questions, such as those
having to do with the child feeling rejected, as not being relevant to their care of children in the group setting.

**Research Question Two**

What is the infant teacher’s experience of providing care to infants in child care centers? How may infant teachers’ perceptions of their work be useful in understanding their observed caregiving?

*even though we’re infant teachers, we still are here to teach, and we’re just not here to put a baby in, give him a bottle, and shake him, or, you know, rock him. We do have to teach just like everybody else because they might not know that the learning really starts with us* (1052, PDI 5)

Although the PDI has been used for insight into parental capacity for reflective function, this interview also allows us to discern infant teachers’ experience of the care environment within the child care center. Interview questions explore relationships, emotions and experiences with infants, all of which may further our understanding of the infant teacher and her caregiving environment. The qualitative analysis of the PDI provides a better awareness of the infant teacher and may aid in consideration of how the quality of such care might be strengthened. Infant teachers had much to say regarding their perception of themselves in the context of their work, the manner in which they considered their relationships, and their understanding of the children in their care. PDI scores for individuals are included with teacher comments, following their teacher ID number, as this provides further illustration of the variance found between infant teachers with different reflective capacity.

In examining the PDI interviews qualitatively, three significant themes emerged relating to relationships, conscious care, and infant development. The teachers’
connections to the infant and their family could be seen in the theme of relationships. As
the infant teachers discussed these relationships, it became apparent that there was a
conscious awareness of their role and responsibility as an infant teacher that was an
important part of their work. Finally (and this is not surprising, given the tremendous
development that occurs in the first year of life), infant teachers were very focused on the
developmental issues of infancy and how this interfaced with their responsibilities as an
infant teacher.

**Exploring Relationships**

As the relationship between infant and teacher provides the essential foundation
for all learning that takes place in the first year of life while in child care, it was not
surprising that infant teachers were very aware of the importance of these relationships
and tried to make sense of them, using familiar terms. Infant teachers spoke of their
relationship in family terms, explored the ways in which this relationship was felt and
admitted that not all relationships were equal, as some infant teachers acknowledged
stronger relationships that had developed with specific infants.

In discussing their work, infant teachers most commonly defined their perceptions
of themselves and others in context of their affinity with the child. Such an affinity was
described in both family-like terms but also in specific with regard to the relationship
themselves:

**Infant Teacher as Family.** It may not be surprising, given the nurturing aspect of
infant care, that infant teachers frequently referenced the role of mother when talking
about their work:
Because with our relationship, he feels like I’m his mommy when he’s at the daycare (1212, PDI 5)

Because from his mom to me is like I’m his second mother..... I would want someone to treat mine the way I treat theirs. So, the way I treat my kids, I’ll treat yours also. (1002, PDI 5)

Although Katz (1980) has noted the differences between mothering and teaching, such a distinction may be less apparent given the type of caregiving essential to a young infant. Several of the infant teachers referenced the role of teacher vs. mother and their efforts to integrate the two roles for the infant’s benefit:

I try to be both parent, not replace the mom, but I know I can’t replace her. I try to be the teacher and a little bit of the mom because at this age, they really need that....I’ll be the one who hug them because that’s give a lot for a lifelong, later. (1242, PDI 5)

I try to be like a teacher but most of all like a mom. (1132, PDI 3)

As an overwhelming majority (84%) of the infant teachers were mothers themselves, the role of infant teacher tapped into their previous maternal experience:

because it’s hard to keep myself from going and seeing what’s wrong with them when I hear them crying. I get that same, like, tugging feeling in your chest that I get for my own child with them. (1122, PDI 5.5)

Infant teachers were clear in seeing themselves as secondary attachment figures, after the babies’ parents:

It’s like being their mom, their second mom....I’m not saying, like I’m their mother, but you know, being their second mom because I’m here with them all day from , like 8:00 to 6:00 p.m. (1032, PDI 3)

As their second mom, they want that mother love. You have to just love the babies. I try to be there and just be a good person you know. When they need me, I’m there. (1082, PDI 5)
Probably a substitute mom, a surrogate mom. Making them feel just as comfortable and as special in my room as they would in their home, in their own family. (1102, PDI 6)

I’m the second parent for that baby because they with me eight hours or nine. I think I’m like a family for that. (1132, PDI 3)

I think they are like my second kids, my second babies...I feel like they are mine. The second ones because the parents are the parents. (1232, PDI 2.5)

Infant teachers also referenced their position in an extended family capacity as well:

I’ll be thinking about them because it’s my second home. When I come here, it’s my second home and they’re like, they’re my children. I’m thinking about them. (1242, PDI 5)

We bond with them, and then you know, it’s just like another parent, or a grandparent, it becomes they’re home away from home. (1112, PDI 4)

This extended family analogy was also seen in references to the role of grandmother; given that almost three-quarters (73%) of the infant teachers were over the age of 40, this may reflect acknowledgement of experience and maturity, as well as their evolving view of themselves within the family system:

they treat me I’m like their, I don’t wanna say mother, in a way – in a sense they treat me sort of like their mother – like their grandmother. They treat me sort of like their grandmother. Yeah, you know, with the closeness, you know. Like I’m some kin to them. (1192, PDI 3)

Well, they say that I’m like a grandmother. I love my babies unconditionally. I don’t care if I just met a baby, if it’s a baby and it’s gonna be in my care, I am going to love it. (1152, PDI 4)

Although, interestingly enough, the more permissive role of the grandmother in spoiling infants was acknowledged:
You need a specific kind of person to take care of them. It’s not the – the teacher-type. It’s more a mother-type with them. Whatever your age is, the mother-type. Not the grandmother-type because we spoil. (1142, PDI 4)

You get to spoil them and do whatever – just like a grandparent – and then, "Bye, mom" – and go on your merry way and be done with it. (1012, PDI 5)

I have my granddaughter now that she’s 3 months and I love her. I spoil her like a grandma. The same with these kids in here. (1232, PDI 2.5)

**Relationships.** The ability of the infant teacher to form a relationship with the infants in their care has been found to be essential to the multidimensional roles required for the provision of sensitive care (Lee, 2006). Central to many of the infant teachers’ comments was a strong sense of the relationships that were formed as a part of caregiving:

*She got that click with me like, ‘Okay, she’s the person who taking care of me the way maybe I want it’. (1242, PDI 5)*

*when she sees me, her eyes light up, and she’s be glad to see me (1082, PDI 5)*

*Well, when he sees me he’s happy and wants to come to me immediately. And when I leave, he cries, he looks and I say, well, I think he may like me (1072, PDI 4)*

*Seeing them look at me and just smile. You know, just getting their eye contact and I know they’re looking at me, but I’m doing something else and I just call their name and they just light up. Just the need to be there and that that bond that I got with them that they feel safe, that just gives me all the joy.*

Later commenting

*And as soon as he seen me, he just hushed. It was just like, you know, he felt safe, you know....when he seen me, he just reached out for me and he quieted down. (1212, PDI 5)*
The cumulative effect of multiple strong relationships was seen as benefiting the baby:

*because if mom is at home giving you the love, and then you come here and want mines too, that’s a lot of love to go around* (1002, PDI 5)

One teacher acknowledged how her relationship with her infants created a bond that was used for social referencing:

*some kids, when they see a new face, they will start crying or start hiding somewhere. She won’t do that. She will stay looking at the person and look me.* (1242, PDI 5)

**Special Relationship.** In discussion of the relationships formed between infant teacher and babies, it became apparent that, within the group care setting, some relationship bonds with the infants were stronger than others. The adapted PDI asks questions of the infant teacher regarding a specific child (chosen by the teacher) whom the teacher has known long enough to have a relationship with, as well as questions relating to the group of infants in her care. Although not universal, almost half (48%) of infant teachers in this study referred to special relationships that formed between themselves and individual children within their care. In discussing such relationships, there was a degree of both acknowledgement of this relationship as being different as well as the two-way affinity of this connection:

*I don’t know – some you just click with – and there’s a bond there, and then others – you know, you can take care of whatever they need but it’s just not that – I don’t know. I don’t know if it’s chemistry that you get, like – when you fall in love with people or whatever but it just – it just goes.* (1012, PDI 5)

*he’s the one that I have the, the knit with, you know, we, we seem to be on the same, on one accord* (1052, PDI 5)
sometimes, some babies, they’re like, the way they act is like they call you – they call your attention more than the others. (1162, PDI 3.5)

As infant teachers reflected upon this connection, they explored possible reasons for how such a relationship had developed, acknowledging circumstances, consistency of the relationship over time and their own interactions with the children that may have facilitated this bond:

Most of the time, when we really click is when everybody’s gone, and he’s really the last one left. So that gives us – it’s just him and I in the room, and we just have that time, that little few minutes by ourselves (1202, PDI 5.5)

I have more one-on-ones with her because her sleep schedule is off from everyone else’s ‘cause she only sleeps about half an hour. (1172, PDI 6)

And I do spend a lot more time with him than I do the other children because on any given day, I spend probably two hours more time just alone with him. So, and we’ve kind of had more quality time for that bond to develop since it is just us two. So, it’s just a little, a little bit stronger with him. The other children I still have strong bonds with, but it’s just a little bit different with him because I get to see him by himself because he does act differently with me than he does with the other children also. (1122, PDI 5.5)

we have always been close. We, he – let me see – he’s been here at the center the longest out of the other kids.... so with Elijah, it’s been consistent, ongoing since I’ve been here so I would say that’s the one that I’m more close to and that I know more of is with Elijah. (1212, PDI 5)

Maybe because always, I’m sitting in the floor.....The other teacher – sometimes they sit in the floor, but not like me – all the time in the floor with them, playing. Maybe it’s that. They can find it easy. She’s here in the floor with me. Maybe it’s that because I like being on the floor with them. (1062, PDI 4.5)

he’s always the last baby to leave. So I usually have a lot of time with him when I’m here (1092, PDI 5)
In reviewing the interviews of the teachers who had made explicit comments concerning their relationship with a specific child, it is worth noting that by a two-to-one margin (67% vs. 33%) the infant involved was male. This finding is of interest, as it is somewhat contradictory with NICHD findings that showed boys at 15 months receiving less responsive care than girls in center-based and family child care homes (NICHD Early Child Care Research Network, reported in Honig, 2002) as well as other research indicating male infants as being more at risk of receiving less attention from teachers as well as parents (Zaslow & Hayes, 1986, in Honig, 2002). Clarke-Stewart and Allison (2005) have noted a “slight disadvantage” (p. 102) for boys in child care.

Infant teachers who had established such a strong bond with an individual child noted the impact on the child:

*Well, because I’m too close to him. I don’t know if this is good or is – but I’m feeling bad because when – that not happen with every children.... I think he’s – he feeling safe with me.* (1062, PDI 4.5)

An infant teacher noted the strength of this connection in her return from vacation and “her” baby’s response:

*So I went on vacation, then I came back. I opened the door; she was way in the back. And I’m standing – she sees me, she’s like – it’s like, (excited voice) “Oh, you back.” I’m like, “Oh, my God.” I dropped down and wait for her and give her a hug. I’m like, “Oh, you remember me.” She see me, and you know, you know the excitement she got.....That was the best day of my life, when I came back. Because everybody was saying, “She won’t remember you.” Okay. She got that connection with me.* (1242, PDI 5)

This infant teacher acknowledges the infant’s role in the establishment of their relationship:
She choose me, actually (laughs). She choose me...She choose me. When she first came, she was a little baby – really small. We put her in bed, she was three months. when she started crawling, she would be connect with me. Like when I put her to bed, she’ll be looking at me. “Ooh, I like that person.” That’s just she be looking at me all the time.....So I think that’s make her attached to me like this. (1242, PDI 5)

The strengthening of this attachment in relation to development was noted:

I guess probably once he started recognizing, I mean, like I said, he was six weeks old, so probably, I would say, maybe six or seven months old – when they start recognizing people and – recognizing voices, and you're just not a person, you know. You're the one that they come to and – avoid the other people. That's probably when it started. (1012, PDI 5)

This teacher’s comment raises an intriguing point, as of the 12 infant teachers who indicated a special relationship existed with an infant in their care, 11 of them were in classrooms that served babies up to a year of age. Only one infant teacher who spoke of a special relationship was in a classroom where the infants transitioned at eight months of age. It may be that the critical developmental period surrounding the last quarter of the first year of life is of particular importance to the strengthening of the infant-teacher bond and this finding may further support the importance of ensuring greater continuity of care with infants.

Conscious Consideration of Caregiving

As infant teachers considered the relationships with the babies in their care, there were aspects of the relationships that were central to this discussion. Such elements were related to both the relationship between infant teacher and child as well as their own response in these relationships. Infant teachers were consciously aware of their relationships with infants; as the loss of the relationship could be painful, their coping
strategies were evident. As they considered the relationship, it was evident many teachers saw the infant as an active partner.

**Attachment and Detachment in the Infant Room.** Despite the positive comments many of the infant teachers made concerning their relationships with the babies in their care, it was also clear they saw issues arising from attachments formed with their babies:

> they get a really strong bond and they get really attached to you – and they just don’t want you to go anywhere, and they think that you’re the only person that should – that takes care of them. And you’re the only person that should, and they – don’t want anybody else. [Infant teacher in classroom of 4 children talking about issues in a small room] (1122, PDI 5.5)

One teacher spoke of her own conscious efforts to cope with the eventual loss of her relationship with her infants as they transitioned out of her room:

> I prepare myself like a month or two before. I tell myself that they are going and I am preparing them to go, so when they finally go, I can say bye. (1072, PDI 4)

One misperception that surfaced concerned the whether or not it was appropriate to form an attachment bond between infant teacher and baby:

> I know you’re not supposed to have bonding with them, the children you see, you’re concerned, you’ll find the protectiveness is coming from. (1222, PDI 4)

It is troubling to note that some infant teachers made specific comments relating to practices designed to keep bonds from forming between themselves and the infants in their care:

> we changed groups so that a kid won’t get too attached to that one teacher. So therefore, in the event of – and I don’t know how me and Kendrick got this relationship going on, you know, because he’ll be in
somebody else group, he'll crawl back to me. So I mean that's why we try to prevent the closeness. That's why we keep it rotating so we won't have that problem. Because if you get one teacher that all the kids are in love with, then you, you got a big problem because it's 4 to 1[teacher-child ratio]. (1052, PDI 5)

Because when you become attached to a kid, it's real hard. You know, I'll be, I'll be caring but yet I won't be, I won't allow myself to, to, to get attached, and that way it will be easy to separate or to let go. (1052, PDI 5)

I actually took her, turned around, I said, “Here, Miss Karen,” and I actually had to give her away because I just mentally couldn’t handle trying to figure out what was wrong. I was like, “I can’t do this,” and I handed her off (1172, PDI 6)

Such comments reflect the need for additional training specific to infant teachers that stresses the importance of attachment relationships in the early years in care and the young child’s ability and developmental needs for such relationships to facilitate optimal social-emotional growth. It may be that such detachment serves as a protective mechanism erected by infant teachers as a means of ensuring boundaries on their own emotions in this type of relationship to meet a sense of professionalism (Katz, 1980; Murray, 1998).

you know, you get them bonds, and, like, if Jasper has to go, I'd probably be upset but what are you gonna do? They have their home life. They're not my children. So you gotta just kind of learn to detach after that point in time. (1012, PDI 5)

I always try not to get attached to the babies, but then when they cry like that, I figured you know you’d be like I’ve got to go, you kiss them and you hug them, and then I’ll see you tomorrow, but it has an effect on you. (1082, PDI 5)

The strength of the attachment relationship was may be felt in the comments of infant teachers when discussing this loss:
When the children move up to the next room or leave the center because I
have them for eight, sometimes ten hours a day. And you get really, really
attached to them. ...I get that same feeling that I give for my own child
with them because you get attached to them......it really is difficult. I’ve
cried when a couple of them have left because you get so attached to them.
And it’s just, it’s really difficult. (1122, PDI 5.5)

Just when one leaves...I just lost one of my babies, like, a month ago. And
when you get close to them like that, it just hurts when they leave. And it’s
just like, oh my God, I ain’t gonna see him no more. And kids, you know,
you get attached to kids and you see them every day and you’re used to
that. I just came to work one day and they said, ‘well, he won’t be back.’ I
go, ‘no, that’s my baby.’ (teacher begins to cry) (1202, 5.5)

One infant teacher also referenced that it was not only the loss of the relationship
with the infant that was felt but the relationship with the baby’s parents as well,
developed through the provision of care in the first year of life:

Some parents you connect more, so then you feel that much more involved
with that family because you have a connection with the parent. But it’s
just harder when you make the extra connection, in more ways than one.
That it’s harder to say goodbye to them. Because you’re not only saying
goodbye to the child, you’re saying goodbye to that morning and
afternoon friend you get to say hi to and have a little chit chat. (1172, PDI
6)

Keeping the Baby in Mind.

when, you know, you’ve had them for six, seven months and you’ve
developed this trust and everything with them and then they’re gone. And,
you know, it – you wonder, well, what happened to them? What’s going
on, you know? (1012, PDI 5)

The infant teacher’s statement above may reflect one reason why infant teachers
opt to detach themselves from their infants, as when a child leaves their care, they may be
left to wonder where that baby has gone and how that baby may be doing. Jeree Pawl
(2006) has noted the importance of being held in another’s mind to infant development
and the manner in which this is relevant to early care teachers. Infant teachers referenced
this sense of the child being held in mind as they talked of their experience when apart from the baby, whether in the center or at other times:

But I find myself, even if I have to stay in another class for like a hour or two, like I’m in here with you now, I feel the urge to go and see what he’s doing, you know. (1052, PDI 5)

One of the babies, he recently left. ...I wonder what he’s doing now. Sometimes, I’ll be like, I wonder if he got to crawl yet or I wonder if he’s sitting up on his own. (1032, PDI 3.5)

Is he living good, is he eating good? You know, that just fills my mind. I can be at home, and I can wake up then with Austin on my mind. Is he okay?...Then my mind be thinking about the funny things he does and the things that I see him do. (1202, PDI 5.5)

You take the children, you mold them, you see the progress, you know their potential and then oops, the mummy moves out of the state or someplace with a different place they have to go. And sometimes I go home and I wonder if she has finally got her sippy cup at all. Something small that you take for granted and I was working so hard at. (1222, PDI 4)

I call and I asked how she was doing because I was so concerned.... I missed her. I would be talking about her, like with my sisters, my brothers all the time. They said, ‘Oh, my God, you’re talking about her like she’s your child.’ Say, ‘Yeah, she is.’ She’s my baby. I’ve been thinking about her. I missed her when I was gone. (1242, PDI 5)

The teachers most likely to speak in such terms were the teachers who had acknowledged a special relationship with an infant.

Reflective Practice. In talking about their involvement with the babies in their care, several infant teachers gave evidence of reflective practice in their work, whether it be in considering their own needs in relation to providing care:

There were days that I felt like I needed to lay down. But I couldn’t. And I realized then, after I had the doctor’s appointment, that I need to take care of me as well as I take care of them. (1152, PDI 4) (infant teacher on coping with her own illness)
Or their ability to consider their own actions in their actions with the infants:

"I just did my own inventory. Like is it something? Did we do something? Did something happen? ....And you know, I just kind of did inventory of myself and I was like, “No one did anything.”" (1212, PDI 5)

and how they might acknowledge what transpired in the course of this work:

"Those are the things I will think about, but not to say I am guilty, I am wondering.... that how can I do something, what can I do to make them come out in their personality in a positive way?” later noting “I’m somebody who goes home and I try to write down what goes on in a day. I try to adjust the lesson to suit the age group or address how I bring out information like if I say “take up toys” maybe I should have sung clean up, clean up or time to go to bed, toys. These are ideas I got from thinking about my day. On a daily basis I go home and I think of what to improve. It’s something I am not going to be doing because I go home and go through this each day. On a weekly basis that thing wouldn’t pertain, you understand, it’s a daily thing I’m doing. (1222, PDI 4)

Conscious Consideration of the Infant in Care. Although the majority of the infant teachers had limited formal education in early childhood, many expressed cognizance of the young child’s ability to perceive what is happening around them and acknowledged this influenced their own practices and behavior as a teacher:

"even at this age, you know they need a role model because they’re watching you. They’re watching – even they can’t repeat the word, but they watching your mouth, how you talk, how you react. So I think, I want to always reflecting a positive attitude, temperament and everything I can to always boost those kids so they won’t, that’s gonna affect them later on life, so that’s why I always try to do everything I can to be, to have a positive thinking, a positive attitude. (1242, PDI 5)

You know, within himself, I think he felt like, you know, sad I guess is of helpless of his own self because he really didn’t, couldn’t communicate to me what was going on. And I’m sure he felt that I was trying my best to help him, but I couldn’t pinpoint what it was, so, you know, he probably was in a helpless state also, you know, because they can’t really, you know, they gotta go to us, to, to fight to solve, problem solve for them. (1052, PDI 5)"
One infant teacher acknowledged the need to consider the child as a partner in care and consider the cues and signals the infant was sending:

_It takes a lot of patience, a lot of understanding, but you got to realize half the time a baby is actually telling you exactly what it wants and exactly what it needs... It takes a lot of patience, a lot of understanding, but you got to realize half the time a baby is actually telling you exactly what it wants and exactly what it needs._ (1152, PDI 4)

As Schore (1994, cited in Gerhardt, 2004) describes, the infant is able to “read” caregiver emotion and synchronize their own system in response, with positive looks from the caregiver being especially powerful. The first infant teacher further reflected upon how tension might be expressed in her behavior and the manner in which her babies might become aware of such tension:

_Because when those thing happen, I’m not happy. You’re not gonna see my smiley face. Maybe. So she might be seeing my face like this [making tense face]. She may be wondering what’s wrong with me – what’s happened. Because when those thing happen, I’m really not – I’m not happy about it, but I’m still working on it because I don’t know how to bring it._ (1242, PDI 5)

She acknowledged the manner in which such distractions get in the way of proper child care and the impact on the infant:

_It’s the same thing because it may be an issue in the classroom... You maybe not focused for a certain time. You’re not focused. You don’t know what you’re doing because you’ll be thinking about what’s going on. You may be missing a time to change. You maybe neglect to feed a kid because that happened._ (1242, PDI 5)

This sentiment was echoed further by another experienced infant teacher, recognizing how her older infants could be affected if she did not consciously work on this tension:
And babies can feel it, especially infants. Mine are a little older, so there's things that, you know, you can do a little different, but if it's an infant, that infant can feel that that negativity that, um, if you're having it bad, and you're tight inside, that baby's gonna feel it, they can feel it. So you have to be able to wash it away or you're not gonna affect the child or you're not gonna have a good day. (1102, PDI 6)

As corroborated by another teacher:

you wouldn't think they would know anything, but they can sense a lot more than what people think they can (1012, PDI 5)

**Trust and Security.** Infant teachers also expressed some understanding of the need to provide the babies in their care with a sense of trust and security:

It's just that reassurance, you're safe, it's okay to do this. We're going to do this now. Just that person that they know that they can come when they need, I mean, granted they don't really know, but they do know that they can come sit on your lap and everything's gonna be okay. You're gonna keep them safe. When you pick them up, that's it's gonna be okay. (1172, PDI 6)

Several of the teachers made a direct acknowledgement of the need for the infant to have the same sense of security as they would in their family home:

Making that person, that baby infant feel safe, secure, like she would be at home. (1102, PDI 6)

So I almost think a touch, a blanket so he can just feel and know that it feel like home, they have that smell on them blankets when they come their house. And when they have that smell on their blanket, that'll calm them down and get them to sleep. (1193, PDI 4)

Teachers recognized that parents also needed to feel a sense of trust and security with them as well:

They feel the love and they know they’re all right; they're safe. The most important thing is for them to feel safe and for the parents to feel that they’re safe too. (1112, PDI 4)
First I try to make the kids happy, and second then you’ll wanna make it that the parents will feel safe that their kids are with you. (1002, PDI 5)

Starting care was noted as an especially vulnerable period for parents:

when a parent comes to leave the baby for the first time, they get very upset. So they need more hugs than the baby does. That time, I tell them, I reassure them the baby be fine. Don’t feel afraid to call or whatever. (1162, PDI 3.5)

Another infant teacher showed appreciation as to why it was important to acknowledge the parents’ need to feel safe in their choice of child care provider:

You have just been entrusted with the most valuable commodity that this parent has. It’s not their home, it’s not their car, it’s not whatever they have in their safe, it’s that child. And if something happens to it, it gets lost, it gets damaged you can’t go to the store and buy them another one. You have been entrusted with the crown jewels. (1152, PDI 4)

**Power.** Although not found as commonly as in Leavitt’s classic study (1994) of infant-toddler teachers, elements of power issues within the infant teachers’ relationships were present:

In fact I was the one who broke her of that habit ‘cause they would hold her ‘cause they didn’t want to hear her cry, whereas I put her down on the ground and made her cry, and she eventually learned how to play with toys, and developmentally she was very far behind her age, so I’ve actually caught her up to where – she’s not walking yet, although almost one, but for how far behind she was versus what she’s come to, she’s come a long way. (1172, PDI 6)

“You’re not gonna get this. I mean I could just come over and pick you up, but no. You’re not gonna win this. It’s – you’re not gonna win this. You’re gonna learn that you’re gonna ask for it, you’re gonna sit, you’re just gonna give a little, “Hey, I’m over here,” whatever kinda cry, little blurb babble that is, but you’re not kicking your feet at me. That is not how you’re getting attention in this place. (1172, PDI 6) (infant teacher talking about older infant’s behavior)

that’s a time when I try to – I need to break him out of that habit of just being around me. (1202, PDI 5.5)
Some of them don’t eat. You try to feed them, give them the bottle, and they hardly ever eat. I just have to keep forcing them all the time. (1042, PDI 3)

Sometimes Lily will just have to get adjusted; I’ll have to change her. (1222, PDI 4)

Such comments were typically focused on infants’ behaviors and the teachers’ sense of responsibility for shaping the child’s behavior in what they believed to be a more socially desirable manner.

**Understanding Development**

As infant teachers discussed their work with babies, they were quite expressive on the need to consider how development and related issues influenced their ability to understand the baby and their needs. This consideration brought them both great satisfaction as well as challenges.

**The Satisfaction of Supporting Development in the First Year.** If there was one commonality among the infant teachers, it was relating to the joy and sense of accomplishment that arose from watching the infants in their care develop:

I guess seeing them progress, seeing, you know, them moving from one stage to the other and how they’re doing developmentally. And it just, it just makes me happy to see how well they’re doing. Even though I’m sad when they’re ready to move up to the next group, it makes me happy that I’ve prepared them well enough to go over to the next teacher. (1122, PDI 5.5)

It makes me very happy because I know that he’s not – he’s not behind in developing, and knowing that he’s growing up, and he’s getting older. That makes me very happy (1002, PDI 5)

I think the best thing about working with them is just watching them grow. Every month is a different month. One month, they’re sitting up, one month they’re laying down, one month they’re crawling, so just seeing the
different stages of somebody growing. That’s my favorite part. (1032, PDI 3.5)

While infant teachers noted the most common physical developmental milestones, some were also aware of the cognitive, linguistic and social-emotional stages unfolding in front of them (albeit in general terms):

I mean just the way their minds work and how they’re developing is just fun to watch it – it grow and expand and whatnot. (1172, PDI 6)

Taking care of the babies and seeing them happy and them growing up. Seeing them growing up and get to cooing, and trying to talk as they get older and walking, from crawling to walking, that’s exciting to me (1082, PDI 5)

The dramatic pace of development in the first year of life also was noted:

I laugh then to see new things everyday. They change everyday, every week. (1232, PDI 2.5)

They just make me feel good, as much as I hope I – I make them feel good, and the growth is really dramatic from infant to a year. And every three months or whatever when they have that next little window, and that next little thing that comes in, it’s very dramatic in those ages....I mean, you know, first time they’re walking, first time they say a word, first time they’re crawling. So it’s very fulfilling paying attention to see how well they’ve developed. And then looking at the pictures that they started, and then at a year or six months in between, and seeing, you know, not just in their body, but just the things that they can do, and I think that’s just – that’s just wonderful. (1102, PDI 6)

What is especially notable is how frequently infant teachers spoke of their contributions to this development as providing them with a sense of accomplishment:

Seeing them move from one stage to another, I feel like I have contributed something. And they, in turn, gives me the joys, so I’ve gained and they’ve gained. (1072, PDI 4)

It’s kind of sad knowing that he’s gonna be going to another class, but I’m happy too. I’m happy too because I’ve watched him grow to this level. From 3 weeks old until he’s almost a year old now. He’s getting ready to start – he’s crawling
now, but he'll be walking soon. So it makes me feel good really. (1202, PDI 5.5)

If watching the rapid development take place in the first year provided much satisfaction, the developmental issues that were also a part of this period provided infant teachers with more by way of challenges. Infant teachers described their coping in trying to support infants through such periods as very tense.

**Crying.** If watching infants progress under their care within the first year provided infant teachers with a sense of joy, trying to cope with crying provided a great deal of their stress. Crying was noted by almost every teacher in this study as the major issue with which they had to contend, which is consistent with other reports of infant teachers (Jurie & Baker, 2008; Mardell, 2002). The way in which one baby crying could set off other infants to crying was repeatedly mentioned, described by one teacher as being “like the domino effect” (p. 1152):

I tell ‘em, ‘When there – one’s happy, they’re all happy. When one cries, they’re gonna all cry.’ And it’s true. I have babies that don’t cry at all. But if they hear another baby cry, they start to cry. (1112, PDI 4)

Infant teachers described strategies they used in a triage manner to assess which infants needed the most attention and how important it was to maintain one’s cool:

sometimes the young ones, they just have this tummy ache, you know, back home we call it gripe and they say gas. They cry and they’re stiff and all you can do is rub their little tummy and there is nothing else you can do. And you just wish the pain to go away because they are so small. (1072, PDI 4)

When you get two or three of them, like, crying and crying and crying and you have another one doing this over there, you just have to learn to prioritize which one’s, like, screaming the loudest or needs the most attention – and if you’re gonna get all flustered and, you know, they sense that. Then they get more upset. (1012, PDI 5)
Now she started now like screaming, but not crying. It’s something like – it’s not crying because she don’t have any tears, it’s screaming. It’s like she wants the attention at that moment... it’s not crying because we know when a baby cries. If the baby’s sick, we know why because you can see in the face, the tears. No, this is not with tears, nothing, it’s just that she’s mad, she’s angry for something. (1232, PDI 2.5)

One infant teacher gave an example of collegial support that helped both her – and by extension, her unhappy infant – through a difficult period:

when he was going through his teething process and he was screaming and screaming. And I was like, “Baby, I did all that I can do.” So one of the other teachers came and she was like, “Well, I’m gonna give you a five minute break. Just go outside, sit in the back.” Because I was like, “I don’t know what else to do.” And he just cried and just cried and I went and did my five minutes and came back because he was screaming for me so I took him outside and we was watching the trees and that calmed him. I guess it took his mind off of his pain and so he was okay. Yeah, it was just – I don’t know what else to do. I usually can get him quiet, but he was just like ‘wow’. (1212, PDI 5)

**Not Knowing What’s Wrong.** Interwoven within infant teachers’ comments concerning crying were attempts to understand and make sense of what was upsetting the infant and how this distress might be alleviated. Not being able to decipher the preverbal infant’s cries created struggles for the teachers, as health concerns were a real issue as well as a sense of powerlessness to alleviate an infant’s distress:

*I guess when they're crying, and you can't figure out what is wrong. You've changed them, fed them – played, rocked, and they're still crying, And, you know, nobody can speak for them. You know, you don't know – if they're sick – or whatever or they just wanna cry, but that probably, after a while, that gets to be the worst thing – especially when one starts crying, the next one starts crying, and what do you do? Yeah, just have to listen to it. (1152, PDI 4)*

*S有时候 they cry and you don’t even know the reason why. You try to do everything you can and you can not soothe them and that kinda gets to me. I can’t ask him why but he can’t speak so. (1072, PDI 4)*
And it hurt me, it really, really bothers me when they cry and I don’t know what’s wrong with them, especially when I’ve done all I could. I dry them, fed them, rub their back, and even maybe rub their little head, and I still don’t know what’s the problem, it bothers me. (1193, PDI 4)

I think that’s one of the hardest things is just when you can’t make the kid happy, no matter what you do. They’ve got clean diaper, they’ve ate a bottle and they’ve taken a nap and they’re still screaming. Because you don’t know what’s wrong, there could actually be something wrong and you don’t know. That’s the hardest. (1172, PDI 6)

The sense of helplessness that infant teachers felt at such times was evident as was their inability to provide any remediation for their baby’s distress:

When they cry, and you don’t know what’s wrong with them....And you know you’ve done all that you can do, but they’re still screaming to the top of their lungs, and you feel helpless ...You get to the point where you want to cry with them. (1052, PDI 5)

When a baby cries and I do all I can but they don’t stop crying. I don’t know what’s wrong to help them. I find that very difficult. Most of the time, they’ll be getting ill. (1082, PDI 5)

One teacher observed that her early childhood training had not equipped her to respond to crying, leaving her to draw upon her practical knowledge:

They don’t tell you how to get children to stop crying. They tell you what the problems might be but they don’t teach you any of the little, I call them “mom tricks” on how to get children to become happy. (1122, PDI 5.5)

Another teacher, while acknowledging crying as an issue in the infant room, shared her own perspective on crying:

When they cry, a lot of people say I don’t like to hear all the crying but that’s their communication to me. They’re telling me that I wanna be held, I’m hungry, I’m hurting. That’s their communication, so it doesn’t bother me. (1212, PDI 5)

**Spoiling.** Infant teachers brought up the issue of spoiling their babies, which is not surprising given the cultural connotations that are often a part of concerns about how
to respond to crying babies. Whenever an infant teacher used the term “spoiled,” they were asked to further elaborate on this. One infant teacher defined spoiling as:

A baby that is constantly on their mother’s hip and instead of doing things for himself, wants you to sit there and do it for them. Instead of picking up the toy and shaking it to hear it, wants you to pick it up all the time and shake it, even though he or she can pick it up and shake it. A child that instead of skooching around wants you to carry them. A child that anytime he moves out of the sight or reach of it, whines, cries for no reason...A child that wants the constant attention. (1152, PDI 4)

It was interesting to note, however, that infant teachers saw spoiling in a somewhat more nuanced manner. Whereas the younger infants who cried were more likely to be responded to, as infants developed, infant teachers noted older infants were more likely using crying in a more intentional, goal-driven manner:

[older babies] understand that if they cry for things, that’s when they start understanding that they’ll get what they want. (1032, PDI 3.5)

when I pick her up, she laughs, that’s something she likes, but I don’t hold her because I don’t wanna spoil her.

Or more representative of a perceived temperamental expression:

like I told you, Imani’s feisty too. She kinda like – you know, like a little feisty baby, and likes things her way because she spoiled later noting [she’ll] just scream, making some noise, scream like – just spoil-like scream. She don’t really even be crying. She just make this noisy scream. (1192, PDI 3)

Although spoiling presented challenges to the teachers, there was some understanding expressed of this being an issue that could be put in context and managed:

[parents] will spoil them. They have them in their arms all the time, and when you come, you can’t do that here. When they’re used to at home, they really, really make a fuss and then you don’t really want to say to them, you can’t do this. So you have to endure that for a period until the baby gets to realize when you come here, look, this is how this is going to
be when I go home because they do understand, even though they are babies. (1072, PDI 4)

One infant teacher put spoiling in context of loving care with an understanding of how spoiling could happen with families on weekends, acknowledging her own predisposition to see that continued with her own practice in the infant room:

some teachers say it’s a little hard because they get spoiled over the weekend, and with the family, mommy, daddy, and grandma. But I don’t have any problem because sometimes they come, like, crying, cranking, or fussy because they want to be held, and right now I don’t have problem because I don’t have too many kids. I can give all my time to them, and I don’t have problem.....By spoiled I mean for the parents, when they get spoiled for the parents, they are at home, or probably they don’t go to sleep like in the routine we have, like two, three times a day because they are at home. They don’t see mommy or daddy for five days. The parents probably keep all the time playing with them and spoiling them. Giving them kiss, or hugs, or take them to the stores, or playing with them. That’s why I said is spoiled. [pause] And when they come here, I spoil them. (1232, PDI 2.5)

Sleep. Sleep was the one area where crying was more easily diagnosed and responded to, as infant teachers described using their knowledge both of infants as a group and individual children to recognize when sleepiness was the cause of their babies’ unhappiness:

a lot of babies get very fussy when they tired. They fall asleep, cry.... And so you calm them down. And then they fall asleep right away.... they fuss most of the time when they’re sleepy. (1162, PDI 3.5)

He would lay down, but then he’ll stand back up. He lay down, stand back up. But he was letting the sleep not defeat him. (1002, PDI 5)

In describing dealing with the fussiness that may be associated with a tired child’s behavior, infant teachers were able to acknowledge the ways in which their actions could support the baby in settling down successfully to sleep:
That’s like during naptime. You need more than two people to try to put them down if they’re really tired because sometimes they get over, they get too tired and they don’t know how to calm themselves down. (1182, PDI 5.5)

I knew that she was tired because she was rubbing her eyes and trying to sleep, but for some reason I put her in the crib, and she didn’t want it. She started crying, and then is when I pick her up, I sat on the rocking chair, and I started rocking her, and she went to sleep with no problem. Probably she wants to feel somebody next to her maybe, and she went to sleep. I wait for a little bit, and then I put her in the crib, I rock the crib because she try to wake up. But she back to sleep. (1232, PDI 2.5)

The ability to support babies in their efforts at self-regulation offered infant teachers an area where they were able to feel a sense of success.

**Behavioral Concerns Related to Development.** While infant teachers’ appreciation of development within the first year was overall positive, one subset of teachers noted infant behaviors that were developmentally appropriate but still not popular as their infants headed towards their first birthday. While teachers’ appreciation for the infancy period came through very clearly, equally apparent was a notable lack of enthusiasm for dealing with emerging toddler behaviors:

*I like them when they're cute and cuddly and huggy and – once they start getting to that stage* [referencing toddlerhood], *that's enough* (1012, PDI 5)

*the reason why I have to have tiny ones is because I feel like I can handle them more* (1162, PDI 3.5)

*the baby’s are, when they start getting big, growing into toddlers, they’re sort of like mean sometimes. But when they’re babies? No. They’re always sweet.* (1232, PDI 2.5)

The behavioral challenges of working with toddlers were repeatedly commented upon:
I’d say like one of the harder things is the, uh, when they start reaching that toddler – transition for that time – the sharing thing, you know, finding two of everything or you know, keeping them apart.... Trying to find, um, teaching them to share, and not to hurt each other, and step on their fingers, and temper tantrums is where they’re coming now. (1102, PDI 6)

I’m sure when they do the full, full-blown kicking and screaming – tantrums, I’m not gonna be finding it as funny, but right now, it’s a little bit cute that they’re starting to do that because they’re – it’s showing that they are getting older and progressing. (1122, PDI 5.5)

When you get in that stage, like 12 months, you start to bite, and that’s what makes me worry the most, about her hurting another child. (1193, PDI 4)

Teacher comments were consistent with other research that has suggested one of the biggest barriers to continuity of care practice has to do with infant teacher attitudes towards working with toddlers (Aquillard, Pierce, Benedict & Burts, 2005).

I like the fact that I’m working with the little ones. It’s a lot of advantage in it because they don’t talk back to you. They don’t make you stress over and over, all day. (1242, PDI 5)

**Hypothesis Two**

The hypothesis that infant teachers would be able to reflect on and share their perspectives about their work through interviews in a manner that provides a greater understanding of the care environment offered to infants in child care was supported. Infant teachers were able to provide a great deal of information on their experience as infant teachers, their relationships with infants and their families as well as the care environment in the infant classroom.
Research Question Three

What factors, such as training, education, and administrative support, may have influence on the infant teacher: her reflective function and her ability to provide quality care and responsive infant-teacher relationships?

PDI/Education and Training Analysis

To assess the role of training and education, separate correlational analyses were conducted using information obtained from the Infant Teacher Demographic Questionnaire.

To examine the relations between infant teachers’ reflective function and their education, correlational analysis were conducted using information obtained from the Infant Teacher Demographic Questionnaire. The correlations between infant teacher reflective function, as measured by the adapted PDI, and Education were not significant, \( r(25)=.158, \text{ ns} \). Infant teacher reflective function did not appear to be related to level of education. As the mean for the infant teachers overall was 2.84 overall, indicative of an educational level somewhere between a high school diploma and a CDA (equivalency). This finding is consistent with existing research (Fonagy et al., 1998) that found an absence of a relationship between reflective function and education. As this group, as a whole, did not have higher levels of early childhood education coursework, this finding is not surprising. None of the two-year degrees held by members of this group were in early childhood education or child development.

Next, analysis was conducted to determine if a relation existed between infant teacher’s reflective function, as measured on the adapted PDI, and infant teacher recent
participation in specific infant/toddler training. An independent t-test was conducted comparing the infant teachers’ adapted PDI scores who had attended specific infant/toddler training within the past year and adapted PDI scores for infant teachers who had not attended specific infant/toddler training recently. This analysis revealed a significant difference in reflective function, as measured by the adapted PDI, \( t(23) = -2.7, p = .013 \), in infant teachers who had or had not recently attended specific infant/toddler training. It was interesting to note, however, that infant teachers who had not attended such specific training had higher PDI scores overall (\( M = 4.95, SE = .25 \)) than those infant teachers who had attended such training (\( M = 4.00, SE = .25 \)). As infant teachers were not asked to specify the topic of the infant/toddler training they had attended; thus, this might have included trainings such as Infant/Toddler CPR or make and take craft sessions. It appears that having attended specific infant/toddler training within the past year was not related to higher PDI scores.

**PDI/ITERS-R Staff Analysis**

To assess the role of staff support, the ITERS-R Staff subscale was used, minus the one question that was parent-focused. Although the Staff subscale is not frequently used in QRIS assessments, it contains questions that are relevant to infant teachers and their provision of care, such as “Staff Continuity.”

The correlations between infant teacher reflective function, as measured by the adapted PDI, and staff support was significant, \( r(25) = .531, p < .01 \). Infant teacher reflective function was associated with staff support, as measured by items on the ITERS-R Staff subscale. This finding is of interest, as the question may be raised as to whether
infant teachers with higher reflective capacity are more likely to seek out employers with greater staff supports or whether centers with the capacity for providing supports to their teachers might be more likely to hire individuals with a higher degree of reflective function. One additional item of note is that all five of the not-for-profit centers (including faith-based providers) were found to have infant teachers with definite reflective function. Although given the sample size and the small number of centers in this category, there are limitations to any conclusions that might be drawn from this finding it is interesting as it is consistent with prior research regarding the importance of staff support (Gerber et al., 2007).

Administrative Support

To assess the role of administrative support, scores obtained from coding of the director interviews were used as a measure of administrative support for infant teachers and their work with children. The mean for Administrative Support was 4.63. Correlations between the infant teachers’ adapted PDI scores and the administrative support measure were not found to be significant, $r(24)=.373, \text{ ns}$. The presence of administrative support was thus, not related to infant teacher reflective function. Given the prior finding of a relationship between staff support and infant teachers’ reflective capacity, this finding may be further evidence of the complexity of supervisory supports and their influence on individual teachers and their work.
Hypothesis Three

The last hypothesis had mixed results with the findings. External factors in the child care setting, in the form of level of education, specific infant/toddler training and administrative support were not found to be related to higher reflective capacity as measured by the PDI. Staff support, as measured by the Staff subscale of the ITERS-R, was found to be related to higher reflective capacity as measured by the PDI.

Case Studies

Two case studies are presented to give a clearer picture of the participants in this study. One was selected as an example of a teacher with low reflective function (3), the second infant teacher was determined to have definite reflective function (5). Both teachers are African-American (the largest ethnic group in this study); both are over the age of 40 and both work in small, privately owned child care centers. Thus, they are representative of the sample overall. But from there, the differences between the two teachers begin to emerge.

Case Study One—1192—“Patricia”. Patricia is an African-American woman in her forties who has not had an easy life. Listening to her description of her own early years was at times painful, as she described living first with her single mother, then her father, returning to her mother’s house when her mother became ill, after which she lived with her aunt. Although Patricia described her childhood as “a real good childhood,” she was also candid in observing her own mother allowed her “too much freedom” as a child, which resulted in Patricia’s becoming a mother herself at the age of 15. After an unsuccessful relationship with her oldest children’s father, she lived on her own,
eventually meeting and marrying her husband of over 20 years. Her own parenting style she viewed as having had “to really teach myself and learn myself,” in contrast to her own early experience. Patricia summed this up saying “I call my mom every day; I love my mom, but I don't wanna be nothing like her.”

Patricia came to work in child care after having worked in hospitality services and elder care, a career path that was not uncommon in this sample. She was somewhat “burned out” from working in the hotel industry when she was awarded custody of her grandchildren, this made child care an attractive career option. Her initial child care experiences were with older children; she gradually worked her way down into the infant room and had been with this age group for approximately half of her six years in child care. Patricia saw the experience of caring for infants as comparable to her work with the elderly, noting that “it’s people who really need people to do stuff for them and care for them and need them. I like to be needed. I love to do stuff for people.”

Unfortunately, her present classroom situation working with eight babies and a co-teacher was not a positive one, as she felt the program was not run in a way that was equitable to staff members. While acknowledging her own predisposition to be “set in my own ways,” Patricia also derided the lack of teamwork present among her co-workers both in her classroom and in her center. She identified as the hardest emotional part of her job as being “Dealing with the employees, that's my hardest thing, yeah.” Her response was notable as typically this question was where other infant teachers talked of separating from the baby as they transitioned out of the infant room or coping with a crying infant for which they could not understand how to help them. Although her
program did have primary caregiving, Patricia observed that it was more like “you got one person doing all the work and that's not fair because that person gets burned out. That person changing, cleaning, it's not fair. There's just so much you can take.”

Of all the 26 infant teachers interviewed in this study, Patricia was the only one to say that she would not, if she had to do it over again, work with infants, commenting, “Because of the experience, it's not with the children. It's because of the experience I have had with the employees. No.” As we talked, she disclosed that she was thinking of returning to work with the elderly, “because it's more peace.” It should be noted that in the director interviews that were a part of this study, Patricia’s director had the lowest scores regarding infant teacher support, which validated some of Patricia’s concerns about the emotional climate of her center.

Patricia’s experience provides insight into her reflective function score of three, with her early experiences as a child and teen parent through to her current employment in a less than supportive emotional environment. Her honesty and willingness to talk about her experiences illustrate the emotional burdens that early care teachers may bring with them into their classroom.

Case Study Two—1212—“Barbara”. Barbara, the second infant teacher to be described, scored higher on her PDI, adapted interview, with a score of five, indicating definite reflective function. Barbara’s experiences were quite different from Patricia’s in many ways. As she discussed her early experiences as a young child, her recollection of her father’s role was quite clear, both in the support it provided her and the intergenerational impact it had with her own children: “he showed me so much love. He
talked to me, he always gave me eye contact and he made me feel like there was no prettier girl in the world but me....he always showed me that gentle side and that’s the side that I took with my children.” This was in contrast to her mother who she saw as “a strong disciplinarian.” Barbara was also able to objectively consider why her father took this approach:

his mother died in childbirth with his baby brother so his aunts took care of him and he had been out on his own since he was 13. Running in and out of jobs and everything so he knew what it was to not have that mother love so he just said, ‘I got all this love that’s inside of me balled all up and I just want to spread it out to my children.’ So my father gave me that gentle side; the side that says, ‘It’s okay to say ‘I love you’. It’s okay to walk up and get a kiss and a hug, you know, so yeah. So I take that part to how I project my whole life and just being who I am.

Barbara also differed from Patricia in that her entrance into early child care had begun earlier as a teenager, working at a church child care program with older children, later working as a family care provider then working in a “corporate” job before eventually “finding myself back in daycare.” At the time of her interviews she had worked in early care for ten years and saw this as a career that she enjoyed. Her family child care experience had allowed her to also care for her father, who eventually died of a long-term illness, while still bringing some income into her family. Barbara had, unlike Patricia, finished all the coursework for her CDA, but had been unable to complete the actual certificate itself due to complications arising from the timing of her father’s death.

Barbara’s enjoyment of her small group of four infants in a small center and her appreciation for the small steps of infant development was evident in her descriptions of how a child “blew a bubble with his saliva” or seeing “them put their foot in their mouth and you see the development going,” sharing how this “just gives me all the joy.” She
was able to take an issue (crying) that many infant teachers had problems with and
clearly put it in terms of understanding: “that's their communication to me. They're
telling me that I wanna be held, I'm hungry, I'm hurting. That's their communication, so
it doesn't bother me.”

Barbara’s reflective capacity showed not just in her understanding of her children
but also in her ability to consider the parents’ perspective, as she noted in one situation
how this impacted her own response: “first of all I listened to the parent because I’ve
been a parent too and the first thing you don’t want is someone to put resistance up when
you’re asking a question about your child because that is your baby.” She also showed
evidence of reflective practice in considering her own actions, in response to another
parent’s concerns, “I just did my own inventory. Like is it something? Did we do
something? Did something happen?” In discussing a time when she was separated from
the infant with whom she had a close relationship (he was on vacation with his mother),
she was clearly able to separate her own needs from what was best for the parent-child
relationship: “When his mom took him two weeks ago to New York, I was getting
withdrawals... I was like, ‘Oh my goodness, I miss my baby.’ And I wanted to call his
mama on her cell phone because she left her cell phone number. I said, “No, I’m going
to let her enjoy her baby.”

Barbara’s frustrations with her work were minor, mostly centered around
“meeting agency guidelines.” Barbara’s relationships with her director and coworkers
was collegial, she shared casually instances where co-workers had provided her support
when she was frazzled from dealing with a sick baby as well as how her director had
forthrightly responded to a former staff member’s efforts at troublemaking. It was notable that her director’s interview was in the top quartile of directors’ responses regarding infant teacher supports. This director’s aptly summed up her philosophy in one response “I listen;” this is a telling example of parallel process, as Barbara’s comments showed a real effort at listening to both the parents and infants in her group. Although this center was a small one, it appeared to provide a caring emotional climate that allowed Barbara the opportunity to appreciate the important role she played in her babies’ lives.

Summary

Because you’ve gotta realize they – these are the smallest little jewels in the world. And within the first year is when they learn everything that they are going to use further up in life. (1152)

Infant teachers in this study provided evidence of reflective function, although the relationship to observed caregiving was not found, as measured by the ITERS-R subscales. The infant teachers also considered the wider context of care offered to infants in center-based child care. This exploratory study offers insight into the complex care environment that exists in the infant care classroom. The role of the wider care environment of the center and administrative support was also analyzed to determine what influence might exist on the individual infant teacher and her group of infants in the classroom. In the next chapter, the implications of the findings and limitations of this study will be discussed further as well as avenues for further research.
CHAPTER V
DISCUSSION

This study explored the question of reflective function and the experience of infant teachers in child care centers in Orange County, Florida. As a mixed methods study, both qualitative and quantitative data provides fresh insight into the care environment present for the youngest and most vulnerable children in child care. As this study was conducted in community-based child care centers, the findings discussed in this chapter may further extend our knowledge of the issues inherent to the provision of center-based infant care.

Does an infant teacher’s reflective capacity provide us with greater insight into the experience of the care offered to infants? A discussion of the key findings and their relationship to reflective function will be explored. This will be followed by discussion of related issues that emerged in this study. The limitations of this study will then be reviewed. The practical implications for the provision of quality early care to infants in a center-based environment and avenues for further research will conclude this chapter.

**Parent Development Interview, Adapted for Child Care**

Of foremost importance in this study is the clear evidence that this first adaptation of the Parent Development Interview (PDI), adapted for child care, worked sufficiently well to provide evidence of reflective function in infant teachers from community-based child care centers. While the PDI has been used with foster parents, this is the first
adaptation for use in early care settings with infant teachers. As such, it represents an enhancement of our understanding of the infant teacher’s consideration of the children in her care.

Although no infant teachers in this small, exploratory study were found to demonstrate marked (7) or exceptional (9) reflective function, it must be noted that neither were infant teachers found with negative (-1) or absent (1) reflective function. Infant teachers in this study clustered around the 4/5 midpoint, fairly consistent with the wider parent population (Crumbley, 2009; Slade et al., 2005) and higher than samples found in studies with mothers in treatment (Baradon, Fonagy, Bland, Lenard & Sleed, 2008; Capstick, 2008). The questions in this adaptation were able to tap into individual infant teacher’s experiences in such a manner as to provide insight into their reflective capacity. Understanding the perceptions of infant teachers as they consider their important work with very young children is an essential step in furthering our knowledge of what happens both in the relationships established in infant classrooms as well as in determining where quality standards may not be met.

The PDI adaptation adhered fairly closely to the original PDI, with the inclusion of additional questions designed to elicit additional information regarding other children in care beyond the specific child of focus in the interview protocol. Addition of questions regarding other children in the infant teacher’s group allowed the teacher to explore more fully the questions asked with regard to her group of children. In this sample, infant teachers several times noted that while a particular issue was not true for their focus child, it was true for another child in their group. As the infant teacher’s challenge is to
hold the competing needs of several children in her mind and actions, the additional
questions provided further evidence of infant teachers’ understanding of the individual
needs of the infants in her care.

In reviewing the overall results of the PDI adaptation, the coder for this project
noted that the infant teachers who scored the highest were “those who were able to
tolerate the uncertainty and accompanied anxiety of not always knowing what to do with
the children” (Pozansky, 2010). Prior research has found infant-toddler teachers’
complexity of thinking related to their ability to provide sensitive care, even when the
center environment is poor (Manlove, Vazquez, Vernon-Feagans, 2008). The ability of
an infant teacher to manage her own mental state (anxiety) while trying to respond to the
infant’s distress provides evidence of an awareness of self-regulation and the possible
impact of this on the infant.

Considering Culture

One concern of note in this sample was the lower PDI scores found among Latina
infant teachers. This may be a reflection of the small group size (5) in this study but may
also reflect the impact of English as Second Language speakers in being able to fully
represent their understanding of the children in their second language. It must also be
noted that the diversity within the Latina teachers was significant—teachers identified
Puerto Rican, Cuban, Mexican, and Bolivian heritage, with some having grown up
outside the U.S. Thus, it is very difficult to speak of a collective “Latina infant teacher
culture” in this sample because the likely within-group diversity must be considered as
well. As research involving Latina infant teachers in center-based child care is sparse, it is worth examining studies of Latina parenting in the early years.

English proficiency has been identified as having an impact in previous research involving Latina mothers. Fuller and colleagues found a difference between English-dominant Latina mothers (more often middle class) and Spanish dominant Latina mothers in a study of pre-literacy practices with their toddler-age children (Fuller, Bridges, Bein, Jang, Jung, Rabe-Hesketh, Halfon, & Kuo, 2009). Berlin, Brady-Smith and Brooks-Gunn (2002) found English proficiency predictive of supportive parenting among the Latina mothers in an Early Head Start sample. As mentioned previously, a more recent study (Crumbley, 2009) using the Parent Development Interview has included vocabulary assessment as a means of reducing the likelihood of confounding vocabulary abilities with capacity for reflective function.

It should be noted that elements of acculturation might also be at work and responsible for some of the differences found between English and Spanish-speaking Latinas. Johnson and colleagues observed that more nuanced understanding might provide greater explanation of such differences, including “country of origin, first language, years of residence in the country and similar information about one’s parents” (Johnson, Jaeger, Randolph, Cauce, Ward, & National Institute of Child Health and Human Development Early Child Care Research Network, 2003, p. 1231). Relevant to the infant teachers’ consideration of mental states, previous research has found higher levels of acculturation and biculturalism in Mexican-American mothers related to enhanced perspectives about child development (Gutierrez & Sameroff, 1990).
Thus, the findings in regard to Latina infant teachers may be reflective of English proficiency and/or vocabulary but also may reflect more intangible elements present in the infant teachers’ consideration of care practices. Super and Harkness (1983), in their classic study of the cultural construction of child development, noted as one of the main dimensions of cultural construction “the culturally shared expectations for behavior by and toward individuals” (p. 223) in each stage of development. Sanchez and Thorpe (2010) observed that the “intangible elements of culture” (p. 45) can be the most difficult as they may present challenges to deeply held beliefs concerning practices of childrearing and care. The ability of parents and their cultural practices to “shape the ‘practice-related mental states’ of children was described by Schweder and colleagues (1998, cited in Fuller & Garcia Coll, 2010, p. 560); it is clear that this is an area of study for which “much work remains” (Fuller & Garcia Coll, p. 564). The manner in which infant teachers in child care may utilize their own cultural practices in their work with babies is unknown; however, it is likely that, as the majority of the infant teachers were parents, they were drawing on their own practical experience of caregiving, shaped through their own cultural experience.

It is also important to consider that as child care is a significant cultural construct, there may be aspects of this adapted instrument that may not have the same resonance to individuals not raised in the dominant mainstream U.S. culture. Questions, for example, concerning a child feeling rejected may not be congruent with the care ethos of Latina infant teacher culture. Obviously, this is an area in need of much further exploration,
particularly given the numbers of Latina teachers present in the infant care workforce today.

**Considering Care**

Qualitative analysis of the PDI and Elliot interviews provided substantial insight into the care experiences of infant teachers in center-based care. Infant teachers in this study showed much understanding of the needs of the young children in their care as well as the importance of the first year to a child’s overall development. Also present, however, was a certain amount of misinformation regarding attachment. Infant teachers, including some with higher PDI scores, spoke of practices designed to reduce the likelihood of a child’s attachment to them, not understanding the importance of attachment to secondary caregivers to young children in non-parental care. Some of this may be self-protective in nature as infant teachers talked of their own sense of loss when “their” babies moved into another classroom, typically by the first birthday.

The most common stressor in the infant classroom was crying, a not surprising finding; however, as infant teachers typically have the least amount of education, when compared with their coworkers, it speaks to a greater need for additional age-specific training to better support and equip infant teachers to deal with the challenges inherent to this work. Likewise, the clear frustration that surfaced among infant teachers with older infants’ independence behaviors as they neared their first birthday further substantiates the need for additional training or education to better support teachers in their understanding of children’s development. This is of particular importance if continuity of care practices is to be fully accepted by infant teachers.
Special Relationships and Gender

One of the more interesting findings from the qualitative analysis was the number of “special relationships” noted by infant teachers to a specific child in their care. Such relationships happened regardless of reflective capacity and appeared, from teachers’ comments, to have developed in response to infants’ efforts at engagement. As a sizeable majority of the children in such relationships in this sample were male, given previous research on the vulnerability of males in early care programs (Scarr & Eisenberg, 1993), this finding is of interest and is worthy of further consideration.

Research has documented that boys experience more by way of adjustment issues as well as behavioral concerns in the preschool years than girls (Bulotsky-Shearer, Fantuzzo & McDermott, 2008). Evidence suggests that child care ratios - as seen through more experience with greater numbers of children and fewer teachers – put boys at greater risk for behavioral concerns as shown in long-term studies (Bornstein, Hahn, Gist, & Haynes, 2006). Infants’ engagement cues may be more readily apparent in infant rooms where the teacher to child ratio is one adult for four babies. As teacher: child ratios increase after the first year of care, young children’s efforts at engaging their teacher’s attention may become increasingly difficult and frustrating to children, with boys perhaps being at greater risk.

Infant teachers in this sample tried to make sense of how their special relationships with infants developed. One infant teacher’s comments about her relationship with a young male infant may provide illustration as to how this occurs. In this case, a young male infant was in care longer than his peers and had more one-on-one
time with his teacher. It could be that this infant’s need for emotional support may have elicited an ongoing caregiving response from the infant teacher that served to establish and maintain this relationship. The infant’s ability to use engagement cues with his infant teacher thus helped to further a relationship that continued to develop over their time in the infant room together. Such relationships may also be the result of an infant seeking an attachment relationship that is not present in his/her family. If this is the case, such special relationships may offer to the vulnerable infant the opportunity to experience an attachment relationship supportive of social-emotional development (Howes et al., 1990).

The special relationships noted by infant teachers are another example of the complexity of the care environment present in infant classrooms. As research continues to explore the care environment offered to infants, our understanding of the relationships that occur will be further enhanced. The ability to understand the dynamics at work in such relationships may help to provide a clearer picture of the infant’s experience of non-maternal care and the infant teacher’s role in supporting this experience.

**Education and Training**

Education was not related to a higher level of reflective function in this study, however, it must be noted that the average infant teacher’s level of education was somewhere between a high school diploma and a Child Development Associate (CDA) credential. Although just over a third of the infant teachers held a CDA credential, there are reasons that might explain the lack of any relationship. An undetermined number of the infant teachers holding this credential had a credential known as a “CDA
equivalency,” a credential determined by the state of Florida to meet the same level of content as the national CDA credential. Although the state of Florida initially granted CDA equivalency status to over 200 equivalency programs at one time in the 1990’s, issues with the caliber of training offered at such programs eventually led to an overhauling of the standards in recent years. Thus, despite infant teachers having an early childhood credential, there is no guarantee as to the comparability of the content offered within this training and thus, no assurance of enhanced teacher knowledge, despite the possession of a credential.

The lack of a relationship between infant teachers who had completed specific infant training within the past year and reflective function may also be seen as an issue of the type of training in which infant teachers participated. If a workshop was a “make and take” training focused on toys or materials, it would not necessarily support greater teacher knowledge of understanding infant mental states and behavior. Training that would be more likely to support stronger teacher-child relationships would focus on teacher-child interactions within the classroom (Whittaker & Harden, 2010). Infant teachers and directors in this study specifically mentioned a lack of available infant training as an issue. Infant teachers expressly mentioned the need for training that provided more age-specific information on topics of relevance, such as crying.

With Age Comes Experience

One of the most striking demographic characteristics found in this study was the maturity of the infant teacher participants in this sample. Almost three-quarters (73%) of participants were over the age of 40, a substantially higher older age than their coworkers
in their centers. This finding most likely represents several elements at work. Directors spoke of the need for experience with infants as being important to working with this age group, often in terms of “maturity.” By placing the fortysomething (or older) staff member in the infant room, directors may have been seeking to offer to entering parents an experienced “elder” who would more likely than not be at least a decade older than the parents she was working with and be able to serve as a mentor to parents, particularly first-time parents. It is also possible that directors may have found younger teachers, who are not parents themselves, to be more problematic in dealing with parents of infants, as parents may question their competency (Wilgus, 2005).

The adverse side of this decision, however, had implications for the classroom as well. Infant teachers who were older might be more likely to rely on their practical experience in parenting infants, which while certainly relevant, might not always be directly applicable to the group care setting. Several directors spoke of “old-school” infant teachers who were resistant to quality improvement efforts being implemented in their classrooms. Such resistance might be an outgrowth of naïve beliefs, as opposed to informed beliefs from education (Brownlee et al., 2000); the net effect, in any case, is a teacher who is resistant to change, even when it is indicated by substantial research (as in the back-to-sleep campaign). It is stereotypical to consider older teachers as being less able to physically do the active work required in infant care; however, there may be physical issues that arise as well. One older infant teacher referenced her challenges in getting up after sitting down on the floor with her babies. This may also be related to the
concerns infant teachers raised about dealing with emerging toddler behaviors in the infant room.

**The Issue of the ITERS-R**

Using subscales of the ITERS-R did not appear, in this study, to adequately capture the infant teacher’s caregiving efforts with the children in her classroom. The lack of a relationship between infant teacher’s individual PDI scores and observed caregiving, as documented in subscales of the ITERS-R, may be less an issue of inconsistency between teacher insight and practice and more of an issue with the specific nature of the ITERS-R itself. In this study, the ITERS-R subscales were used as a means of gathering specific independent classroom observation of the infant teacher’s interactions with infants in the classroom.

While the ITERS-R is perhaps the most frequently used classroom assessment instrument in quality rating improvement systems in the U.S. today, a need has been noted for additional classroom instruments to measure important elements beyond the environment (Bisceglia et al., 2009). As Douglas (2004) has observed, tools such as the ECERS/ITERS focus attention on the framework of quality standards while missing the quality of interaction with the child that happen through a “set of unique relationships” (Pugh, 1992, cited in Douglas, 2004, p. 185). As the relationships between infant and teacher are at the heart of quality in an early care setting (Lally, 1995), a gap exists at present in assessment instruments that adequately define and capture this relationship for purpose of quality improvement (Child Care Bureau, 2008).
The entire topic of the ITERS assessments was something of an unanticipated “hot topic” among both infant teachers and directors in this sample. The commitment to reliability implemented by Devereux, the agency contracted to conduct ERS assessments, resulted in lower scores than many established early care providers in the community were used to receiving on their assessments. It should be noted that ITERS-R scores overall in Orange County were extremely low, in the 2-3 range among an extremely diverse set of early care providers, including long-term accredited programs. While the intent of the Quality Rating Improvement System of the Early Learning Coalition was to support centers in meeting higher quality standards, to some early childhood staff, it had the feel of “a ‘stick’ with which to beat” poorly performing providers (Mathers, Linskey, Seddon, & Sylva, 2007, p. 272), given that continued low assessments could result in the loss of a provider’s ability to serve subsidized children in their program.

A review of issues in measuring quality in early childhood settings examined the Early Childhood Environmental Rating Scale (ECERS), the preschool companion to the ITERS-R, and found high ratings were largely determined by two aspects of environment—the abundance and availability of materials in the classroom and the implementation of health and hygiene practices (Layzer & Goodson, 2006). This review noted that ECERS “overvalues some resources and aspects of the physical environment and captures poorly, if at all, two aspects of teacher behavior linked to children’s development: responsiveness to children and use of language” (p. 570). As the ITERS-R is structured in a comparable manner, such concerns may be even more relevant, given the importance of adult-child interaction to the infant’s optimal development.
As noted in the previous chapter, specific issues with the “much of the day” standard had influence on both the overall ITERS-R and specific subscales scores. Several infant teachers were found to have “7”s on the “Staff-child interaction” item but still fall into a low score on both subscales and overall score. This provides further evidence of the need for additional instruments that capture more fully the nuances of teacher-child interactions in the infant care setting.

**Does Reflective Capacity Make a Difference in the Quality of Care?**

The real question that remains is whether or not increased reflective capacity in infant teachers is indicative of more responsive, sensitive caregiving in the classroom. The ITERS-R did not provide confirmation of this relationship; however, it is possible to see differences in individual infant teacher’s responses. Infant teachers with higher PDI scores were much more able to describe in a conscious manner, their insights and actions with the infants that were descriptive of strong teacher-child interactions. Throughout the qualitative analysis, infant teachers with PDI scores of 5 or 6 are cited more frequently as these infant teachers were able to describe more fully aspects of care than their lower-scoring PDI counterparts. Whereas an infant teacher with a lower PDI score might identify an issue, such as crying, the infant teacher with a higher PDI was more likely to be able to put the child’s behavior in context and consider her response(s) in light of this information.

It is important to note that just because an infant teacher may have had a lower PDI score, this does not necessarily mean the quality of care they provided to their infants was substandard. Peter Fonagy has said that it is important to keep in mind that a “high
rating does not necessarily imply greater mental health, common sense or capacity to form good relationships” (Fonagy et al., 1998, p. 32). Many of the lower-scoring infant teachers spoke in caring ways of their interactions with their children, and their concern for their babies was evident. Yet, in a group setting, the ability of an infant teacher to utilize her understanding of mental states of individual children and respond in a specific manner to the needs of that individual child may provide a greater degree of the sensitivity and responsiveness that research in parenting indicates supports a secure attachment. Beyond this, it may also be indicative of a range of interactive elements that have been linked to “enhanced theory of mind competence in children” (p. 19).

So although this study cannot confirm a link between higher levels of reflective function, as measured by the PDI adaptation, and observed caregiving, as measured by subscales of the ITERS-R, it does appear that individuals with higher PDI scores show evidence that could indicate a greater degree of sensitivity and responsiveness in their dealings with infants in a center classroom. Unfortunately, at this time, it is not possible to fully assess how this reflective capacity translates into actual care with individual children in a classroom.

**Related Issues of Relevance in this Study**

Beyond the question of how infant teachers considered the care of infants and their reflective capacity, other issues emerged that were relevant to this discussion of infant teachers in center-based care. As infant child care has been a subject of much debate, it is important to consider these additional findings as they may add to our knowledge of what is taking place in infant child care.
Teacher Turnover in the Infant Room

Although there has been much discussion in the research literature regarding teacher turnover in the early care workforce (Whitebook, 1999; Whitebook et al., 2001), the impact of turnover within infant classrooms has not been the focus of study. This study found a turnover rate of over 30% in less than half a year’s time, which should be cause for serious concern as it raises questions regarding the ability of infants to form secure relationships with teacher with this degree of turnover present. Discussions of the need for continuity-of-care to better support the teacher-child relationship are meaningless if babies are faced with a revolving door of new faces in one year’s time. More in-depth study of turnover and the impact in specific-age classrooms would be a worthy area for further analysis. Given the low-status role that has been accorded to infant teachers (Elfer & Dearnley, 2007), efforts to support a more educated and stable workforce in the infant room can be seen as of critical importance.

The Important Role of the Director

Continuing recent studies documenting the important role of the director in making quality happen in early care (Mill & Romano-White, 1999; Rohacek, Adams, Kisker, Danziger, Derrick-Mills, & Johnson, 2010), this study found staff support, as measured in the Staff subscale of the ITERS-R, linked to higher levels of reflective function in infant teachers. One explanation of such findings may simply be further documentation of the adage, “good things go together in child care” (Phillips et al., 2001, p. 486) previously noted in earlier child care research. It is quite plausible to consider that an infant teacher with a higher level of reflective capacity might be more conscious
in seeking employment in a center with more by way of staff support. Directors with a knowledge of appropriate practice may also be more cognizant of the need to support teachers through the type of efforts that are reflected in the Staff subscale of the ITERS-R.

It should be noted here, that the Staff subscale of the ITERS-R is frequently not included in QRIS assessment, as the quality of the overall ITERS-R is not impacted by this subscale’s omission. As staff support by the early childhood administrator is coming to be viewed as important to the overall quality of care provided to children, it may be that there is a need for further consideration of this omission. Certainly the question in the Staff subscale regarding “Staff Continuity” is but one example of an item that is very relevant to the establishment of strong relationships between infant teacher and the babies in her care.

**Best Practices in Infant Care**

It is particularly notable that almost none of the infant teachers in this study were in classrooms that followed best practices as defined by Zero to Three (Lally et al., 2003) and NAEYC (Copple & Bredekamp, 2009). Primary caregiving, continuity of care, and specific infant training were not commonly found. Indeed, when classrooms did have children for more than one year, it was most often due to the economic recession, whereby directors merged infants and toddlers into one room to avoid having to close an infant room and potentially lose families who needed that care.

In light of this finding and the previous finding concerning the importance of staff support, the need for director training requirements regarding appropriate practices in
infant care may be seen. In elementary schools, the need for principal knowledge of early childhood practice has been seen as essential to collaborative practice supporting school readiness (NAESP, undated). It may be that to fully improve infant classroom quality in child care, specific training requirements on best practices for infants would be beneficial for early childhood directors. As many states have enacted director credentials in the past decade, such training could be offered to meet credential renewal requirements.

**Limitations**

Although the findings in this study are informative to the experience of the infant teacher in center-based care and the manner in which she considers the infants in her care, there are significant limitations to note. First, although great effort was made to ensure a diverse sample of participants, the study’s findings may be most relevant to the Orange County, Florida community in which it took place and not be as transferable to a wider infant teacher population.

One substantial limitation of this study is the lack of comparable measurements to assess reflective function. Although the Adult Attachment Interview (AAI) (George, Kaplan & Main, 1984) may be coded to assess reflective function, to utilize the AAI in a study of this small size is beyond the scope of this study.

As this study was conducted within a specific community, using a small sample, a number of limitations must be noted. Despite the researcher’s extensive efforts to recruit as diverse a population of participants as possible, the time required for participation in
this study may have kept some teachers and directors from taking part, thus influencing the data obtained from the interviews.

At the time the interviews for this study were taking place, the community was in the worst recession in over fifty years, which had a substantial impact on the child care community (Shrieves, 2009). The ability of both infant teachers and directors to participate in this study may have been compromised by this economic situation and thus may have had an unknown influence on the subsequent findings. It is also quite possible that concerns over losing one’s position may have kept some participants from fully answering questions, especially in the PDI adaptation, as this would require them to acknowledge times when children might have felt rejected, for example, while in their care.

As the majority of the data was collected through individual interviews, the potential for interviewer effect may exist. To limit the impact of this, the researcher was the sole interviewer of both infant teachers and center directors and thus able to keep the interview format as consistent as possible. As the information collected was limited to infant teachers in the child care setting, the applicability to teachers of other ages in child care is limited at present and represents an area for further study.

The sample of infant teachers and directors was drawn from a community that includes urban, suburban and a very small rural communities; although this offers some pluses in diversity it also meant that it is not possible to view this data through any one sole setting perspective (i.e., urban). As the research effort to utilize the existing ITERS-R data was limited to child care centers serving children receiving subsidized care
support, this may influence the findings more so than if ITERS-R data had been available on all infant care settings in the community. As the “parental choice” provisions in subsidized care support allow families to access a wide range of care programs, however, this may have less impact.

The other limitation with regard to the ITERS-R data concerns the collection of the data itself. As this data was collected by an independent agency, the researcher had no influence on the standards that were used to train and ensure reliability with the assessments. Concern with this may be mitigated somewhat as the agency conducting and collecting the assessments is one familiar with psychological assessment and thus, familiar with the need for consistency and reliability and has taken steps to ensure reliability. As previously noted, the ITERS-R assessments are a part of the Early Learning Coalition’s QRIS efforts, therefore the data is a part of a larger systematic effort to客观ly measure early childhood quality in the community. Given the manner and consequences in how this data is used by the coalition, Devereux has implemented significant quality controls in an effort to ensure the most accurate data.

The lack of Spanish-speaking teachers in this study was likewise a serious limitation, as Latina teachers, who do not speak English, comprise a definite segment of the child care workforce, particularly in the earliest years. As noted in the Results, infant teachers for whom English was a second language had PDI scores that were lower on average. The ability to interview participants in their first language is an essential area for further study to better inform our understanding of infant teachers in group care settings.
While the adaptation, use and coding of the PDI was done in consultation with the primary author, Arietta Slade, it must be noted that this adaptation was done with the specific population of infant teachers in mind; the transferability of the instrument for use with early childhood teachers of other ages is not assured and would need further evaluation. Ideally, further adaptation of this instrument for use with early care teachers would be best carried out with a multidisciplinary team of psychologist and early childhood specialists to better inform further revisions.

**Implications for Practice**

The findings from this study may be of greatest relevance to key members of the early childhood community who work with and provide support to infant teachers in center-based care. Directors of early childhood programs, providers of early childhood professional development and community agencies that oversee and support early childhood programs all have contact with infant teachers and may thus find practical use of the results from this study. In addition, given the research gap that has existed in early childhood research surrounding infant teachers in child care programs, this study offers additional avenues for consideration regarding quality of infant/toddler child care.

Directors of early childhood programs set the agenda for their centers with regard to quality and standards. Understanding of the way in which an infant teacher can provide support to new parents by acting as a mentor and resource might prompt directors to consider the infant teacher’s role as worthy of higher status and pay. This study also documents the need for further specific infant training and support offered to infant
teachers in the classroom; it is the director’s responsibility to advocate for her staff within the community regarding training and other allocation of available early care resources.

It would be worthwhile for providers of professional development to consider the specific needs of infant teachers regarding training. Infant teachers spoke of the need for training that equips them to better do their job—clearly training is needed that more substantially supports the infant teacher in her care of infants, given the profound development that occurs in the first year of life. Special attention needs to be given to the critical role of attachment in the first year to help infant teachers better understand the significance of their relationships with infants in care. Along with this, helping infant teachers to understand and feel comfortable with the challenges of infant behavior and development (i.e., crying and the emergence of independence) would provide infant teachers with essential understanding that would better enable them to do their work.

Training and education—for both infant teachers and directors—should also include best practices as recommended by the leading early childhood organizations. If the demographics from this study are true of the larger infant teacher population, the infant teacher may be older than the average ECE provider, with prior experience that may allow her to make more sense of the information presented within training experiences.

Increasingly, with the emergence of QRIS, community agencies are playing a role in the support of quality development with early childhood programs. Thus, an increased understanding of the specific needs of infant teachers is vital to ensuring that their efforts are working in an effective manner in support of quality. It is also important that
resource allocation consider the needs of infant teachers and classrooms in QRIS efforts as infant/toddler child care have typically been found to be of lower quality. More recent attention to pre-K initiatives may have drawn attention away from the continuing need for quality support in classrooms serving the youngest children.

Finally, a sharper focus on the infant teacher is essential to a better understanding of how quality care occurs in the infant classroom. Previous “waves” of early childhood research have refined the focus of attention in efforts to discern what is happening with the young child in non-parental care. It is time that research efforts need to disentangle what is taking place in infant (vs. toddler) classrooms, rather than continuing to combine these ages together. Further, more study of infant teachers in community based child care settings is desperately needed to tease out the issues getting in the way of quality care for infants. As a necessary part of this research, additional instruments that examine the important role of relationships and teacher-child interactions are critical. The ITERS-R is a proven tool in assessing infant/toddler classrooms but there is a serious need for instruments that look at the “dance” that occurs daily in the interactions between the adult and child in early care.

**Areas for Future Research**

Extending the investigation of how reflective function may influence the provision of care by early childhood teachers, specifically those working with infants in the early childhood setting, is a worthwhile area of research. Given the vulnerability of the young child in the first year of life and long-standing concerns about the quality of the care provided to infants in group care settings, broader, more in-depth analysis might
answer more fully some of the questions raised within this study. Of most immediate need is a measure that fully captures the teacher-child interaction more fully than the ITERS-R, which is, first and foremost, an assessment of the classroom environment. Additional exploration of the role of content-specific education and training in enhancing the infant teacher’s ability to understand the infant’s mental state and respond in an appropriate manner would also be worthwhile.

**Conclusion**

The work done by infant teachers in child care centers is not easy, as both infant teachers and directors in this study acknowledged, but it offers significant intrinsic rewards, as consistently noted by infant teachers. Providing sensitive, empathic care in the first year of life, in the absence of the parent, is a vocation of consequence, yet, as this study shows, infant teachers are frequently the least educated members of their center and may have very little specific content training on the complex needs of developing infants in group care. It is therefore a positive finding that a sizable number of infant teachers did show evidence of reflective function, indicating an awareness of the infant’s state of mind, as this understanding has been linked to more secure attachments with very young children.

It is also notable that even infant teachers in the lower reflective function group showed reflective capacity when responding to certain questions. This provides evidence of their potential for increased reflective functioning as well as the need for more specific training and educational supports for infant teachers. Such programs might further develop infant teacher reflective capacity as has been seen in comparable projects that
have been successful with parents (Hoffman, Marvin, Cooper, & Powell, 2006; Slade et al., 2005).

Given the volumes of research attention accorded over the past decades to the question of “is day care [sic] bad for babies,” it is more than time for increased empirical attention to be given to the infant teachers who are at the heart of making quality happen for babies in non-parental care. This exploratory study of infant teachers in community-based child care centers provides evidence of what the experience of caregiving is like from the infant teacher’s perspective and her experience of the care environment.

Understanding the infant teacher’s capacity for reflective function – her ability to make sense of the infant’s experience in her care – may provide us with one of the next steps forward in early care research and a way forward in addressing the substantial issues of quality and the enhancement of caregiving for infants and teachers in center-based care today.
APPENDIX A

PARENT DEVELOPMENT INTERVIEW, REVISED, SHORT VERSION,

ADAPTED FOR CHILD CARE

Adapted for Child Care

This interview is an adaptation of the Parent Development Interview (Aber, Slade, Berger, Bresgi, & Kaplan, 1985). This protocol may not be used or adapted without written permission from Arietta Slade, Ph.D., The Psychological Center, R8/130, The City College of New York, 138th Street & Convent Avenue, New York, NY 10031, asladephd@earthlink.net.
Adaptation for Child Care

In using the PDI with child care teachers:

To ensure that interviews are conducted in the best possible manner with child care center teachers, the following points should be kept in mind:

1. It is essential that teachers understand that the information they share will be considered confidential. To help teachers’ understanding of confidentiality, interviewers should explain that:
   a. Their name and/or identifying information will not be attached to any specific comments at any time,
   b. No one other than the researcher will have access to the identifying information contained in this interview,
   c. This interview will be assigned a label which will not identify the teacher, center, or children in any manner to assure confidentiality
   d. No one – not their director, fellow teachers, the early learning coalition, community assessors, licensing agencies - will have access to their comments by name or identifying information,
   e. The one exception to this is if they disclose any information concerning child abuse or neglect – as mandated reporters, it is necessary for the interviewer to disclose this. This point will be covered in the informed consent that all participants will sign before participation.
   f. This information concerning confidentiality should be shared with center directors as well.

2. To fully ensure maximum confidentiality as well as the privacy needed to complete this interview, interviews should take place outside of the classroom in a private space free from interruptions. This may vary from center to center. This should be discussed with the director and teacher at the time of recruitment. Working collaboratively with the center director and teacher to schedule the interview is essential, as child care staffing can be challenging and optimal interviews will occur when teachers and/or directors are not stressed over whether a classroom is appropriately staffed. The key to scheduling is to be honest with both center director and teacher about the maximum time the interview may take, so they are not caught unaware. Stress the importance of allowing sufficient time so that the interview is not rushed, as what they have to share is important and if they are rushed there may be important things that are not shared or forgotten.

3. It may be helpful to explain to the teacher that this interview is adapted from a parent interview and that because there are some parallels between parental caregiving and caregiving in the child care center, this study is an effort to understand how teachers think about the babies in their care.
4. In requesting the teacher to select a child for purpose of the interview, try to limit the suggestions as to which child to select beyond the general, “select a child you know well enough to talk about,” however, be aware that this will be the teacher’s selection and their reasons for selecting a child may prove useful, i.e., a child who has just begun at the center may be challenging given the lack of a longer term relationship, but may also provide insight as the teacher struggles to understand the new child’s state of mind.

5. Have the teacher identify the child by first name only to ensure anonymity of the child. If the teacher wishes to use a pseudonym for the selected child, this is acceptable.

6. It is essential to try to put the teacher at ease in this interview, it may be helpful to share that while there is much attention being given at the moment to pre-kindergarten, it is important for researchers to understand how infant teachers in typical child care centers think about their work with babies. Therefore, their thoughts are very important to help our understanding of what occurs in child care, from a teacher’s perspective. As stated above, it is important that participating teachers understand that there are no “right” or “wrong” answers to the questions. Their honesty in thinking about the questions and answering them freely is important and is why we stress the confidentiality, so they may feel comfortable in answering questions candidly.

7. Although participating teachers should be allowed time to ask questions prior to agreeing to participate in this research, it is important to allow time at the end of the interview for any teacher questions as well
PARENT DEVELOPMENT INTERVIEW-REVISED for Child Care

A. View of the Children
Today we’re going to be talking about you and the children in your care. We’ll begin by talking about your classroom, then we’ll talk about you, and then one of your children and your relationship with him/her and then a little about your own experience as a child.

1. Let’s just start off by your telling me a little bit about your classroom – how many children are in your classroom? What are their ages? Who are the adults in the classroom in addition to you?
(Here you want to know how many children, ages, parents, other adults working in classroom. If atypical situation - mixed ages, for example - who have been primary caregivers, etc.; likewise, if there appears to be a history of staff changes, or multiple moves, get some of the detail of that just to create a context for understanding the interview.)

NOTE: In discussing the infant teacher’s relationship with the children, the focus should be an attempt to first get specific information about the teacher and one specific child. Ask the teacher to identify this child (first name ONLY) and their age at the beginning of the questions.

2. What about you, what kind of person are you? Can you choose 3 adjectives that describe you?
(Pause while they list adjectives.)
Now let’s go back over each adjective. Does an incident or memory come to mind with respect to _____? (Go through and get a specific memory for each adjective.)

3. OK, now I’d like you to think about one child in your class that you know well enough to talk about – please just his his/her first name or another name for them. In an average week, what would you describe as his/her favorite things to do, his/her favorite times?

4. And the times or things he/she have the most trouble with?

5. What do you like most about (child’s name) this child?

6. What do you like least about (child’s name) this child?

7. OK, now let’s return to your children as a group…In an average week, what would you describe as their favorite things to do, their/his/her favorite times? [additional question]

8. And the times or things they have the most trouble with? [additional question]
9. What do you like most about your children? [additional question]

10. What do you like least about your children? [additional question]

B. View of the Relationship with Individual Child

1. I’d like you to choose 3 adjectives that you feel reflect the relationship between you and (specific child). (Pause while they list adjectives.) Now let’s go back over each adjective. Does an incident or memory come to mind with respect to _____? (Go through and get a specific memory for each adjective.)

2. Describe a time in the last week when you and (specific child) really “clicked”. (Probe if necessary: Can you tell me more about the incident? How did you feel?
   a. How do you think (this child) felt?

3. Now, describe a time in the last week when you and (specific child) really weren’t “clicking”. (Probe if necessary: Can you tell me more about the incident? How did you feel?
   a. How do you think (this child) felt?

4. How do you think your relationship with (this child) is affecting his/her development or personality?

C. Affective Experience of Caregiving

1. Now, we’re going to talk about your feelings about being an infant teacher. Can you start out by choosing 3 adjectives that describe you as an infant teacher. (Pause while they list adjectives.) Now let’s go back over each adjective. Does an incident or memory come to mind with respect to _____? (Go through and get a specific memory for each adjective.)

2. What gives you the most joy in being an infant teacher?

3. What gives you the most pain or difficulty in being an infant teacher?

4. When you worry about (specific child), what do you find yourself worrying most about?

5. How has being an infant teacher changed you?

6. Tell me about a time in the last week or two when you felt really angry as an infant teacher. (Probe, if necessary: What kinds of situations make you feel this way? How do you handle your angry feelings?)
a. What kind of effect do these feelings have on this child? On other children in your care? [additional question]

7. Tell me about a time in the last week or two when you felt really guilty as an infant teacher.
   (Probe, if necessary: What kinds of situations make you feel this way? How do you handle your guilty feelings?)
   a. What kind of effect do these feelings have on this child? On other children in your care? [additional question]

8. Tell me about a time in the last week or two when you felt you really needed someone to take care of you.
   (Probe, if necessary: What kinds of situations make you feel this way? How do you handle your needy feelings?)
   a. What kind of effect do these feelings have on (specific child)? On other children in your care? [additional question]

9. When (specific child) is upset, what does he/she do?
   a. How does that make you feel?
   b. What do you do?

10. Does (specific child) ever feel rejected? What about other children in your care? [additional question]

D. Infant Teacher’s Family History
Now I’d like to ask you a few questions about your own parents, and about how your childhood experiences might have affected your feelings about young children….

1. How do you think your experiences being parented affect your experience of being an infant teacher now?
2. How do you want to be like and unlike your mother as a caregiver/teacher?
3. How about your father?
4. How are you like and unlike your mother as a caregiver/teacher?
5. How about your father?

E. Separation/Loss
1. Now, I’d like you to think of a time you and (specific child) weren’t together, when you were separated. Can you describe it to me?
   a. What kind of effect did it have on the child?
   b. What kind of effect did it have on you?
   Can you think of a time you and the infants in your group weren’t together, when you were separated? Can you describe it to me? [additional question]
   a. What kind of effect did it have on the children?
b. What kind of effect did it have on you?

2. Has there ever been a time in (child’s name)’s life in your classroom when you felt as if you were losing him/her just a little bit? What did that feel like for you?

Has there been a time in your classroom when you felt like you were losing the children a little bit? What did that feel like for you? [additional question]

3. Do you think there are experiences in (child’s name)’s experience that you feel have been a setback for him/her/them? How about for your classroom as a group? [additional question]

F. Looking Behind, Looking Ahead

1. You are an experienced teacher (modify as appropriate). If you had the experience to do all over again, what would you change? What wouldn’t you change?

G. Wrap up

1. Why did you choose (child’s name)? [additional question]

2. Anything else you’d like to add? Thank you very, very much!
APPENDIX B

INFANT TEACHER INTERVIEW
Teacher’s previous experience & education
1. How long have you worked with infants?
2. Have you worked with another age group? For how long?
3. Have you worked in another infant program?
4. Do you prefer this age group? Why?
5. What impact have other programs had on you?
6. What do you remember most from your course?

Definition of good practice
7. How do you define good practice for infants and toddlers?
8. How did you develop your definition?
9. Do you and your coworkers share the same definition?

Reflections on working with infants
10. What do you like most about working with infants? What do you like least?
11. What do you find most difficult about the work?
12. Which babies are easiest to work with? Which most difficult?
13. What role do you play in the parents’ lives?
14. What kind of person do you try to be for the babies in your care?
15. What would you tell a new caregiver entering the field about working with infants?
16. What have you learned in your work with infants that you did not learn in your educational program?
17. What is the hardest part of the job emotionally?

Other emotional issues
18. Have you found there are other areas of strong emotion?
19. Is it difficult to say ‘good bye’ to babies when they move to another centre or group?
20. Are there babies for whom it is hard to develop a warm feeling?

Other personal reflections
21. Why did you decide to become a teacher?
22. Would you still make the same decision?

Work setting
23. What does your center do that helps you the most with your work?
24. Are there times when you do not feel supported in your work by your center?
25. If you could change one thing about your program to make it a better place for babies what would that be?
26. What do members of our Early Learning Coalition and community leaders need to know about your work with babies in child care?

APPENDIX C
CENTER DIRECTOR INTERVIEW
**Director’s experience & education**

1. How long have you worked as a director?
2. What education or experience have you had to prepare you to work as a director?
3. Have you worked in a classroom in a child care center? With what ages? For how long?
4. Have you worked in another center?
5. What impact has working in the classroom had on your work as a director? (if appropriate)

**6. Definition of good practice**

7. How do you define good practice for infants?
8. How did you develop your definition?
9. Do you and your infant teachers share the same definition?
10. What do you think gets in the way of good practice in infant classrooms?

**II. Reflections on working with infants**

12. What do you like most about serving infants in your center? What do you like least?
13. What do you find most difficult about the provision of this care?
14. Which babies are easiest to work with? Which most difficult?
15. What role do you play in your infant teachers’ work?
16. What role do you play in the parents’ lives?
17. What kind of person do you try to hire to be with the babies in your center?
18. What would you tell a new caregiver entering the field about working with infants?
19. What have you learned in your work with infants that you did not learn in your educational program?
20. What is the hardest part of the job emotionally for your infant teachers?

**21. Other personal reflections**

22. Why did you decide to become a director?
23. Would you still make the same decision?

**24. Work setting**

25. What do you do at your center to help infant teachers with their work?
26. Are there times when you think your teacher do not feel supported in their work at your center?
27. If you could change one thing about your program to make it a better place for babies what would that be?
28. What do members of our Early Learning Coalition and community leaders need to know about your work with babies in child care?

APPENDIX D

INFANT/TODDLER ENVIRONMENTAL RATING SCALE, REVISED
Infant/Toddler Environmental Rating Scale, Revised

APPENDIX E

DEMOGRAPHIC INFORMATION – INFANT TEACHER,
DIRECTOR AND CENTER
Adapted from:

Adapted with permission of the authors.

a. Director/Teacher demographic information

b. Infant Teacher demographic information

c. Center demographic information
WELCOME!

The attached survey is a modified version of a national and local survey that has been used in child care research. My goal in adapting this survey was to be able to gain information about participants in my study and then compare it to both local (Seminole County) and national data.

The director should complete the director portion of the survey. **Please do not put your name on the survey**, as I will assign it a code to better ensure you and your center’s confidentiality as a part of this process. **Your answers are for descriptive information only and will in no way be used for any type of monitoring or evaluation of your program.**

The information obtained by participating directors and infant teachers will be available in a collected group form that **will not reveal any individual center information**. You will receive a copy of this information, if you wish.

Your participation in this research project is greatly appreciated!

Sincerely,

Cindy Jurie, M.S.
Erikson Institute/Loyola University of Chicago

INSTRUCTIONS

**Please Note:**
Here’s what I’m asking you to do:

- Please read and follow all directions carefully. Do not check more than one answer for each question unless you are instructed to do so.

- Please try to answer every question except those that I ask you to skip. If you’re not sure of an answer, give me your best estimate.

- The survey will take approximately 15-20 minutes to complete. The time you invest will help to provide important information about child care centers in Orange County. Thanks for doing your part!

If you have questions, please call me at 407-XXX-XXX! Many thanks!!
Center Director & Staff Demographics  

ID # __________  

Section I: Directors  

Director Characteristics  

D1: Are you the sole director for your program?  
_____ Yes  _____ No  

D2: Gender:  
_____ female  _____ male  

D3: Ethnicity:  
_____ African American/Black  _____ Latino/Hispanic  
_____ Caucasian/White  _____ American Indian/Alaskan Indian  
_____ Asian/Pacific Islander  _____ Biracial/Multiracial  
_____ other (please describe) ______________________________  

D4: Age:  
_____ under 20 years of age  _____ between 50 and 59 years  
_____ between 20 and 29 years  _____ 60 years and older  
_____ between 30 and 39 years  
_____ between 40 and 49 years  

D5: Have you attended training in the last twelve months (such as local workshops, conferences, in-service training sessions)?  
_____ Yes  _____ No  

D6: Did you receive college credit or CEU for this training in Question D5?  
_____ Yes, college credit  _____ No, college credit  
_____ Yes, CEU  _____ No, CEU  

D7: Have you taken any college courses in the last 12 months?  
_____ Yes  _____ No
D8: Indicate your level of education (in any subject area). Indicate only the highest level of education achieved.

_____ less than high school diploma or GED
_____ high school diploma or GED
_____ national CDA or CDA Equivalency (Specialization:___________________)
_____ some college courses
_____ two-year college degree (AA, AS, or AAS)
_____ four-year college degree (BA or BS)
_____ some graduate courses
_____ graduate degree (MA, MS, Ed.S, or Ph.D.)

D9: Indicate your level of education in Early Childhood Education (ECE) or Child Development (CD). Indicate only the highest level of education achieved.

_____ no ECE/CD beyond high school  _____ graduate degree in ECE or CD
_____ 6 credits or less of ECE/CD  _____ other - please describe:
_____ 12 credits or less of ECE/CD  ____________________________
_____ 24 credits or less of ECE/CD
_____ AA in ECE or CD
_____ BA/BS in ECE or CD
_____ graduate credits in ECE or CD

D10: What level of Director Credential do you have?

_____ Level I  _____ Level II  _____ Do not have Director Credential
**Director Tenure and Turnover**

**D11:** How long have you been employed in your present position as director?

- _____ less than 6 months
- _____ at least 3 years but less than 5 years
- _____ at least 6 months but less than 1 year
- _____ at least 5 years but less than 10 years
- _____ at least 1 year but less than 2 years
- _____ more than 10 years
- _____ at least 2 years but less than 3 years

**D12:** How many directors have worked at your center in the past 12 months?

- _____ # of directors

If no other directors have worked at your center in the past 12 months, write 0 and skip to Question R1.

**Director Wages**

**D13:** What was your starting wage? Starting wage is $_____./hour.

**D14:** What is your present hourly wage?$ _____ per hour

**D15:** How many hours, on average, do you work each week? Include paid breaks and lunchtimes in your calculation. _____ hours per week

**D16:** Do you work under a collective bargaining unit (union)?

- _____ yes
- _____ no

**Director Benefits and Working Conditions**

**D17:** Indicate which benefits are provided for directors.

**Note:** If benefits increase over the time of employment, indicate the starting benefits offered.

**Note:** Full-time hours may vary by center. If your center operates part-time only, complete these questions for directors working the maximum hours permitted by your program.

- Reduced child care fees for directors _____ yes _____ no
- Unpaid, job-protected maternity or paternity leave _____ yes _____ no
Paid, job-protected maternity or paternity leave
_____ yes _____ no
Retirement plan
_____ yes _____ no
Number of paid sick days per year (write 0 if none)
_____ # of days
Number of paid holidays per year (write 0 if none)
_____ # of days
Number of paid vacation days per year; Include paid personal days here (write 0 if none)
_____ # of days

D18: Indicate the following type of health and dental coverage offered to full-time directors:

<table>
<thead>
<tr>
<th>Health</th>
<th>Dental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unavailable</td>
<td>_____</td>
</tr>
<tr>
<td>Fully paid for employee and dependents</td>
<td>_____</td>
</tr>
<tr>
<td>Fully paid for employee, partially paid for dependents</td>
<td>_____</td>
</tr>
<tr>
<td>Fully paid for employee only (no dependent coverage available)</td>
<td>_____</td>
</tr>
<tr>
<td>Partially paid for employee and dependents</td>
<td>_____</td>
</tr>
<tr>
<td>Partially paid for employee only (no dependent coverage available)</td>
<td>_____</td>
</tr>
<tr>
<td>Available but unpaid</td>
<td>_____</td>
</tr>
</tbody>
</table>

(Check only one box in each column).

Now, I’m going to ask some questions about your teaching staff.

Section II: Teacher Information

TEACHERS: Refers to persons in charge of a group or classroom of children, often with staff supervisory responsibilities.

Teacher Characteristics

S1: How many teachers are on your payroll? _____ #
If none, write 0 and skip to Section F.

S2: Indicate the number of teachers in your program who are:
_____ female (Total should equal your answer to Question S1).
_____ male

S3: Indicate the number of teachers in your program who are:
_____ African American/Black _____ Latino/Hispanic
S4: Indicate the number of teachers in your program who are:

_____ under 20 years of age  
_____ between 20 and 29 years  
_____ between 30 and 39 years  
_____ between 40 and 49 years  
_____ between 50 and 59 years  
_____ 60 years and older

(Total should equal your answer to Question S1).

S5: How many teachers attended other types of training in the last twelve months (such as local workshops, conferences, in-service training sessions)?

_____ # of teachers

S6: How many teachers received college credit or CEU for this training in Question S5?

_____ # of teachers receiving college credit

_____ # of teachers receiving CEU

(The same teachers can be counted in each group).

S7: How many teachers took college courses in the last 12 months?

_____ # of teachers

S8: Indicate the number of teachers on your staff who have attained the following level of education in any subject area. Indicate only the highest level of education achieved.

_____ less than high school diploma or GED  
_____ high school diploma or GED  
_____ national CDA or CDA Equivalency  
(Specializations: ______________________)

_____ some college courses  
_____ two-year college degree (AA, AS, or AAS)  
_____ four-year college degree (BA or BS)  
_____ some graduate courses  
_____ graduate degree (MA, MS, Ed.S, or Ph.D.)

S9: Indicate the number of teachers on your staff who have attained the following level of education in Early Childhood Education (ECE) or Child Development (CD). Indicate only the highest level of education achieved.

_____ no ECE/CD beyond high school  
_____ AA in ECE or CD  
_____ 6 credits or less of ECE/CD  
_____ BA/BS in ECE or CD
208

____ 12 credits or less of ECE/CD  ____ graduate credits in ECE or CD
____ 24 credits or less of ECE/CD  ____ graduate degree in ECE or CD
____ other (please describe) ________________________________

Teacher Tenure and Turnover

S10: I am interested in the length of time different teachers have been working in your program. Indicate the number of teachers who have been employed in your center for:
____ less than 6 months  ____ at least 3 years but less than 5 years
____ at least 6 months but less than a year  ____ at least 5 years but less than 10 years
____ at least 1 year but less than 2 years  ____ more than 10 years than 2 years
____ at least 2 years but less than 3 years
(Total should equal your answer in Question S1).

S11: How many teachers have left your center in the past 12 months?
____ # of teachers
If none of your teachers have left the center in the past 12 months, write 0 and skip to Question A13.

S12: How many teachers in Question A11 left the center for the following reasons?
____ got a job at another center
____ transferred to another center within your organization or chain of centers
____ went on leave (such as maternity leave) and did not return
____ opened a family child care home
____ left to care for own children at home (no outside employment)
____ left the child care field altogether (accepted a job in another field of work)
____ moved to another city or state
____ other (please describe) ________________________________

S13: Thinking about the last time your center had to fill a teacher vacancy, how long was it from the time a teacher left until a permanent replacement was hired? Check only one answer.
____ less than a week  ____ 3 to 4 weeks  ____ 6 weeks or more
____ 1 to 2 weeks  ____ 5 to 6 weeks

Teacher Wage

S14: Do all teachers receive the same starting wage, regardless of education and experience?
____ yes  Starting wage is $____/hour.
____ no  Range of starting wages is from $____/hour
to $_____/ hour.

(If your teachers receive annual salaries, you can divide the gross earnings for each pay period by the number of hours worked to find the hourly wage).

S15: What hourly wage does the highest paid teacher currently earn?
$ _____ per hour

S16: How many hours, on average, do teachers work each week? Include paid breaks and lunchtimes in your calculation.
_____ hours per week

S17: Do teachers in your center work under a collective bargaining unit (union)?
_____ yes  ____ no

Teacher Benefits and Working Conditions

S18: Indicate which benefits are provided for full-time teachers.
Note: If benefits increase over the time of employment, indicate the starting benefits offered.

Note: Full-time hours may vary by center. If your center operates part-time only, complete these questions for teachers working the maximum hours permitted by your program.

Reduced child care fees for teachers  ____ yes  ____ no
Unpaid, job-protected maternity or paternity leave  ____ yes  ____ no
Paid, job-protected maternity or paternity leave  ____ yes  ____ no
Retirement plan  ____ yes  ____ no
Number of paid sick days per year  _____ # of days (write 0 if none)
Number of paid holidays per year  _____ # of days (write 0 if none)
Number of paid vacation days per year; Include paid personal days here  _____ # of days (write 0 if none)

S19: Indicate the following type of health and dental coverage offered to full-time teachers:

Health  Dental
Unavailable  _____  _____
Fully paid for employee and dependents  _____  _____
Fully paid for employee, partially paid  _____  _____
For dependents

<table>
<thead>
<tr>
<th>Coverage Available</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully paid for employee only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partially paid for employee and dependents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partially paid for employee only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Available but unpaid</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Check only one box in each column).

**S20:** Do part-time teachers receive the same health benefits as full-time teachers?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

_____ not applicable; center does not offer health benefits

_____ not applicable; center does not employ part-time teachers

**S21:** Following is a list of working conditions and policies that affect the child care work environment. Check those offered to full-time teachers.

- Paid breaks
- Paid lunch break
- Staff lounge (break room)
- Written job description
- Written salary schedule
- Formal grievance procedure (for complaints)
- Written contract
- Annual evaluation
- Yearly cost of living increase in wages
- Periodic increase in wages based on performance
- Compensation for overtime (either financial or time off)
- Paid preparation/planning time (not counting set-up time and clean-up time)
- Payment for attendance at staff meetings after working hours
- Payment for attendance at parent meetings after working hours
- Paid release time for attendance at on-site in-service training
- Paid release time for off-site training and workshops
- Stipend for professional development activities or materials (such as for
registration fees)

Thank you for completing the survey!
Infant Teacher Survey

ID#___________________

Infant Teacher Characteristics

T1:  Sex:  _____ female   _____ male

T2:  Ethnicity:
     _____ African American/Black   _____ American Indian/Alaskan Indian
     _____ Caucasian/White     _____ Latino/Hispanic
     _____ Asian/Pacific Islander   _____ Biracial/Multiracial
     _____ other (please describe) _____________________________

T3:  Age:
     _____ under 20 years of age   _____ between 40 and 49 years
     _____ between 20 and 29 years   _____ between 50 and 59 years
     _____ between 30 and 39 years   _____ 60 years and older

T4:  Parenting Status:
     _____ I am a parent   _____ I am not a parent

T5:  Have you attended training in the last twelve months (such as local workshops, conferences, in-service training sessions)?
     _____ Yes   _____ No

T6:  Have you received college credit or CEU for this training in Question B5?
     College Credit:  _____ Yes   _____ No
     CEUs:  _____ Yes   _____ No

(The same training can be counted in each group).

T7:  Have you taken college courses in the last 12 months?
     _____ Yes   _____ No
T8: What is your highest level of completed education (in any subject area)? Indicate only the highest level of education achieved.

_____ less than high school diploma or GED
_____ high school diploma or GED
_____ national CDA or CDA Equivalency (Specialization:_____________)
_____ some college courses

_____ two-year college degree (AA, AS, AAS)
_____ four-year college degree (BA or BS)

_____ some graduate courses

_____ graduate degree (MA, MS, Ed.S, or Ph.D.)

T9: What is your level of education in Early Childhood Education (ECE) or Child Development (CD). Indicate only the highest level of education achieved.

_____ no ECE/CD beyond high school
_____ 6 credits or less of ECE/CD
_____ 12 credits or less of ECE/CD
_____ 24 credits or less of ECE/CD
_____ AA in ECE or CD
_____ BA/BS in ECE or CD
_____ graduate credits in ECE or CD
_____ graduate degree in ECE or CD

_____ other (please describe) ________________________________

T10: If you have less than an A.A./A.S. degree, are you required by your center to continue your formal education?

_____ Yes  _____ No

T11: Have you attended training within the last twelve months specifically focused on infants or caring for infants in a child care center?
_____ Yes  _____ No

**T12:** How long have you been employed in your center:

- _____ less than 6 months
- _____ at least 3 years but less than 5 years
- _____ at least 6 months but less than 1 year
- _____ at least 5 years but less than 10 years
- _____ at least 1 year but less than 2 years
- _____ more than 10 years
- _____ at least 2 years but less than 3 years

**T13:** Have you left another teaching position at another center in the past 12 months?

- _____ Yes  _____ No

If the answer is no, check no and skip to Question T13.

**T14:** If the answer in T10 was “yes”, what reasons were involved in your decision?

(please describe) ________________________________

**T15:** How long have you worked with infants at this center?

- _____ Years  _____ Months

**T16:** How long have you worked with infants altogether in your child care experience?

- _____ Years  _____ Months

*Teacher Wages*

**T17:** What was your starting wage when you began work at this center?

$_____/hour

**T18:** What is your current hourly wage?  $_____ per hour

**T19:** How many hours, on average, do you work each week? Include paid breaks and lunchtimes in your calculation.

_____ hours per week

**T20:** Do you work under a collective bargaining unit (union)?
Teacher Benefits and Working Conditions

T21: Indicate which benefits are provided for full-time teachers.

Reduced child care fees for teachers
Unpaid, job-protected maternity or paternity leave
Paid, job-protected maternity or paternity leave
Retirement plan
Number of paid sick days per year (write 0 if none)
Number of paid holidays per year (write 0 if none)
Number of paid vacation days per year; Include paid personal days here (write 0 if none)

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Health</th>
<th>Dental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unavailable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully paid for employee and dependents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully paid for employee, partially paid for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>dependents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully paid for employee only (no dependent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>coverage available)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partially paid for employee and dependents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partially paid for employee only (no dependent coverage available)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Available but unpaid</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

T22: Indicate the following type of health and dental coverage offered to full-time teachers:

<table>
<thead>
<tr>
<th>Coverage Type</th>
<th>Health</th>
<th>Dental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unavailable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully paid for employee and dependents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully paid for employee, partially paid for dependents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For dependents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully paid for employee only (no dependent coverage available)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partially paid for employee and dependents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partially paid for employee only (no dependent coverage available)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Available but unpaid</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

T23: Do part-time teachers receive the same health benefits as full-time teachers?

_____ yes  _____ not applicable; center does not offer health benefits
_____ no  _____ not applicable; center does not employ part-time teachers
_____ don’t know
**T24: Following is a list of working conditions and policies that affect the child care environment. Check those offered to full-time teachers.**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid breaks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unpaid breaks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paid lunch break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unpaid lunch break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff lounge (break room)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designated storage for belongings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to telephone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>File storage space</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Space for parent/teacher conferences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written job description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written salary schedule</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formal grievance procedure (for complaints)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written contract</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yearly cost of living increase in wages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Periodic increase in wages based on performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensation for overtime (either financial or time off)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paid preparation/planning time (not counting set-up time and clean-up time)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Events you &amp; staff participate in together</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Staff meetings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for attendance at staff meetings after working hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for attendance at parent meetings after working hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training offered</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paid release time for attendance at on-site in-service training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paid release time for off-site training and workshops</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stipend for professional development activities or materials (such as for registration fees)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thank you for completing the survey!
Center Characteristics

Center Description

ID # __________

C1: Indicate whether your program is operated on a for-profit or non-profit basis.

_____ for-profit  _____ non-profit

C2: Please circle the one label that best describes your program. Circle only one.
FOR-PROFIT  NON-PROFIT
1. Independently owned and operated  6. Independent
2. Local chain  7. Head Start
4. Sponsored: Corporate/business/hospital  9. Sponsored: Church or religious organization
5. Worker cooperative  10. Sponsored: University or college
11. Sponsored: Public primary/secondary school
12. Sponsored: Private primary/secondary school
13. Sponsored: Corporate/business/hospital
14. Sponsored: State or local governmental agency
15. Sponsored: Non-governmental community organization

C3: How many children does your center currently serve in each of the following age groups?

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Full-time</th>
<th>Part-time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants (6 weeks-12 months)</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Toddlers (13 months -24 months)</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Preschoolers (2-4 years)</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>VPK Students (4 years)</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Kindergarteners (5 years)</td>
<td>_____</td>
<td>_____</td>
</tr>
</tbody>
</table>
C4: Please estimate the percent of funds your center receives on average from the following sources:

Parent fees, excluding vouchers _____ %
provided through public funds
Public subsidies (federal, state, or local money, including vouchers) _____ %
Corporate subsidies _____ %
Private donations; such as United Way _____ %
Fundraising _____ %
Other _____ %
(Total should equal 100%).

C5: Please estimate the percent of children enrolled in your center whose parents receive child care subsidies: ________%.

C6: Is your center licensed by the state of Florida?
_____ yes  _____ no

C7: Is your center currently accredited by a professional organization?
_____ yes  _____ no

C8: If yes, by which organization?

C9: If no, are you currently in the process of seeking accreditation?
_____ yes  _____ no

C10: If you are seeking accreditation, from which organization?

C11: Is your center recognized as a Gold Seal Program?
_____ yes  _____ no

C12: Many child care centers employ staff in a variety of non-teaching positions. Please indicate whether your center employs staff for the following positions.

Cook _____ yes  _____ how many?  _____ no
Secretary _____ yes  _____ how many?  _____ no
Bookkeeper _____ yes  _____ how many?  _____ no
Education Coordinator _____ yes  _____ how many?  _____ no
Bus Driver _____ yes  _____ how many?  _____ no
Social Worker _____ yes  _____ how many?  _____ no
Other _____ yes  _____ how many?  _____ no
Please describe ________________________________________________

C13: Approximately what percentage of your annual operating budget do you spend on salaries, fringe benefits, payroll taxes, and other personnel costs for all employees?
_____ % per year

Final Questions

C14: If increased funds were available for your center, how would you use the added funds?
Indicate your top three choices by writing 1, 2, and 3 in the spaces provided:

_____ increased number of staff
_____ improve staff training
_____ improve physical facilities and environment
_____ increase program supplies and equipment
_____ reduce parent fees
_____ increase staff wages
_____ offer or improve staff benefits
_____ other (please describe) ________________________________

C15: Indicate the number of sites for which you are responding. _____ # of sites

C16: Comments (optional) ____________________________________________

______________________________________________

______________________________________________

C17: Indicate the position of the person filling out the survey:

_____ Owner  _____ Owner/Director

_____ Director  _____ Teacher-Director

_____ Other (please specify) __________________________________________

Thank you for completing the survey!
APPENDIX F

RECRUITMENT LETTER TO INFANT TEACHER
October 15, 2009

Dear Infant Teacher:

Did you know that despite years of research looking at the question “is day care bad for babies?” there is very little research that has been done talking to the folks who know infant care best – the infant teachers who can make quality care happen?

My name is Cindy Jurie and I’m presently beginning my dissertation research looking at infant teachers’ experience and thinking about infant care. I’d like to invite you to be a part of my study. As a former infant teacher and director, I know that you are very busy keeping your babies happy. But it is very important that people like you be a part of research as it is important that people know what the real issues are for everyday child care staff.

Now if you’re like me, the first question you’re asking is “what will this involve?” I will need to complete two interviews with you and get some background information as well. Interviews will be scheduled as to what works best for you, your classroom and your center. It will be important to have uninterrupted time, however, since what you have to say is very important.

As a thank you for your time and commitment in this research project, infant teachers who complete their portion of the study will receive a Target gift card.

If you would like to be a part of this research – THANK YOU!! You can either call me at 407-323-#### or email me at cindyjurie@####com. I will be contacting you in a few days just to check and see if you have any questions that may help you decide whether or not you’d like to participate.

If you can’t participate, that’s ok but I really hope that you and your director will be a part of this research study, as I know infant teachers and directors have a lot of information to share.

Many thanks for your considering this!

Sincerely,

Cindy Jurie
Erikson Institute doctoral student
APPENDIX G

RECRUITMENT LETTER TO CENTER DIRECTOR
Dear Child Care Director:

Did you know that despite years of research looking at the question “is day care bad for babies?” there is very little research that has been done talking to the folks who know infant care best – the infant teachers who can make quality care happen?

My name is Cindy Jurie and I’m presently beginning my dissertation research looking at infant teachers’ experience and thinking about infant care. I’d like to invite you to be a part of my study. As a former infant teacher and director, I know that you are very busy keeping your center running. But it is very important that people like you and your infant teacher be a part of research as it is important that people know what the real issues are for everyday child care staff.

Now if you’re like me, the first question you’re asking is “what will this involve?” I will need to complete two interviews with your infant room lead teacher and one interview with you as director. I will need to get some background information about you both and your center. Interviews will be scheduled as to what works best for you and your program. It will be important to have uninterrupted time, however, since what you and your infant teacher have to say is very important.

As a thank you for your participation in this research project, directors will receive a certificate and letter of thanks that may be useful in your director credential renewal. Infant teachers who participate will receive a Target gift card.

If you would like to be a part of this research – THANK YOU!! You can either call me at 407-323-###### or email me at cindyjurie@###.com. I will be contacting you in a few days just to check and see if you have any questions that may help you decide whether or not you’d like to participate.

If you can’t participate, that’s ok but I really hope that you and your infant teacher will be a part of this research study as I know directors and infant teachers have a lot of information to share.

Many thanks for your considering this!

Sincerely,
Cindy Jurie
Erikson Institute doctoral student
APPENDIX H

SCRIPT FOR FOLLOW-UP RECRUITMENT CALL TO CENTER DIRECTORS
Hi! My name is Cindy Jurie; can I please speak with the director? [Ask for director by name]

Hi, [directors name] my name is Cindy Jurie and I am a doctoral student at the Erikson Institute. I am beginning my dissertation research looking at teachers in infants in child care centers. Your center’s name was selected as a possible participant. You should have received a letter in the mail for you and your infant teacher recently. If you’ve got a couple of minutes, I can tell you about it, so you might have an idea if you’d like to participate.

[If director says “no” thank them for their time and end the call]

If director says yes:

There’s been a lot of study about whether or not child care is good for babies but not as much study of the infant teachers who care for babies. My study is focused on how infant teachers view their work with babies and the work environment influences this. As a former director and infant teacher, I think you all know a lot of information that would be helpful to understanding the issues better. This is an area that hasn’t been looked at closely and your participation would help us understand how to make infant care as good as possible. The Early Learning Coalition of Orange County may have sent you a letter about this study encouraging directors to participate.

There are two parts to the study:

The infant teachers’ part consists of two interviews that are approximately 60-90 minutes long. I can work with you to schedule these interviews in a way that works with your center staffing. The first interview asks her questions about her experience and thoughts about working with babies and the second interview is an adaptation of an interview that’s been used with parents but has been adapted for child care.

The second part is an interview with you as director, to get your thoughts on this subject and information about how staff supervision is handled at your center. This should take about 60 minutes.

All information that is shared will be confidential – it will not ever be shared with your name, your infant teacher’s name or center name. It will not affect your relationship with the Early Learning Coalition, as they will not see the information from your center, except in a group with no names attached. If you choose not to participate, that is your choice and that’s ok with both the Early Learning Coalition and myself.

If you are interested in participating, you will receive a certificate and a letter thanking you for your participation that you can use for your director credential renewal. Your
infant teacher will receive a $20 gift card to Target. At the end of the study, you’ll receive a brief report that will tell you what I found out in the course of this research.

Does this sound like something that you would like to be a part of?

[If no, thank them for their time.]

If yes:

Great! I think you and your teacher will find this very interesting. To get started, we’ll need to schedule an appointment where I can come to your center and talk with both you and your infant teacher. I can go over the basic information we need to get started, talk with you about the informed consent process and answer any questions either you or your infant teacher might have.

When would be a good time for me to come out when I could talk with both of you?

[Schedule date & time]

Let me give you my contact information so that you can get in touch with me if you need to. My telephone number is 407-323-#### and my cell phone number is 407-####-#####. If your infant teacher wants to call me about this study, I’d be happy to talk with her as well.

Thank you so much for wanting to be a part of my study! I’ll call you a day before our appointment just as a reminder. Thank you so much for your help!
APPENDIX I

SUPPORT LETTER FOR RECRUITMENT FROM ELCOC
Dear Center Director:

The Early Learning Coalition of Orange County is very interested in supporting efforts to better understand the issues that influence quality care for young children. As a part of that interest, we wish to support research that will better our understanding of the issues in child care. We would like to let you know of one such study that will be taking place in our community, and give you and your center the opportunity to participate.

The project is a part of a dissertation research study being conducted by Cindy Jurie, a doctoral student at the Erikson Institute/Loyola University of Chicago. She will be conducting her dissertation research in Orange County, looking at the work of infant teachers in center-based care. You may know Cindy from her past work in early childhood in our community. As a former child care center director and infant teacher, Cindy knows the many demands you have on your time every day. Your participation in this research may help provide a better understanding of what is needed to make our center care for babies the best that it can be. If you are asked and choose not to participate, there are no consequences. We would certainly understand. We believe that the directors and infant teachers in our community have a great deal of knowledge and experience that would be helpful in expanding our understanding of infant care. The choice to take part in this study is truly yours and your infant teacher’s.

If you have questions about the study and requirements for participation, Cindy will be happy to answer them. You will be receiving a letter asking for your participation soon.

Thank you for your consideration.

Sincerely,

Warren D. Grantham
Deputy Director
APPENDIX J

INFORMED CONSENT FORM – INFANT TEACHER
**Project Title:**  Considering Care: Infant Teachers, Reflective Function and the Care Environment in Child Care Centers

**Researcher(s):**  Cindy Jurie

**Faculty Sponsor:**  Linda Gilkerson, Ph.D.

**Introduction:**
You are being asked to take part in a research study being conducted by Cindy Jurie, M.S., for dissertation research under the supervision of Linda Gilkerson, Ph.D., of the Erikson Institute at Loyola University of Chicago.

You are being asked to participate because you are an infant teacher in a child care center. Twenty-five infant teachers in Orange County child care centers are being recruited for this study. To participate you must be available for two interview sessions and be comfortable answering questions orally and in writing about your work and personal experience in English.

Please read this form carefully and ask any questions you may have before deciding whether to participate in the study.

**Purpose:**
The purpose of this study is to gain a better understanding of infant teachers’ experience and perceptions of working with infants in child care centers. The specific focus of this study is how infant teachers think about their work with the infants in their care. Some questions may be viewed as personal or sensitive and you may find them upsetting to talk about. If this is the case, you may leave the interview or choose not to answer the question. The interviewer will be available to talk with you after the interview or make referrals for additional support if you want.

**Procedures:**
If you agree to be in the study, you will be asked to participate in two private interview sessions of approximately ninety minutes.

- The first interview will consist of **thirty-one** questions, focusing on your experience and education, your thoughts and feelings about your work with infants, and supports for infant child care.
- You will also be asked at this time to complete a drawing of your work.
- The second interview will consist of the Parent Development Interview, Revised, short version, adapted for child care. This interview consists of thirty-five questions, focusing on your view of the children in your care, your relationships with them, your experience of caregiving in a child care center, including issues of separation/loss, and your own family history.
- Before taking part in the interviews, you will also be asked to complete a paper questionnaire consisting of **twenty-four** questions that will provide demographic information, such as gender, ethnicity, age, **parenting status**, education, training and education, experience, benefits, and working conditions.
The interview will be conducted in a mutually agreed upon private location. Your name will not appear on any information, as all information (interview transcripts, drawings, paper questionnaires) will be assigned a code number. The interviews will be audio taped, and the tapes will be transcribed (written out word for word). The transcripts will then be analyzed. Each interview will last no longer than 90 minutes. Information from the questionnaire will be entered into a database with an assigned code for each participant. Drawings will be scanned and entered into the same database. Questionnaires and drawings will be kept in a locked file cabinet in the researcher’s home office, while transcripts and audio files will be kept in a password-protected computer.

Risks/Benefits:
There are no foreseeable risks involved in participating in this research beyond those experienced in everyday life. There are no direct benefits to you from participation in this study, however, information from this study will help further understanding of the needs of infant teachers in child care centers.

Compensation:
Participants completing all parts of this study (questionnaire, two interviews, drawing) will receive a $20 gift card to Target, in acknowledgement of their time and commitment in participating in this study.

Costs:
There are no costs associated with participation in this study. If participants are reported to DCF and referred for services, they will be responsible for the costs associated with these services, as they are not provided by the study.

Confidentiality:
All information gathered in this study will be kept confidential by the researcher. Your name, address, or any other identifying information will not be used in reporting the results of the interviews. Participant’s identity and the identity of others they might mention in the interview will be purposefully masked and never revealed. All efforts will be made to disguise incidents about which participants might refer to if the mention of those incidents makes it possible to identify the participants or others specifically.

If in the interview, a teacher reveals information that raises a serious concern of neglect or physical harm, the study staff is legally required to inform the Department of Children and Families of these concerns. If referrals for services arise from this report, they will be the responsibility of the family or the Department of Children and Families (DCF).

Audio recording, drawings, and paper questionnaires will be destroyed at the conclusion of this research study.
**Voluntary Participation:**
Participation in this study is voluntary. If you do not want to be in this study, you do not have to participate. Even if you decide to participate, you are free not to answer any question or to withdraw from participation at any time without penalty.

**Contacts and Questions:**
If you have questions about this research project or interview, feel free to contact Cindy Jurie at 407-221-6854 or Linda Gilkerson, Ph.D., faculty sponsor at 312-755-2250.

If you have questions about your rights as a research participant, you may contact the Compliance Manager in Loyola’s Office of Research Services at (773) 508-2689.

Participant’s Signature                                      Date

____________________________________________  ___

Researcher's Signature                                      Date

__________________________________________  __________________
APPENDIX K

INFORMED CONSENT FORM – CENTER DIRECTOR
Project Title:  Considering Care: Infant Teachers, Reflective Function and the Care Environment in Child Care Centers

Researcher(s):  Cindy Jurie, M.S.
Faculty Sponsor:  Linda Gilkerson, Ph.D.

Introduction:
You are being asked to take part in a research study being conducted by Cindy Jurie, M.S., for dissertation research under the supervision of Linda Gilkerson, Ph.D., of the Erikson Institute at Loyola University of Chicago.

You are being asked to participate because you are a director of a child care center serving infants. Twenty-five directors in Orange County child care centers serving infants are being recruited for this study. To participate you must be available for one interview session and are comfortable answering questions orally and in writing about your work as a director and personal experience in English.

Please read this form carefully and ask any questions you may have before deciding whether to participate in the study.

Purpose:
The purpose of this study is to gain a better understanding of infant teachers’ experience and perceptions of working with infants in child care centers. The specific focus of this study is how infant teachers think about their work with the infants in their care. As a part of this study, information about the director’s perceptions of infant care and the center are being sought to provide a better understanding of the center environment. Some questions may be viewed as personal or sensitive and you may find them upsetting to talk about. If this is the case, you may leave the interview or choose not to answer the question. The interviewer will be available to talk with you after the interview or make referrals for additional support if you want.

Procedures:
If you agree to be in the study, you will be asked to participate in one private interview session of approximately ninety minutes.

- The interview will consist of twenty-six questions, focusing on your experience and education, your thoughts and feelings about your center’s care of infants, and supports for infant child care.
- Before you are interviewed, you will be asked to complete two paper questionnaires:
  - The first questionnaire consists of seventeen questions relating to your center, such as auspices, enrollment, funding, budgeting and accreditation.
  - The second questionnaire consists of thirty-nine questions that will provide demographic information about you as a director and the teachers in your center, such as gender, ethnicity, age, education, training and education, experience, benefits, and working conditions.
The interview will be conducted in a mutually agreed upon private location. Your name will not appear on any information, as all information (interview transcripts or paper questionnaires) will be assigned a code number. The interview will be audio-taped and the tapes will be transcribed (written out word for word). The transcripts will then be analyzed. The interview will last no longer than 90 minutes.

**Risks/Benefits:**
There are no foreseeable risks involved in participating in this research beyond those experienced in everyday life. There are no direct benefits to you from participation in this study, however, information from this study will help further understanding of the needs of infant teachers in child care centers.

**Compensation:**
Director participants completing all parts of this study (questionnaires and interview) will receive a letter of thanks and certificate in acknowledgement of their time in participating in this study. This letter may be used as documentation for your director credential renewal documenting participation in a research study.

**Costs:**
There are no costs associated with participation in this study. If participants are reported to DCF and referred for services, they will be responsible for the costs associated with these services, as they are not provided by the study.

**Confidentiality:**
All information gathered in this study will be kept confidential by the researcher. A code number will be assigned to all participant materials so that participant names will not be found on any of the study materials. Your name, center name, address, or any other identifying information will not be used in reporting the results of the interviews. Participant’s identity and the identity of others they might mention in the interview will be purposefully masked and never revealed. All efforts will be made to disguise incidents about which participants might refer to if the mention of those incidents makes it possible to identify the participants or others specifically.

Information from the questionnaires will be entered into a database with an assigned code for each participant. Questionnaires will be kept in a locked file cabinet in the researcher’s home office, while transcripts and audio files will be kept in a password-protected computer.

If in the interview, a director reveals information that raises a serious concern of neglect or physical harm, the study staff is legally required to inform the Department of Children and Families (DCF) of these concerns.

Audio recordings and paper questionnaires will be destroyed at the conclusion of this research study.
Voluntary Participation:
Participation in this study is voluntary. If you do not want to be in this study, you do not have to participate. Even if you decide to participate, you are free not to answer any question or to withdraw from participation at any time without penalty.

Contacts and Questions:
If you have questions about this research project or interview, feel free to contact Cindy Jurie at 407-221-6854 or Linda Gilkerson, Ph.D., faculty sponsor at 312-755-2250.

If you have questions about your rights as a research participant, you may contact the Compliance Manager in Loyola’s Office of Research Services at (773) 508-2689.

Statement of Consent:
Your signature below indicates that you have read and understood the information provided above, have had an opportunity to ask questions, and agree to participate in this research study. You will be given a copy of this form to keep for your records.

____________________________________________   __________________
Participant’s Signature                                                   Date

____________________________________________  ___________________
Researcher’s Signature                                                  Date
APPENDIX L

INCENTIVE LETTER FOR CENTER DIRECTOR
[Date]

Center Director Name
Center Name
Center Address
City, FL Zip Code

Dear [Center Director Name];

Thank you once again for agreeing to support and participate in activities as a part of my dissertation research. Your willingness to take the time and trouble to be a part of this study is commendable, given the many demands on your time as director.

My research focuses on infant teachers in child care centers – a group that has not been as well studied to date as other groups of early childhood teachers. Therefore, your willingness to participate has helped to extend our knowledge of this very important group of teachers. Understanding how infant teachers view their work and the important role of providing care to infants is important to furthering our understanding of how to support quality with child care in the first years of life.

Given the realities of everyday staffing in child care centers, your willingness to support this research by making available your infant lead teacher for interviews as well as being willing to take part in interviews yourself, is much appreciated. Truly, this study could not have happened without your willingness to help make it happen. For this, I am most grateful!

I will be providing all centers that participated in this research with an update of the findings when they become available. Your contribution to this research is important and I trust that this letter and certificate will assist you in documenting your support for purposes of your professional documentation.

Thank you once again for your time and assistance in helping me to better capture the important role that infant teacher play in the lives of babies in child care centers.

Sincerely,

Cindy Jurie
APPENDIX M

LETTER OF AGREEMENT WITH ELCOC
Letter of Agreement
Research Focusing on Infant Teachers in Child Care Centers

This agreement between the Early Learning Coalition of Orange County ("ELCOC") and Cindy Jurie ("Researcher"), doctoral student at the Erikson Institute/Loyola University of Chicago, covers research to be conducted with staff in Orange County child care centers. This research involves interviews with infant child care center teachers and center directors concerning issues related to infant child care, as the focus of dissertation research.

This agreement is not an indication or commitment to provide any financial support for this research project beyond the provision of ITERS-R related materials from participating centers.

The Early Learning Coalition of Orange County or its designee will:
1. With provider consent, provide the current Infant/Toddler Environmental Rating Scale-Revised (ITERS-R) scores available on participating centers in the study.
2. Assist the researcher with requests relating to ITERS-R scores.
3. Assist the researcher by allowing access to ELCOC activities for recruitment purposes with child care center directors and/or staff. Such access can be determined in a mutually agreed upon manner.

The researcher will:
1. Conduct all research activities in a manner consistent with ethical standards of research, particularly with regard to participant confidentiality.
2. Complete background screenings and drug testing as required by ELCOC standards.
3. Submit all proposed research materials through the appropriate Institutional Review Board at Loyola University Chicago.
4. Schedule all activities with center staff in a collaborative and cooperative manner, respecting the needs of center directors and teachers.
5. Provide the coalition with data that does not allow anyone other than the researcher to identify individual’s answers or site location.
6. Provide all participants with an update of the research upon completion.
7. Comply with all State of Florida reporting requirements regarding child abuse & neglect, and include notice of the need to adhere to such requirements in the informed consent forms for all participants.
8. Identify sources of mental health counseling should individuals participating in this study indicate the need for such support.

Cooperating child care centers will:
1. Assist the researcher with determining appropriate times and space for interview activities.
2. Complete necessary forms such as the Institutional Review Board consent and demographic materials.
3. Notify the researcher in a timely manner of any necessary changes to appointment times and/or center visits.

[Signatures]

Carol Wells, Early Learning Coalition of Orange County
Date

Cindy Jurie, LUC/EI doctoral student/researcher
June 24, 2008
Date
REFERENCES


Ackerman, D.J. (2004). States’ efforts in improving the qualifications of early care and education teachers. Education Policy, 18(2), 311-337.


Keyes, A. (undated). Introduction to the ERS.


Wilgus, G. (2005). If you carry him around all the time at home, he expects one of us to carry him around all day here and there are only TWO of us! *Journal of Early Childhood Teacher Education, 26*(3), 259-273.


VITA

Cynthia Jurie was raised in Bradenton, Florida. She attended Georgetown University, Washington, DC, where she earned a Bachelor of Arts in Sociology in 1980. Her Master’s Degree in Early Childhood Education was completed at Wheelock College, Boston, Massachusetts, in 1983.

Since returning to Florida in 1983, Cynthia has worked extensively with early childhood programs serving infants and toddlers, including Migrant Head Start. She has taught graduate, community college and vocational courses in early childhood education and been an active member of the Central Florida Infant Mental Health Task Force and the Central Florida Association for the Education of Young Children.

While at Loyola, Cynthia worked as an early childhood mental health consultant with the Sharing the Caring project and as a coordinator with the Partners in Care project, funded by the Prince Charitable Trusts. She also served as an early childhood consultant to several community programs in Chicago, Illinois, including CEDA Early Head Start. She received an Irving R. Harris fellowship in her last year of coursework while her dissertation research was supported with an Advanced Dissertation Fellowship, as well as a Community Stewards award and a Graduate Student Advisory Council award.
At present, Cynthia is an Infant/Toddler Mentor with the Early Learning Coalition of Orange County, in Orlando, Florida, working to support infant/toddler teachers in their care of young children. She lives in Sanford, Florida.